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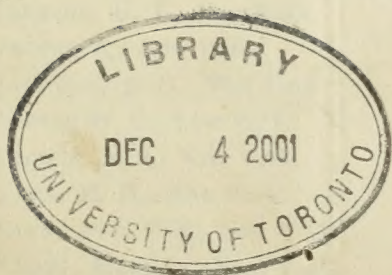
A Weekly Journal of Medicine, Surgery and the Collateral Sciences.

EDITED BY

EDWARD J. BERMINGHAM, A.M., M.D.

FELLOW OF THE AMERICAN AND NEW YORK ACADEMIES OF MEDICINE MEMBER, OF THE NEW YORK MEDICO-LEGAL
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EDITORIAL.

BADGERING SCIENTIFIC WITNESSES.

If we could suppose a person of ordinary intelligence, ignorant of the *modus operandi* of modern criminal trials, observing for the first time the method of cross-questioning witnesses indulged in by our distinguished counsel nowadays, he would naturally infer that the object of such questioning was not to elicit the truth and further the ends of justice, but rather to amuse the audience, and exhibit the superior badgering qualities of the interrogator. It would be difficult to convince such an observer that the hapless witness against whom the shafts of legal rillery were being hurled was not the prisoner receiving in advance an installment of the punishment for suspected crime.

Certainly one can imagine few more harassing positions for a self-respecting man with a fine sense of honor than to be compelled by the law to submit to this degrading style of examination, which often amounts to positive insult.

The tendency of this brow-beating is to render witnesses, men of scientific attainments for example, whose testimony may be invaluable in establishing truth, shy of coming forward to illumine a difficult case by the light of their experience.

We know that the ability to confuse witnesses, of which badgering is an exaggeration, is popularly sup-

posed to be one of the attributes of the successful lawyer and to exhibit superior legal acumen. We must, however, exclaim against what must appear to the thoughtful to be an abuse of the power temporarily conferred on the cross-examiner, and not only a parody of justice, but also an infringement of the unwritten code, that governs the relations between gentlemen, and which gives to the individual man the right to resent an insult.

Shall the law itself furnish a cloak under cover of which a man may with impunity reflect on the veracity and private character of his fellow; emboldened by immunity from punishment, to probe the irrelevant secrets of an individual's private life? Forbid it, justice! Public opinion forbid it!

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, December 15th, 1881.

Dr. Fordyce Barker being prevented by illness from presiding, Dr. Robert F. Weir, the Vice-President, filled the chair.

The minutes of the preceding meeting were read and approved. The secretary read a communication from the council with reference to excluding reporters of the secular press from the purely scientific meetings of the society, which was approved by the society.

Dr. Frank P. Kinnicutt read a paper entitled

"TRANSIENT ALBUMINURIA AS IT OCCURS PARTICULARLY IN CHILDREN AND ADOLESCENTS, IN APPARENT HEALTH."

The following is a brief summary of Dr. Kinnicutt's paper.

MR. PRESIDENT AND GENTLEMEN: The occurrence of transient albuminuria is a subject which has often claimed the attention of observers and pathologists and is one of much importance. Cases are reported by many observers and different theories have been advanced to account for this phenomenon.

One considers it due to changes in the walls of the vessels, another maintains that it is the function of albumen to nourish the epithelium, and when the vessels are denuded of their epithelial coat their supply of albumen appears in the urine. A third theory is that the epithelium when present prevents filtration, when absent the albumen is allowed to pass through.

Still another theory accounts for it by attributing it to vaso-motor disturbance of the kidney producing slowing of the blood current in the glomeruli. But, what is the cause of this vaso-motor disturbance?

From a careful analysis of my own and other cases I am led to believe this cause to consist in the presence in the blood of unoxidized nitrogenous matter, in other words temporary oxaluria or lithæmia.

A similar albuminuria follows epileptic attacks and exophthalmic goitre. It is more frequent in children and adolescents on account of their greater mobility and susceptibility. It is often observed in active brain workers.

Dr. Kinnicutt referred to a paper on this subject by Sir Wm. Gull, read before the Royal Medical and Chirurgical Society, London, and to cases reported by Moxon, Dr. Clement Duke, and other observers. A fact which had been constantly observed was the pres-

ence of oxalate of lime and uric acid in the urine in this temporary form of albuminuria.

Dr. Duke looked upon this condition as resulting from high tension and hyperæmia, but states also that it is pathological and the beginning of true Bright's disease.

Admitting the frequent dependence of albuminuria on indigestion, general nervous exhaustion and loss of tone, the effects of mal-assimilation, Saundby regarded temporary hyperæmia as the cause of temporary albuminuria. Dr. Kinnicutt then presented the history of his own cases, which he stated had been kept under constant observation. In some albumen had been absent for many months and in none of them were casts discovered in the urine. Sphygmographic traces showed lowered tension.

These cases had all been treated successfully by hygienic measures and dietetics, and in all of them the constant association of imperfectly oxidized matter in the urine with the albuminuria, could not be regarded simply as a coincidence, but rather as a cause.

In the discussion which ensued Drs. Draper, Jacobi, Thomson, Bradley and Seguin took part.

Dr. Draper spoke as follows: It seems to me that the interesting paper read presents two or three points worthy of consideration. The first question is as to the essential cause of the albumen. Various opinions are held. I think it is evident that the theory of blood-pressure is not sufficient to explain the presence of albumen in urine; for in health we find variations in blood-pressure not followed by the presence of albumen. Then again, in those diseases in which blood-pressure is altered albumen is not constantly present. In contracted kidney albumen in the urine is by no means a constant phenomenon. Take again diseases of the heart in which there is obstruction, the blood-pressure is reduced and there is passive congestion of the vessels, which may be very considerable and yet be unaccompanied by albuminuria. It seems therefore that hyperæmia does not explain it.

In chronic Bright's Disease the glandular epithelium is degenerate and these diseases would furnish a proof that this condition is favorable for the production of albuminuria.

But there is another condition, and this is the one Dr. Kinnicutt has dwelt upon, viz: the constant association of uric acid and oxalate of lime with temporary albuminuria. The urine of fever patients as a rule contains albumen. Whenever there is a high temperature, rapid emaciation, and the blood is filled with the products of rapid tissue metamorphosis, the rule is to find albumen in the urine.

As to the vaso-motor theory which is so popular nowadays, as to whether it is sufficient to explain albuminuria in adolescents I do not know. But if we accept the theory that it is due to presence in the blood of imperfectly oxidized nitrogenous matters, why is it so seldom observed? This is a conundrum no one can answer. You may say it depends on vulnerability of the kidneys; possibly this is a reasonable explanation, but it is not altogether satisfactory.

Another point is as to the general significance of transient albuminuria. It always suggests a suspicion of possible disease, and should be looked upon with anxiety. We should regard it, however, as only a single symptom and in connection with other symptoms, and we will not go far astray in our appreciation of its significance.

Albuminuria should never be considered by itself alone and a false significance attached to it. The only safe way is to consider it in connection with the esti-

mation of functional power of the kidney by estimating the quantity of urea and solids excreted.

Dr. Jacobi said that he had heard a part of the paper only, but from the remarks of Dr. Draper he understood that the ways in which albumen can temporarily get into the urine had been discussed.

From a general standpoint he should say that when albumen appears in the urine it is due either to the condition of the blood, the blood propellor, or the walls of the vessels.

As to the condition of the blood that has nothing to do with it.

As to the condition of the blood vessels in temporary albuminuria, he had seen two cases in which this latter condition was associated with disease of the blood vessels.

Dr. Jacobi then narrated the history of a case in which a temporary abnormal condition of permeability of the vessels was accompanied by temporary albuminuria; and also of a case of purpura maculosa, in the intervals of which albumen would appear in the urine. He therefore considered a defective condition of the blood vessels a cause, though he would not say the only one, of temporary albuminuria. The most remarkable and comprehensive paper on this subject he had met with, was by Prof. Ellis, of Harvard.

Dr. Thomson said that he had never made any observations himself which bore out the theory suggested in the interesting paper read, but he had had a number of cases of transient albuminuria in children. He had ascribed it to malaria in a case he recalled, and was led to take this view by the intermittent hæmaturia which developed into intermittent fever. The albuminuria promptly yielded to quinine. In more than twelve cases he had found transient albuminuria dependent upon temporary kidney congestion from malarial poisoning.

As to lithuria, it was exceedingly common in children from 3 to 10 years of age.

Rather than account for the albuminuria by the vaso-motor theory he would attribute it to tubal catarrh from local irritation of the kidney by uric crystals. The fact was that the cause of albuminuria was not known. He had met with two cases of transient albuminuria afterward becoming permanent.

One, a gentleman of 60, was suddenly awakened with a severe attack of dyspnœa; the urine was found to be highly albuminous. After the attack the quantity of albumen steadily diminished until another attack, when it again increased. The dyspnœa was uræmic in character. There was no tension to the pulse and no change in the arteries. These attacks continued with the same phenomena until gradually the albumen became more constant, and in 18 months the patient died of chronic Bright's disease.

CASE II. was that of a pregnant married lady. For six months there was no nausea, no discomfort of any kind. I saw her up to seven months, when the urine began to fall steadily in specific gravity until it reached 1004, but there was not a trace of albumen in it. I was called to see her soon after, and found her in convulsions, in which she died. We had here the worst form of kidney affection in pregnancy, but not a trace of albumen.

We have not yet a single satisfactory explanation of albuminuria, none of the hypotheses are demonstrable. The nearest probable cause is a diseased condition of the bloodvessels.

Dr. Bradley had met with many cases of transient albuminuria in cigarette smokers which had been relieved by discontinuing the habit.

Dr. E. C. Seguin called attention to a physiological experiment which supported Dr. Kinnicutt's theory, namely that in which the vena cava ascendens of the dog is tied and no œdema of the extremity or hind quarter follows but on producing vaso-motor paralysis by tying the sciatic nerve there is free transudation of serous material from the blood.

Another experiment in support of this theory also was the production of Basedow's disease artificially.

The lesion of the vessels regarded as a possible cause might be paresis of their muscular coat.

The discussion was closed by Dr. Kinnicutt.

Dr. Rudolf Tauszky read an amendment regarding the night medical service of this city which he proposed to submit to the next legislature of the State of New York. He asked for the endorsement of the Academy. The matter was referred to the Council.

The society then adjourned.

LECTURES.

CHRONIC DIFFUSE NEPHRITIS.

A CLINICAL LECTURE.

BY

FRANCIS DELAFIELD, M.D.,

Adjunct Prof. Practice of Medicine, College of Physicians and Surgeons, Visiting Physician Bellevue Hospital, Attending Physician Roosevelt Hospital, etc., etc.

CASE I.

History.—Male, æt. 39; workman, admitted on the 15th of Oct. Patient says that in the course of his occupation he has been a good deal exposed to cold and wet, but always had good health until two years ago; then, after taking cold, he had œdema of the feet and legs. He had œdema of the feet and legs for the first time two years ago, and at this time he noticed also that he passed a large amount of urine and had to pass it frequently; no vomiting, no headache, no disturbance of vision.

This first attack of œdema of the legs lasted five weeks and he was unable to work at that time on account of it. This condition accordingly disappeared and between this first attack two years ago and the last attack two weeks ago, when patient was admitted to the hospital, he was perfectly well, but was still passing a large amount of urine; then he took cold and had another attack of œdema of the legs and feet; and this reached considerable proportions, so that these were rather swollen, and he also had an attack of acute bronchitis at the same time. When he was admitted to the hospital he was passing 120 oz. of urine in twenty-four hours, without any diuretic. Sp. gr. 1.015; contained albumen and a few hyaline casts.

There were no other symptoms since the man's admission to the hospital on the 15th of October. He has been gradually improving, though there is still some little œdema of the feet and legs, and he has some fever. He is still passing a considerable amount of urine, sp. gr. of which is now 1.027. At the last examination there was no albumen and no casts present.

Heart's beat is somewhat acute, left apex is further out than it should be. There is no murmur; apex is displaced somewhat to the left.

Here we have a history of constitutional syphilis. He has chronic diffuse nephritis. There is hypertrophy of the left ventricle; large amount of urine passed

and long continuance of the disease are in favor of the atrophied kidney.

The amount of urine passed however is rather large for an atrophied kidney.

He has had œdema of the legs, and dropsy is common in the atrophied kidney. Waxy or amyloid kidney may result from constitutional syphilis. Diagnosis in this case is between simple atrophy and waxy kidney. It is perfectly possible to have at the same time atrophied and waxy kidney. All the waxy kidneys are not large white kidneys. A man may have large white kidney, and yet the blood vessels may be the seat of waxy infiltration, and in that case we would get a history like that of this man. The probabilities are that the man has suffered from one or another of the forms of waxy kidney; either large white kidney with waxy infiltration or atrophied kidney with waxy infiltration.

The high specific gravity of the urine does not belong to the waxy kidney at all. It has varied between 1.015 and 1.027; this is not characteristic of very large white kidney or atrophied kidney, or any of the forms of waxy kidney.

But in spite of that, I think we will have to accept this high specific gravity as an accident in this particular case.

Prognosis and Treatment.—Treatment is practical; being quiet in the hospital has resulted in improvement; interval between first attack and second was two years. He may go a year or less without another attack. Probably the œdema will come on again next fall. He should protect himself against exposure to cold and wet. He should avoid habitual use of alcohol. A recurrence at some time or other is pretty sure to come. In this particular case probably next fall.

CASE II.—Male, æt. 32, admitted the 26th of November. Three months before he was admitted patient noticed that his feet and legs were becoming œdematous, and at the same time that he had ascites. The swelling in his stomach came first, and the dropsy of the legs afterwards. This dropsy has continued up to the present time. He has been tapped three different times in other hospitals, the last time on Nov. 4th. He passes his urine frequently and in small quantities, has no headache, denies having used alcoholic liquors. At the time when he was admitted there was a good deal of ascites, and œdema of the feet, legs, and scrotum. The heart was pushed up by fluid, as was also the liver; the urine contained albumen, epithelial and granular casts—sp. gr. 1.016. The man has suffered a good deal from dyspnoea, apparently due to the pressure of the fluid. After his admission to the hospital the urine passed was in quantities from 45.15 oz., and for some time past the quantity has been as small as from 20.15 oz. On the 30th Nov. the abdomen was tapped, and 545 oz. serum were drawn off. He was relieved by this. The dyspnoea, nausea and vomiting which he was suffering from before the tapping, disappeared, and the amount of urine was increased. After the tapping he did pretty well for several days, and then the fluid began to accumulate in the abdomen again, and the amount of urine passed during the 24 hours began to decrease, and so it has been going on up to the present time. Yesterday his urine had specific gravity 1.016, contained albumen and granular and hyaline casts, and amount of urine passed was about 12 oz.

Gentlemen, you have heard the history of this case. We have then a man 32 years old, who dates the commencement of his sickness three months before his

admission to the hospital. At the time the first symptom noticed was dropsy, beginning in the abdomen, and afterwards involving the feet and legs. His urine was passed in diminished amount, and contained albumen, hyaline and granular casts. The man was tapped and relieved for a time, and then the swelling of the abdomen began to increase, and the dyspnoea, nausea and vomiting returned.

When we tap the abdomen we get the characteristic wave of fluid without any trouble. I get flatness on percussion as high up as the third rib; this means that the liver is pushed up by the fluid into the thoracic cavity; that shows that the yielding of the diaphragm in this particular case has been more marked than the yielding of the abdominal wall. This differs in different cases of ascites. In some cases the abdominal wall will yield to the pressure of the fluid a good deal and the diaphragm only a little. In other cases the diaphragm will yield and be pushed upward in the abdominal cavity, and the abdominal wall will yield but little. The abdomen is very tender; the liver is above the free border of the ribs, it is probably a small liver diminished in size. The splenic dullness cannot be made out because the liver and intestines are pushed up over the region where the spleen is seen. We have then at the present time marked ascites, tenderness over the whole abdomen, the liver pushed way up and from the appearance of the man's face, his general nutrition has suffered greatly. He is very much emaciated and his whole condition is exceedingly bad; he is probably suffering from the cirrhotic form of chronic diffuse nephritis. The cirrhosis in this particular case is giving trouble in two ways. In the first place it is producing dropsy to a very marked extent; he has a great deal of fluid in his abdominal cavity. The dropsy in these cases is a very common and serious feature. In addition to the dropsy the change in the substance of the liver has so interfered with its functions that the man's whole nutrition is suffering therefrom.

ORIGINAL ARTICLES.

ARSENIC IN THE TREATMENT OF LYMPHO-SARCOMA.

MR. EDITOR.

DEAR SIR:—Some recent success in the treatment of lympho-sarcoma prompts the present communication. I have very little to say, and perhaps nothing to say on this subject, which will be new to most of your readers; but I have at least a duty to perform in correcting a published statement of my own, made some years since, on the matter of treatment and prognosis.

It is no part of my purpose to give, at this time, my views or the views of others as to the causes, pathology and symptoms of the affection in question; but the reader will form a tolerably correct opinion upon all of these points by a repetition of the terms which have been employed by different writers to designate the disease. So far as my reading extends they are as follows: *Adenoid disease*, Southey. *Anæmia Lymphatica*, Wilks. *Adenæe*, Trousseau. *Diathese lymphogene*, Jaccoud. *Sarcoma of the glands*, Langenbach. *Lymphoma maligna*. By the English it is generally called *Hodgkins' disease*, Dr. Hodgkins' having been among the first (1832) to carefully study its characteristic phenomena, under the title "On some morbid appearances of the absorbent glands and spleen." Most writers, however, have adopted the name first

applied by Lucke, *Lympho-Sarcoma*. Virchow has adopted the same term.

My purpose is solely to call attention to the value of arsenic in the treatment of this hitherto very intractable affection.

In 1872 I wrote "Lympho-sarcoma is occasionally observed in connection with the lymphatic glands of the neck, forming enormous tumors, which are little amenable to treatment, and generally occasion death by their interference with respiration and deglutition."* My experience up to that time had furnished no examples of recovery, whether the lympho-sarcomata were found in the neck or in any other parts of the body; and I thought it proper to give this very unfavorable prognosis.

James H. Hutchinson, in an excellent paper read before the College of Physicians of Philadelphia in 1874, says: "No treatment has been shown to have the slightest influence in arresting the course of this disease; although, of course, various plans have been proposed."

It is my present opinion that the exceedingly grave prognosis given by myself and by Dr. Hutchinson, and probably by most other writers until a very recent period, is no longer justifiable; but that by a proper administration of arsenic, a certain proportion of these cases may be cured, and a still larger proportion greatly relieved.

I regret to say that my own limited personal experience as to the value of this agent in lympho-sarcoma will have to be given from memory, as I have no record of even the name of the person successfully treated, or of those relieved; and I would have hesitated to speak of them, except that I am able now to reinforce my conclusions by the experience of others.

About three years since a man consulted me who was by trade a carpenter, and about fifty years of age. He was a man of temperate habits, and had generally enjoyed good health. Several months before he consulted me the lymphatic glands on the left side of his neck began to enlarge, and when seen by me there was an enormous bosselated tumor occupying all the space between the ear and the clavicle, and extending from near the spine to the trachea. My impression is that it interfered some with both respiration and deglutition. His general health was greatly impaired, and although dependent upon his labor for living, he had for some time been compelled to suspend work altogether. His work-shop was in a basement, and to this circumstance his wife was disposed to attribute the disease—a supposition which seemed to me not improbable. It is scarcely necessary to say that he had taken advice and medicine from various sources, but chiefly from the dispensaries, and it was from one of them that he was sent or came to me to enquire whether I would receive him as a hospital patient and cut out the tumor.

It was not difficult to decide this question; and when informed that a successful operation was impossible; and that, inasmuch as the disease was a constitutional affection, and that lymphatic enlargements were, probably, already existing in other portions of the body, the operation if successful would be useless, he enquired what then could be done. Observing his anæmic condition, I determined to give him arsenic; but I had then no knowledge of its having effected a cure in any similar case, and I gave him no encouragement, except that his general condition might thus be improved. He was directed to take Fowler's solution

* General Treatise on Surgery, p. 691.

times daily, and to increase the quantity from time to time until, if his stomach would tolerate it, he took six drops three times daily. In about two weeks he returned to me improved in health and the tumor sensibly diminished in size. In about six weeks it was reduced to one-half, and at the end of three or four months it had disappeared entirely, and he had returned to his work. I have never seen him since, and think it may, for that reason, be presumed that it never returned.

This was to me a most wonderful result, and I have no other equally wonderful result to record; but my opportunities of seeing well-marked examples of this disease are not frequent. Recently, however, I have prescribed for two cases, both occurring in adults—in one, the glands of the neck being primarily affected, and in the other, the glands of the groin; in both of which there has been very manifest subsidence of the tumors under the same treatment. The final result is not yet, however, declared; but as some weeks have elapsed since either of these persons called upon me, I am led to suspect that the remedy has not proved entirely satisfactory, and that some one else has been consulted.

This closes my experience with arsenic in this affection: but I wish now to refer my readers briefly to such observations and experiences of other surgeons as my casual reading has brought to my notice.

In the "*International Journal of Medicine and Surgery*," Jan. 29, 1881, p. 89, occurs the following (a translation of a paper written by Dr. J. Israel, and published in the Berlin Klin. Wochensch. No. 52, 1880)—"The malignant lymphomata are, therefore, in the full sense of the term, *malignant tumors*, and yet, under certain circumstances, they are curable by arsenic.

"For the first authentic observation of the fact, in the year 1871, we are indebted to Billroth; next to him, some encouraging experiences of Czerter were published by Tholen, and, finally, all the cases which fell under Billroth's observations were collected by Winniwarer. All these prove, without exception, that in many cases arsenic possesses an indubitable influence in diminishing these tumors."

Dr. Israel then proceeds to describe a case which came under his own observation. A woman, æt. 65, enjoyed excellent health until January, 1879, when a swelling commenced in the region of the throat; soon the glands in the submaxillary region began to enlarge, and subsequently those of the neck lower down. When she was admitted to the hospital, February 16, 1880, she was in a miserable condition. The lymphatic glands were greatly enlarged on both sides of the neck, particularly on the left, where the enlargement extended into the pharynx; also the submaxillary glands, and the axillary glands. She was pale or greenish, had difficulty in breathing, in hearing, and in speaking.

She was ordered Fowler's sol. of arsenic, two drops three times daily. At the end of four weeks this was increased to six drops, and after ten days the amount was gradually diminished. At the same time Dr. Israel used an arsenical solution as a hypodermic injection into some of the cervical and pharyngeal tumors. At the end of nine weeks she was dismissed without any trace of the disease.

I have omitted to mention that, as a consequence of the injection into the pharyngeal portion of the growth, this portion swelled so considerably "that the necessity of tracheotomy almost presented itself."

Tholen has published also the results of treatment in four cases seen by him, and which I judge from the date of the report may include some cases not reported by him in his first communication, but I am unable to speak positively; of four cases, one was cured, two were relieved, and one died.—*London Med. Record*, Aug. 15, 1881; *from Arch. fur Klin. Chir.*

For myself I do not think it is at all proven that hypodermic injections of arsenic as practiced by Israel, are of any special value. Quite certainly they are of no more value than would be the injection of any other irritating agent. The value of arsenic in this disease evidently depends upon its constitutional effects; and especially upon its direct influence upon the nervous system, or upon its power to impart tone and vigor to the whole body. Various stimulating agents have been employed from time to time by surgeons in the case of both malignant and non-malignant tumors, by the method of direct injection into the substance of the tumors; with the pretty uniform effect of causing some inflammation, with increased swelling, and with the farther effect, in most cases, of perceptibly accelerating the progress, growth or fatal development of the disease. In a few very rare instances, according to my experience and study, a resolution of the tumor has been effected. When such agents, however, are employed in the case of tumors in the neck or pharynx, the temporary inflammation which they cause endangers life, by impeding respiration, or by interfering with the circulation of large blood vessels, or with deglutition. This is precisely what happened in the case reported by Israel, and by which the life of the patient was for a few days greatly endangered. It may be stated, as evidence in support of my opinion that those injections did not, in themselves, accomplish the remarkable cure effected by Dr. Israel, that the tumors which he did not treat by arsenical injections disappeared as rapidly as those which he did thus treat.

The employment of electricity as a mode of dispersing tumors, is subject to the same criticism, as the employment of arsenic subcutaneously, or of any other stimulating agent. Their effects are purely mechanical, and they are liable always to cause inflammation with increased swelling. I can at this moment recall the case of a gentleman with a tumor in his neck, who, after seeking my advice, consulted an electrician, by whom electricity was applied directly to the interior of the mass; in consequence of which the swelling was rapidly augmented, and in a few days he died of asphyxia.

Iodide of potash has been employed very much by surgeons in cases of lympho-sarcoma, and I have employed it myself, but in almost all cases, so far as I know, with negative results. Billroth, also, in speaking of this practice, says that when employed energetically in these cases it is apt to break down the general health more completely. At all events, the question as to the relative value of the iodide of potash, or of any other agent and arsenic, seems at present to be fully settled in favor of the latter.

FRANK H. HAMILTON.

CONDYLIC FRACTURE OF HUMERUS—REDUCTION AND TREATMENT BY FLEXION ONLY.

BY

THOMAS RYERSON, A. M., M. D.,

of Newton, N. J.

The files of the *Medical Record* for 1880 contain an interesting and instructive paper upon the application of the treatment named, as the heading of this article, to cases of fracture of the internal condyle with simultaneous dislocation of the radius backward. The author, Professor Markoe, seemingly adopted this treatment as the result of a *a priori* reasoning upon the subject.

Professor Markoe's paper recalled to the present writer a case that occurred in July, 1877, of transverse fracture of the whole humerus, a little above the epiphyseal junction, where this treatment, suggested by the diagnostic manipulations, was very successfully applied. It was with some degree of chagrin that this case was encountered, because previous cases of injury to, or near to, the elbow joint had not been very satisfactory. These previous cases had been two of this species of fracture, one of them coupled with splitting off of the whole internal condyle, besides fracture of the olecranon, and every species of elbow dislocation.

The results of his treatment of these various injuries had not been better than the average, as given by systematic writers. The principal difficulty had been in the two cases of fracture of both condyles off from the shaft of the humerus; and the obstacle to the relief of deformity had been the action of the supinator longus and the pronator teres, in flexing the short condylic fragment upon the forearm, which could not be prevented either by side splints or antero-posterior ones, applied to the forearm and arm, flexed at a right angle. It was all the same, whether the splints were of wood, gutta percha, pasteboard or tinned iron, and whether in one piece or jointed at the elbow. No justifiable tightness of roller applied to these splints would overcome the muscular action.

The case of 1877, which has suggested this article, was a simple transverse fracture about one inch, or inch and a half, above the internal epicondyle, and was found with the olecranon projecting backwards and the distal fragment tilted or flexed forward, the forearm being slightly flexed.

Motion upon the forearm and wide flexion brought all the parts into exact position and apposition, but the deformity returned when the limb was returned to its first position, and still remained when flexion was again made up to a right angle.

The treatment was at once suggested by these phenomena. The details of it are as follows: A roller having been firmly applied to the elbow and continued loosely over the joint, the forearm was flexed so that the fingers applied to the opposite acromion, and the limb was so maintained by a roller fastened at the wrist, carried over the shoulder, around the neck, across the shoulder again, and under the arm back to the wrist, and there fastened. The best fastenings are adhesive strips. The space near the elbow, between the arm and forearm, having been padded with cotton-wool, a roller stiffened with milk of calcined gypsum was applied, in three thicknesses, around the whole at the elbow and half way up the arm, and, of course, correspondingly on the flexed

forearm. Before this stiffened, the elbow was raised with a proper sling, so as to bring the ends of the bone closely together; because experience teaches that the gravitation of the forearm and lower part of the arm cause delayed or non-unions to occur more frequently in fractures of the humerus than elsewhere. After the plaster had set, the bandage was so far cut away as to afford full view of the joint; it having been carried so high as to maintain the steadiness of the limb without the lower part. To this end the interlacing tampon of cotton most greatly contributed.

The fracture was so simple, and the manipulations had been so careful, that very little inflammation of the soft parts supervened. Therefore the dressings were not taken down, for passive motives, before the eighteenth day. The subject of this treatment returned to his home at Harlem, with what seemed to be a perfect result. He can be induced very willingly to present himself at the office of any teacher of this branch of surgery, or even at a surgical clinique.

Hamilton's last edition of *Fractures and Dislocations*, tells us that in the great majority of eighteen cases of this fracture, the direction was obliquely downwards and forwards; the writer's three cases were either transverse or oblique in the opposite direction. But with care in making full traction before flexion, there can be no good reason why this treatment will not be precisely adapted to Hamilton's prevailing species of fracture of the condyles. It promises to give better flexion after union than the plan by flexion at a right angle.

Compound fractures of the humerus in this situation are not common. But it is an open question whether this method of treatment, or a modification of it, that will occur to any one, would not be admirably adapted for allowing full inspection and defining the wounded soft parts, when situated laterally or posteriorly.

The whole subject is presented to the profession for observation and experiment.

COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

DERMATOLOGICAL CLINIC OF PROF. GEO. H. FOX, M.D.
QUARTERLY REPORT.

BY

GEO. T. JACKSON, M. D., Clinical Assistant

All who are engaged in public practice know how difficult it is to follow up cases, and to see the full results of treatment. In the following notes on the more interesting cases which have presented during the three months ending Dec. 1, whenever the patients have come to us regularly I have noted the progress made by the treatment instituted.

Case 317. *Acne insularis*.—Sophie W—, æt. 19 single, October 3, 1881. For the past three years the patient has noticed pimples upon her face and shoulders, which always become more abundant directly after menstruation. She does not think that her face flushes after eating, nor does she blush very easily. At times she has thought that her nose became swollen. Appetite good; bowels regular; no discoverable dyspeptic symptoms. Menstruates regularly, and without special pain. Upon examination, large acne pustules are found scattered over face with some papules, and a very abundant eruption of acne upon the shoulders. Nose greasy.

Ordered: Ungt. Hydrarg. Co. [Bronson], viz.:
 R. Hydrarg. ammoniat, 2 parts,
 protochlor. 8
 Ungt. petrolei. 15 "

Case 333. *Acne vulgaris*.—Emma R.—, age 19, single, Oct. 24, 1881. For past two years she has had pimples upon face. Patient has a good deal of headache; lack of energy, becoming easily tired on exertion; and notices a bad odor from mouth in the morning. Bowels regular; appetite fair; sleep restless; urine dark-colored, and deposits abundant sediment. Menstruation irregular and painful.

Upon examination, discrete acne pustules and papules of small size, with a few comedoes, are found upon both cheeks and forehead. Patient well nourished, though somewhat anæmic; face flushes easily; her manner is bright and nervous.

Treatment: Order a vegetable and milk diet; stop tea and coffee; recommend plenty of exercise in open air. Direct her to wash face in hot water at night, and hot followed by cold water in the morning. Prescribe: R. Potassa acetat. 20 grms.; teaspoonful t.i.d. Oct. 31st, urine still dark. Walking gives backache. Order, R. Potassa acetat. in tr. cinchon. co.; teaspoonful t. i. d., and pil. triplex. Nov. 21st; much improved. Continue treatment as before.

Case 319. *Eczema Capitis*.—Wm. O'C., aged 3½ years, October 10, 1881. When about one year old, in the summer, patient had first attack of eczema, which at that time was general. In spite of treatment this continued until about one year ago, when the child was brought to us, and in two months was entirely cured. From that time till about two months ago the child was free from eczema, when it reappeared on head and ran a typical course. For the past year the child has been restless at night and cross during the day. Appetite good. Bowels regular. Was out of health while teething. Diet bad, being fed anything that the family had on the table.

Upon examination thick crusts are found all over the head, the hair being matted together. Child anæmic.

Treatment.—Regulate diet, and exercise in open air. Order to wash head with sol. boracis 3ij ad Oj, and apply ungt. cade 3j ad 3j.

Case 346. *Eczema Capitis*.—Gracie R., æt. 4 months, October 31, 1881. Four weeks ago mother first noticed small "pimples" on head, which became more numerous, broke down, discharged freely, matting the hair together and forming thick crusts. At the time of appearance of eruption on head the mother noticed redness of the buttocks. Takes breast freely, but is given it as often as she cries. Bowels constipated and only move with castor oil. Sleeps well. No trouble with urine. Does not fret much, but scratches head a good deal. The mother has washed child's head with Castile soap and water, and has tried to remove crusts with sweet oil.

Treatment.—Regulate times of feeding. Order ungt. idioform 10% in ungt. zinci oxid. November 6, child improved, Bowels still constipated. Continue ungt. and prescribe calomel in gr. ½ doses.

CASE 346—*Eczema Capitis*.—Thos. S., æt. 2 years, November 14, 1881. When child was five months old mother first noticed the eruption on top of head, which spread over whole scalp, and three months afterward came on face, where it lasted only one month. Has never left scalp since its first appearance, though becoming better in the summer. At eight months of age the child cut its first tooth. Was brought up on the breast, but fed whenever he cried, and now eats anything that is going. Bowels regular. Sleeps well.

Upon examination the head is found covered with thick crusts and hair matted together.

Treatment.—Wash off crusts with oil and soap, preliminary to further treatment.

CASE 349—*Eczema Universalis*.—Mary C., æt. 57, widow, November 21, 1881. Until February of this year patient never had any disease of the skin. Ceased menstruating when she was 45 years of age, and at the time of menopause was somewhat out of health, staying in bed for a couple of weeks at one time on account of a feeling of general weakness. Since then she has enjoyed fair health, though for some months previous to appearance of eczema she had been sleeping badly and was constipated. Last February head and feet became itchy, and head "broke out in lumps." Discharge accompanied eruption, and hair became matted together. From that time on patches of eczema broke out on different parts of the body.

Upon examination, patches of eczema are found on face, legs, arms, etc., of red color, covered with thin scales. Itches very much. Patient says that she sleeps poorly; appetite is poor; bowels constipated; urine heavy and dark colored, though normal in amount. She tells us that she has taken potash, and used vaseline.

Treatment:—Sal Rochelle, internally, and ungt. diachyli ext.

Nov. 28th.—Much improved. Repeat treatment.

CASE 352.—*Syphiloderma tuberculosum*. Mary D., æt. 32. Married. Nov. 21st, 1881.—Has been married twelve years, and has had five children at full term, with no abortions. Has buried one child, the youngest, at one and a half years of age. Had her last child three years ago. Up to about two years ago the patient was in good condition; then her hands swelled without any known cause and three months after that noticed a rash on feet, which itched slightly, and ulcers formed which up to this time had never healed. About one and a half years ago she had a rash on head, some scabs in hair, and hair fell out. She says that her husband is healthy, and has no spots on his body.

Upon examination, three large ulcerations are found on left foot, two on the plantar surface and one on the dorsum; on the right foot there are some six or eight, the plantar surface being almost completely taken up with them. These ulcers are punched out, with thickened gyrate edges, and exceedingly offensive discharge. On left knee, large ecthymatous patch, with red areola, and below it an old cicatrix, which patient says was a "lump." On right arm a large ulcer. All of these lesions, specially those on the feet pain her very much at night. On left hand between first finger and thumb a dry, scabbed, fissured patch.

She has a great deal of severe pain on top of head; is troubled with pyrosis; and has poor appetite. Bowels regular. Menstruation regular. Complains of burning in vagina, and leucorrhœa.

Treatment:—Potass iodide. Ungt. hydrarg.

Nov. 28th.—Greatly improved. Ulcerations healed. Continue treatment.

CASE 315.—*Herpes faciei*. Florence P., æt. nine years. Sept. 19th.—Two weeks ago child took a "heavy cold," and after two or three days of *malaise* vesicles appeared upon chin, lips, and nose, and from these centres spread over whole face so that at present the whole face is covered with an abundant crop of vesicles, considerable amount of crusts and scales, the vesicles being more or less grouped, and face be-

ing hyperæmic on account of the red areolæ of the vesicles.

Treatment: Ordered syr. fer. iod. Patient did not return.

CASE 321. *Zoster Femoralis*.—Bridget H—, æt. 46, Irish, October 10, 1881. For three or four years she has been troubled with dyspepsia, and has had patches of acne rosacea upon nose and both cheeks. She has been much troubled with rheumatism, but appetite has been good and bowels regular. She works very hard, and for past year has slept badly. No history of any injury or strain.

Upon examination, patient appears care-worn and anxious. Acne rosacea upon end of nose and both cheeks; patches small. Upon the anterior and inner surface of left thigh are two groups of herpetic vesicles, the vesicles discrete. In the groin of same side, enlarged inguinal gland. Herpetic groups painful on contact; otherwise they give so little trouble that patient came to clinic simply for the adenitis.

Treatment: Keep vesicles well covered with pulv. amyl.

CASE. *Zoster Inguinalis*.—H. C. M., æt. 33, U. S. General history good; bowels regular; no trouble with his digestion, and no account of injury or strain. Patient said he knew he was "going to the devil" through his bad habits, and is very nervous and worried.

Five days ago, while in his usual health, he was attacked with a sharp pain in left leg, and soon after noticed a couple of patches of vesicles in the groin, since which time he has slept very badly, and the pain in his leg has continued.

Patient very nervous and has a wild, worried look. Upon examination two groups of herpes vesicles are found, one immediately over the inguinal region, the other below and to the inner side. The groups are oval upon a slightly inflamed base, of nearly equal size, longest diameter being about two and a half inches; composed of pin-head vesicles closely pressed together, with turbid contents, and upon each group one large bulla is seated, rising up from about the centre.

Treatment: A protective ointment and a tonic.

CASE 250. *Zoster Lumbo-Femoralis*.—Wm. C—æ. 60, Irish, October, 1881. Patient has had pyrosis and other dyspeptic symptoms for some time. Bowels regular. General health fair. Sleep much broken. No history of bruise or strain. Tells us that he is a good deal worried by a son who leads a wild life. Two days ago, while in his usual health, he had a severe sharp pain in the "small of his back" and right leg, and noticed that a number of little vesicles appeared suddenly upon his right thigh. Pain in back continuous.

Upon admission, the patient seems a fairly well nourished man for his time of life. On examination we find on the anterior surface of right thigh principally in the area of distribution of the middle and internal cutaneous branches of the anterior crural nerve, six groups of herpes vesicles, varying in size, some having only three or four vesicles in them. Vesicles pin head size with clear serous contents, the groups being seated upon reddened bases.

Treatment—Palliative.

Two days after patient presented himself with a large herpes patch in right lumbar region, the patches on thigh having a number of large bullæ on them. Pain in back constant and sleeps badly on account of pain.

CASE 354. *Scabies*.—Lizzie and Eugene B—, æt.

18 and 8, Nov. 28th, 1881. About three month ago an older brother of the patients was attacked with the same disease and still has it. About two months ago Lizzie acquired the disease, and about one month ago Eugene followed suite. Eugene sleeps with the older brother, and Lizzie takes care of Eugene and is with him a great deal of the time.

Examination shows on Eugene excoriated papules over whole body; most marked about scrotum and genitals, where distinct and characteristic scratch marks are present, and on the scrotum an ecthymatous spot. On Lizzie large pustulo-papules on hands. No furrows could be found on either, but the peculiar cracking of the skin between the fingers was found in both, and on the girl some black headed papules between fingers. On Lizzie the trouble seems to be located only on hands.

Treatment:—R Sulph. precip.; bals. peru.; potass. iodid. aa 6 grs. Cosmoline 42 grs. Misce. Ft. Ungt.

CASE 338. *Nævus Verrucosus*.—Helen T.—æ. 27. November 6th, 1881. Six years ago first noticed hard protuberance on outer canthus of left eye, and shortly afterward a similar one on forehead. At monthly periods these seem to grow larger and become sore. When menstruation is past, they regain their former size and soreness leaves them. Never had any other skin trouble. Mother has same thing on neck.

Examination.—Upon outer canthus of left eye a papillary growth about the size of a split pea is located, but it does not prevent closing of the eye. A similar growth on forehead which is prominent with pigmented top. Two growths on left cheek which are smaller and more like papules.

CASE 324. *Psoriasis*.—Johan R.—æ. 10.—Oct. 10th, 1881. Up to last May the child's skin was clean, when at that time little "pimples" appeared on knees and elbows, which have spread since then and become scaly. Does not itch. Appetite good, bowels regular, sleeps well. Family history good.

Examination shows large patches of psoriasis on elbows, knees, legs and forearms, covered with thick white scales, and with slightly raised and reddened edges.

Treatment.—R, Syr. fer. iodid. 15 grms., Ol. morhuæ 100 grms., 3 i t. i. d.—Oct. 17, Ungt. hydrarg. ammoniat.

WIGHT'S ATOMIZER—A MODIFICATION OF RICHARDSON'S.



Has two points in its construction that may be described:

1. The second "bulb" of Richardson's atomizer is removed, thus dispensing with the rubber reservoir and the rubber tube going from the bellows is attached directly to the short supply pipe—as seen in the figure.

2. The bottle, holding the liquid solution to be atomized, is made large enough to leave some space over the liquid,—and this space is used as an air-chamber. In practice, the elasticity of the air in this air-chamber is sufficient to keep up a continuous spray. Of course this air-chamber takes the place of the rubber bulb.

I may state that I have been using this atomizer since the year 1874, when I first devised it. I have used it with an ordinary quart bottle, supplying the air by means of a condenser, in order to supply carbolic spray during amputations.

This atomizer has some advantages which may be mentioned:

(1). It is a very compact and simple instrument for the production of a continuous spray; and as a small bottle can be used, it will take up but little space.

(2). It is very convenient for applying an antiseptic or disinfectant spray in dressing wounds and ulcers.

(3). It is less expensive than the more elaborate atomizer of Richardson.

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK.

SERVICE OF R. F. WEIR, M. D.

EPIDIDYMITIS—NON-UNITED FRACTURE OF THE TIBIA.

CASE I.—*Epididymitis*.

This man had a stricture of the urethra which caused extravasation and sloughing of the floor of the urethra, and a fistula just in front of the scrotum. He was operated on before the class and his stricture divided, and he can at present pass at No. 32 sound.

In order to allow the healing of the urethral fistula he was taught to pass a catheter, and so not to allow any urine to pass through the fistula, and it is hoped in this way to cause its healing and to avoid any plastic operation.

But the frequent passage of the catheter over the prostatic urethra has set up an inflammation, and this has extended down to the epididymis, and has caused epididymitis. His scrotum is red, swollen and œdematous. There is a hard, painful tender lump on the posterior surface of the testicle. This inflammation of the urethra may be caused by any roughness or imperfection in the catheter, and it extends down through the vas deferens to the epididymis, and may involve the body of the testicle itself. When a man has double epididymitis he may become sterile from the blocking up of both passages.

Treatment.—This consists in the application of an ointment composed of gr. xxx. of iodoform to the 3 of glycerine. Combined with this may be added 3j of balsam of Peru to control the disagreeable odor of the iodoform. This form of treatment gives very good results.

A second form of treatment is to apply a bag of ice to the part. If this causes pain of the genito-crural nerve, or of the scrotum, a few layers of woollen cloth may be applied between it and the part. If it will do any good, it will be during the first twenty-four hours. If it does not relieve the pain in that time other treatment should be resorted to.

An old method of treatment was to make a poultice of tobacco and linseed meal and apply to the part. This will relieve the pain. Morphine may be substituted for the tobacco.

Strapping of the scrotum has been suggested in this disease. But compression will do little good, as it will take a long time any way to get rid of the swelling.

CASE II.—*Ununited Fracture of the Tibia*.

The most common bones, in which ununited fracture is liable to occur, are the femur, humerus, and tibia.

The causes are constitutional and local.

1. *Constitutional*:

- a. Lactation.
- b. Syphilis.
- c. Cancer.
- d. Any low state of the system.

2. *Local*:

- a. Loss of a considerable portion of the bone.
- b. Very great comminution of the bone.
- c. Interpositions of substances between the ends.
- d. The limb not being placed in a condition of rest.
- e. Splints put on too snugly.

Since the use of immovable splints has been common, non-union of fractures has been more common.

Some explain this by saying that the circulation is retarded in the limb; others by saying that unless you change the splint often, the parts become loose. In this case the parts had shrunk.

Treatment: The ends of the bone in this case have been rubbed together in the hope of, by that method, starting up a healing inflammation, but without success.

Now it is proposed to perform a more radical operation to start up inflammation in the periosteal cells and the ends of the bone. This is by the Braynard method, which consists in running a drill in and rubbing the ends to a considerable extent, and then putting on a plaster splint.

If this does not work we will allow him to walk around the wards with a crutch and bear some weight on the bones, and in that way set up an additional inflammation.

But if the desired result is not obtained, then resection will be performed.

But one point must be remembered in resection where only one bone is broken in the leg or forearm, and that is that the other must also be broken.

The operation on the leg is generally successful.

A German has proposed another method and that is, to put on a splint that will cause some pressure, and have an opening in the splint at the point of fracture. This will cause an œdema at the point and a passive congestion. An active congestion is what we want, yet in some cases the passive condition seems to do good.

An opening will be made in this case, both for this purpose and to enable us to see if there is any local inflammation produced by the operation, which consists in running a strong awl into the ends of the bones in several different directions.

FORMULARY AND POINTS IN PRACTICE

We insert the following formulæ from Berkeley Hill's Manual of Venereal Diseases:

THE MERCURIAL VAPOR BATH.

The apparatus consists of a lantern supporting a shallow saucer in the centre, surrounded by a deeper

one; the first receives the drug to be volatilized, the second contains water. Beneath these is a spirit lamp. A blanket or water-proof cloak is needed to enclose the patient, who sits naked on a wooden-seated chair, under which the lantern is placed. The length of time necessary for each bath varies with the form and quantity of mercury employed. Calomel is most frequently used, of which the average dose is 20 to 30 grains, requiring from 15 to 20 minutes for volatilization.

GARGLES.

Alum..... 120 grains.
Water..... 8 fluid ounces.
Dissolve.
Chlorate of potash..... 80 grains.
Water..... 8 fluid ounces.
Dissolve.
Perchloride of mercury..... 4 to 8 grains.
Dilute hydrochloric acid..... 24 minims.
Glycerine..... ½ fluid ounce.
Water to dissolve..... 8 fluid ounces.
Used in syphilitic ulceration of the throat.

URETHRAL INJECTIONS.

Before prescribing an injection, the patient should always be instructed in the method of using it. The syringe should be made of hard rubber, and should be short and wide, that one hand may work it easily. The nozzle, half an inch in length, should be bulbous at the extremity. When the injection is to be used, the patient makes water to clear out the discharge that has collected in the passage. This precaution taken, the patient inserts the nozzle into the canal, and pinches the penis with the thumb and forefinger of the left hand, *on each side of the nozzle, not above and below*. He then depresses the piston with the right thumb until the injection is thrown in. Unless the discharge come from the prostatic part, it is not necessary to inject more than about two teaspoonfuls at a time, but that much should be retained about two minutes before it is allowed to escape; if it has properly distended the passage, the fluid returns with a spirt from the meatus.

Sulphate of zinc..... 20 grains.
Extract of belladonna..... 60 grains.
Mucilage..... ½ fluid ounce.
Distilled water to..... 8 fluid ounces.
Dissolve.

Begin with two parts of water to one injection, and gradually lessen the quantity of water. This is suitable to begin with when some tenderness remains.

Alum..... }
Sulphate of zinc..... } of each 10 grains.
Sulphate of iron..... }
Sulphate of copper..... }
Distilled water..... 8 fluid ounces.
Dissolve.

This injection is to be diluted, at first with three times its bulk of water, and the strength gradually increased. Never to be used if the patient is not accustomed to injection.

Subnitrate of Bismuth..... 60 grains
Mucilage of Tragacanth..... 2 fluid drachms
Glycerine..... 6 fluid drachms
Distilled Water to..... 8 fluid ounces
Mix. Used in old gleets.

Tincture of Perchloride of Iron..... 40 to 160 minims
Distilled Water..... 8 fluid ounces
Mix. Commence with the weaker solution, and increase the strength gradually.

INJECTIONS FOR THE VAGINA.

Alum..... }
or Sulphate of Zinc..... } 60 grains
or Subacetate of Lead..... }
or Tannic Acid..... }
or Borax..... }
Water..... 20 fluid ounces
Dissolve. To be injected twice or thrice daily by means of Higginson's syringe or an irrigateur. Used in vaginitis, ulcers of the cervix, chronic uterine catarrh, &c.

CHANCRES AND ULCERS.

Sulphate of Zinc..... 1 to 3 grains
Compound Tincture of Lavender..... 5 minims
Distilled Water to..... 1 fluid ounce
Mix. Useful as a dressing for the initial lesion of syphilis, &c
Calomel..... 15 grains
Lime Water..... 5 fluid ounces
Mix. (Black Wash). Used for indolent sores.
Corrosive Sublimate..... 9 grains
Lime Water..... 5 fluid ounces
Mix. (Yellow Wash). Used for indolent sores.
Solution of Chlorinated Soda.... ½ to 1 fluid drachm
Water to 1 fluid ounce
Mix. May be used as a gargle.

IRITIS, ETC.

Solution of Sulphate of Atropia..... 60 minims
Distilled Water..... 4 fluid ounces
Mix. Used in iritis and corneitis. If there be conjunctivitis, 8 to 10 grains of sulphate of zinc may be added.

EXCORIATIONS.

Borax..... 60 grains
Glycerine..... 2 fluid drachms
Distilled water..... 10 fluid drachms
Dissolve. Use for excoriations and aphthous patches.

RAGAZZONI'S SOLUTION FOR HYPODERMIC INJECTION.

Red Iodide of Mercury.... 4 grains
Distilled Water to..... 256 minims
Iodide of Sodium..... Sufficient to dissolve the Iodide of Mercury.

Dose—10 minims.

SUPPOSITORIES FOR CHORDEE, ETC.

Morphia..... ½ to ½ grain.
Cocoa butter..... 10 grains.
Maix. To be passed into the rectum at bedtime.

SELECTIONS FROM JOURNALS.

A SUCCESSFUL OPERATION OF GASTRO-
MY FOR INTUSSUSCEPTION. By HARRY B.
ESTILL, M. D., Tazewell C. H., Va.

On the 3d day of October, 1881, Oscar Holly—a strong, robust, muscular man—was suddenly seized with a severe abdominal pain, of a griping or spasmodic character, referred to the neighborhood of the umbilicus. My father, Dr. J. M. Estill, was immediately summoned, who exhausted all the known remedies for mechanical obstruction of the bowels, viz: catharsis, copious enemata, opium, etc., without result.

He continued to treat the patient upon general principles, until Saturday morning—five days after his attack began—when, according to previous arrangements, he started for the meeting of the Medical Association of Virginia at Old Point Comfort, and I, who had been absent in the meantime, saw him, at 2 o'clock, on Saturday morning, for the first time. I found him with coldness of the skin, prostration, distressed countenance, persistent constipation, constant vomiting entirely of a stercoraceous character, abdomen tender and very tympanitic, with a slight tumor, dull upon percussion, immediately to the left of the umbilicus. From these symptoms, and the history of the case, I diagnosed intussusception or invagination; and decided that an operation was the only remedy by which to give my patient a chance for life.

Accordingly, on Monday morning, the 10th day of October, and the 8th day of Holly's illness, I, with the kindly assistance of my friends, Drs. A. S. Huffard and Thomas Witten, performed the operation of gastrotomy, opening the abdomen between the umbilicus and pubes, along the linea alba, five inches, through the peritoneum; and passing my fingers to the supposed point of obstruction, I found the diagnosis to be correct, the invagination occurring in the small intestines (jejunal) immediately to the left of the umbilicus. The gut below the obstruction was very much engorged, and presented every appearance of acute enteritis. The adhesions were pretty firm, but with moderate force they separated. The wound was closed with sutures, the peritoneum being included; but, on the fourth day, as considerable peritonitis had supervened, the sutures were removed and plaster substituted therefor. The peritonitis very readily yielded to treatment; the temperature did not exceed 100° F., and the pulse did not reach 100. I should have mentioned that the antiseptic method (Lister's) was used throughout.

On this, the 22d day after the operation, the patient is able to walk, and in a few days will be able to engage in his usual avocation.—*Va. Med. Monthly.*

A WALK-ABOUT CASE OF TYPHOID FEVER. By PHIL. S. RIDDELL, M. D., Woodstock, Va.

On Friday night, September 2, 1881, I was called to see Henry H., aged 13, who was suffering with pain in his bowels simulating colic. He had been suffering on the previous night from pain in the bowels and vomiting. Dr. Campbell saw the case during the day, and prescribed bismuth and saccharated pepsin with laudanum, gtt. viij, every three hours until relieved. His pulse on Friday night was 108; temperature 101½; respiration hurried; considerable tympanites, with some tenderness on pressure over the abdomen, but not marked.

Sept. 3d, 8 A. M. Patient comfortable, but still tympanitic; pulse, 97; temperature 101½. Patient lying on his back with his knees drawn up. First took milk freely. At 8 P. M., the patient was comfortable and expressed himself as feeling much better. No action from bowels.

Sept. 4th, 1:30 A. M. I was called to see the patient on account of a return of the abdominal pain and distress, which was now accompanied by vomiting, increased tenderness and tympanites. Dr. W. H. Triplett, of Washington, D. C., who was here on a visit, was called in consultation (Dr. Campbell being out of town). We found the temperature 102½, pulse 140; countenance anxious. A full history of the case re-

vealed the fact that the boy had had diarrhoea for several weeks previous to the attack of cramps. He also had bleeding from the nose and a capricious appetite, a furred tongue, but was, nevertheless, out of the house during the day, and had been fishing and engaged in other diversions common to boys of his age, but was considered out of health by his family. The amount of peritonitis which was now developed, taken in consideration with other symptoms, confirmed the belief that the case was one of typhoid fever with perforation, and more especially since there had been no traumatic cause. The opium in full doses was continued, as also the warm applications. At 8 A. M., the pulse was 100, very small; countenance anxious. Tympanites, but no tenderness on pressure; patient expressed himself free from pain. The condition was realized in a case of peritonitis which immediately preceded dissolution. He survived till 6 P. M.

Post-mortem.—Peritoneal cavity filled with exudation products, serum, albumen, and pus. The visceral and parietal peritoneum universally involved. Mesenteric glands much enlarged and intensely injected. There was ulceration and perforation of the small intestines near the cæcum, and several grapestones, together with feculent matter, were found in the peritoneal cavity.—*Va. Med. Monthly.*

A MODIFICATION OF LISTER'S ANTISEPTIC DRESSING.

In the *New York Medical Journal and Obstetrical Review* for December, 1881. Dr. James L. Little, Professor of Clinical Surgery in the University of the City of New York, states that, while having full confidence in Mr. Lister's antiseptic method, he, like many others, has long recognized the great difficulty that must need be experienced by the general practitioner in attempting to carry out the minute details of the dressing. Dr. Markoe's "through drainage" was a decided step in this direction, but it is appropriate only where drainage is necessary, and, simple and efficient as it is, it requires a certain degree of attention, which, while easy for the hospital surgeon, is not sufficiently so to guarantee its extended use by the physician in charge of a large general practice. Aside from the difficulties incident to the application of Mr. Lister's dressing, it has been found that surgeons in country towns distant from large cities have great trouble, and often are unable to procure good antiseptic gauze at the time when it is needed. The gauze sold in most of our stores is frequently not in an antiseptic condition, and, as Dr. R. F. Weir has demonstrated (*N. Y. Med. Jour.*, January, 1880), even when kept wrapped up in rubber cloth and in a box, it will deteriorate in a few months. Furthermore, the materials necessary for fully applying Mr. Lister's dressing are somewhat expensive, a very important fact when we consider that the majority of accidents and operations that call for this procedure occur among those who are able to bear but little expense. Dr. Little has for several years been surgeon to a large factory in New York, in which three thousand hands are employed, and where injuries by machinery are quite frequent. These injuries consist chiefly of wounds of the hands and fingers, caused by their being caught in the cog-wheels and other parts of the machinery. In many cases the fingers are torn off, tendons are pulled from their sheaths, joints are opened, and the hands are often severely crushed and lacerated. In all of these cases he has, for the past six years, been using the following antiseptic dressing: Having put the parts in

a condition for dressing, he washes the wound in a solution of carbolic acid of the strength of one to twenty; he then covers the parts with a thick layer of borated cotton, and then snugly and evenly applies a simple gauze bandage. At first he used bandages made of antiseptic gauze, but for the past three years has used those of plain uncarbolicized cheese-cloth. These thin bandages distribute the pressure more evenly over the cotton, and are more easily saturated with fluids than those made of unbleached muslin. The patient is instructed to keep the outside of the dressing wet with a solution of carbolic acid of the strength of one to one hundred. The author employs Squibb's solution of impure carbolic acid, which is of the strength of one to fifty, and which, when mixed with an equal bulk of water, gives a solution of the desired strength. The parts should be kept at rest, and the dressings may be left undisturbed for several days, unless there is pain, rise of temperature, or discharge through the dressings. These conditions are always to be considered indications for renewing the dressing. In many cases, where rubber drainage-tubes have been used, they may be removed at the second dressing, and, if catgut has been used for sutures, this second dressing can be allowed to remain on for an indefinite period. In a number of cases of lacerated wounds the first dressing has been allowed to remain on until the wound has entirely healed. In these cases the external use of carbolic lotion was discontinued after the fifth or sixth day, and the dressing would become dry and hard, the wound healing, as it were, "under a scab." The patient should be instructed to loosen the bandage at once if any pain occurs. Out of nearly three hundred cases of open wounds involving the fingers and hands, thus treated, not one has been followed by inflammatory symptoms. Extensive lacerated wounds have healed, and dead tissue has sloughed away, without giving rise to any of the so called symptoms of inflammation. Neither pain, redness, heat, swelling, nor constitutional disturbance has resulted. In no case has there been reddening of the lymphatics or tenderness of the glands. No counter-openings have been necessary. Pain has been entirely absent, so that anodynes have not been needed, save in a single case, and that for one night only, and to control slight restlessness. The author thinks these results the more remarkable from the fact that many of the patients were in an unhealthy condition, some suffering from anæmia, some from cardiac disease, phthisis, and the like. After giving a case of amputation of the leg, exemplifying the method, Dr. Little expresses the opinion that the value of cotton-wool as an antiseptic dressing is not fully appreciated. Used in the way he has indicated, it seems to be as perfect an antiseptic dressing as the gauze and other materials recommended by Mr. Lister, while at the same time it is free from all objections that pertain to the latter, and which materially hinder their use by the general practitioner. If applied in sufficient quantities around an open wound, it protects it thoroughly from the "floating matter of the air" which is supposed to be the real inciter of suppuration. It is the best germ-filter known to us. To insure success in cases where the dressing is used, full precautions as to rendering the instruments, sponges, and the hands of the surgeon aseptic, and the use of drainage-tubes if necessary, should not be neglected. Catgut or torsion should be used to arrest hemorrhage. The spray may be resorted to if thought necessary. At the second dressing the author now usually applies carbolicized

oil, of the strength of one to twelve, to the wound, to facilitate the removal of the cotton, which is otherwise apt to adhere after the first dressing.

MEDICAL NOTES AND NEWS.

The Journal of Nervous and Mental Diseases, heretofore edited by Dr. J. S. Jewell, and published in Chicago, has been transferred to this city, and will henceforth be under the sole editorial management of Dr. William J. Morton. Dr. Morton is an accomplished physician, and an enthusiastic worker in his profession, and we therefore extend him a cordial welcome to the ranks of journalism, and predict his success.

The medical world of Paris is somewhat startled by the report—which, unlike most reports, is authentic—that the Minister of the Interior will shortly publish a decree, according to lady medical students the right to compete for the house-surgeonships, hitherto denied to them. The agitation, as is natural, is most marked among the class directly interested, the house-surgeons. Their concord is not on purely scientific grounds: it is not fear that the medical reputation of their order is in jeopardy. It has another source, which may be described as domestic. What will become of the *salle de garde* (the dining room and place of reunion)? "*Nous ne serons plus chez nous*" (we shall no longer have our house to ourselves)! is the cry. Perhaps M. Quenten, the energetic and amiable head of the *Assistance Publique*, may solve the difficulty and make life easy to both lady and gentleman house-surgeons by giving them separate *salles de garde*.—*British Medical Journal*.

Professor Pirogoff.—The death of Dr. Nikolaus Pirogoff is announced by telegram from St. Petersburg. He was Professor of Surgery to the Medico-Chirurgical Academy in St. Petersburg, and a member of the consulting staff of several hospitals in that city. In 1840 he brought out a valuable treatise on the division of the tendo Achillis in orthopædic surgery. He also wrote on cholera, on the surgery of the arterial trunks and of fasciæ, and on the medical aspects of the Caucasus, and on topographical anatomy. His work on this last subject forms a fine atlas of anatomy, as illustrated by frozen sections. It is, however, with military surgery that his name will ever be most closely associated. He is the medical historian of the Crimean and Circassian campaigns; and also wrote a report on the permanent and improvised military hospitals in Germany and Alsace-Lorraine during the war of 1870. The late Professor is probably best known to Englishmen in association with one of the numerous methods of partial amputation of the foot. Last June we announced the celebration of the fiftieth anniversary of his commencement of official life.—*Brit. Med. Jour.*

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EDITORIAL.

THE ATTEMPT TO EXPEL DR. BRYCE FROM THE MEDICAL SOCIETY OF VIRGINIA.

To assert that a principle so interwoven with the prosperity and unparalleled growth of our country and its institutions, as the freedom of the press, should be held inviolate, is but to give voice to the belief of every intelligent man in the land.

It would seem superfluous even to call attention to the importance of maintaining and guarding this grand principle were it not for the fact that we are sometimes reminded that there still exists a remnant of that mediæval spirit which would deny expression to adverse opinion or unfriendly criticism, though it be given honestly and in the belief that it reflects the feelings of many besides the individual.

We can not help feeling that the exhibition of such a dictatorial spirit, which would attempt to trammel the precious liberty of the press by controlling the journalist's pen, must in this enlightened age react on its exponents.

It is, therefore, with sorrow that we see some of our friends of the Medical Society of Virginia attempting so hastily, without a proper regard for the rights of the individual and without the formality of a proper hearing, to expel a member, because, in the heat of journalistic criticism, he has commented unfavorably on the management of the Society.

Although we believe that the liberty of the press is sometimes abused and deplore the fact that the journalist under the pretense of a public grievance may gratify his private spite and revenge his personal wrongs, we nevertheless think that the day has gone by when interference with the proper and most useful privileges of the journalistic office will be tolerated.

Dr. Bryce may or may not have transcended the bounds of impartial criticism in exclaiming against the management or mismanagement of the affairs of the Medical Society of Virginia.

Be this as it may, it furnished the Society with no excuse for their inconsiderate action in denying him the right of a deliberate hearing by his peers, and in open session of the Society.

From the report of the committee who were so hastily convened to consider his case, it appears that there has been misapprehension and misunderstanding on both sides, and that a private difference has been magnified, by both alike, until it has assumed proportions its want of importance does not merit, and obscured for a time the friendly feelings that should be maintained by co-laborers for the general weal.

The committee report that Dr. Bryce is willing to admit that he was in error in regard to some of his editorial statements to which exception has been taken. Why cannot the Society, who feel aggrieved, be as frank, and confess to having acted over-hastily and ill-advisedly, and unjustly condemned, without a sufficient hearing, one of their own medical family whose weapons for the advancement of the cause were just as free from stain, though perhaps more trenchant, but on that account not less useful than their own?

"A house divided against itself cannot stand," and we trust our Southern friends may settle their difficulty as becomes gentlemen, by a frank confession of error, and, with the strength born of union, go forth together to fight the foes of medical progress, rather than waste their force and ammunition on internecine strife.

BOOK NOTICES.

A Handbook of Uterine Therapeutics and of Diseases of Women. By Edward John Tilt, M. D., Past President of the Obstetrical Society of London, etc., etc. Fourth Edition. Wm. Wood & Co. New York. 1881.

The author states that the guiding principles of the present work may be summed up in the following propositions:

Firstly, The paramount importance of female hygiene for the relief, cure, and prevention of diseases of women.

Secondly, The constitutional origin of many diseases of women, as well as the impossibility of curing them and of preventing relapses unless the treatment comprehends such measures as are known to favorably modify constitutional taints.

Thirdly, The possibility of curing most diseases of women without surgery, by the better application of old familiar remedies and sound hygiene.

Fourthly, The utter impossibility of curing aggravated forms of the most common uterine affections, unless surgery be combined with medicine and hygiene.

The author has in the main adhered to these prin-

ciples and has in consequence presented a common-sense discussion of a much murdered subject and a very useful array of therapeutic hints on the management of uterine disease—although not on a par with a work such as “Atkinson’s Therapeutics of Gynecology and Obstetrics,” it is nevertheless in its present form a useful contribution to the literature of the subject.

The Opium Habit and Alcoholism—A Treatise on the Habits of Opium and Its Compounds: Alcohol, Chloral Hydrate, Chloroform, Bromide Potassium and Cannabis Indica—Including their Therapeutical Indications, with Suggestions for Treating Various Painful Complications. By Dr. Fred. Heman Hubbard. Published by A. S. Barnes & Co., New York, 1881. Price, \$2.00.

From the number of recent additions to the literature of this subject it will be inferred that the habits involving abnormal stimulation are greatly on the increase at the present time and are demanding better recognition and treatment by the profession.

Dr. Hubbard has gathered many highly interesting and important facts regarding the nature of these habits, their formation, peculiarities of manifestation, and treatment, although these are not grouped and arranged in the clearest and most assimilable way.

The text is interspersed with histories of typical cases and formulæ which have proved serviceable in treatment.

The Nurse and Mother—A Manual for the Guidance of Monthly Nurses and Mothers, Comprising Instructions in Regard to Pregnancy and Preparation for Child-birth, with Minute Directions as to Care during Confinement, and for the Management and Feeding of Infants. By Walter Coles, M. D., Consulting Physician, St. Ann's Lying-In Asylum, St. Louis, etc., etc. Published by J. H. Chambers & Co., Chicago, 1881.

In this little manual the author has attempted to replace many injurious popular superstitions and traditions, by the teachings of enlightened common sense and the results of scientific study and experience.

It is an unconventional talk on the practical aspects of a most important subject, and though its ostensible object is a difficult one to achieve, if it accomplishes it in any degree it will have served a most useful purpose.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, DECEMBER 14, 1881.

Dr. Satterthwaite, the president, presided.

The minutes of the preceding meeting were read and approved.

Dr. F. N. Otis taking the chair, Dr. Satterthwaite, for a candidate, presented a specimen of

PURPURA HEMORRHAGICA.

The patient, a native of Ireland, 35 years old, was an inmate of St. Luke's Hospital. Before admission had an attack, supposed to be malarial in origin, marked by severe chill. Previous to that was in perfect health. The chill lasted three-quarters of an hour and was accompanied by headache, nausea, pain in the back and limbs, fever, sweating and hemorrhagic discharge from

vagina and bowels, and appearance of ecchymotic spots on the back of the hands, and inner surface of the cheeks. She also spit blood. She suffered from anorexia and intense thirst. She was given ergot, digitalis and chloride of iron. On the following day patient had hemorrhages from stomach and fainted, remaining unconscious till death. One-sixth grain of ergotine was given hypodermically every two hours, and under this treatment the patient seemed to improve; the bleeding diminished. Wherever the needle pierced the skin hemorrhagic spots appeared. The pulse became feeble and rapid, and on the fifth day after admission the patient died. Examination of the blood had shown the relative number of red and white corpuscles 3 to 150. Post-mortem: ecchymotic spots were found generally distributed over the hands, lips, eyelids, etc. Abdominal cavity contained a small amount of bloody fluid, and there were hemorrhagic spots beneath the endocardium. Mucous membranes colorless; hemorrhagic spots beneath the capsule of the liver. The colon was filled with grumous blood. Vagina congested. Uterus contained a fibroid tumor.

After thus giving the history, Dr. Satterthwaite remarked that this was the first specimen of the kind he had seen. An interesting fact in connection with this case was, that there was no urticaria, though this was generally present in cases of purpura hemorrhagica.

Dr. Mary Putnam Jacobi remarked that multiple hemorrhages do not depend upon alteration in the fibrin of the blood, but upon changes in the coats of the blood-vessels. She alluded to a case in her own practice of multiple hemorrhage occurring in a child two years old, the attacks subsiding spontaneously, but recurring and being accompanied by febrile disturbance. After the fourth attack she had succeeded in controlling the fever and hemorrhage, and preventing a recurrence by the administration of salicylate of soda.

Dr. Satterthwaite alluded to the fact that these hemorrhages were apt to be symmetrical, which was interesting to those who regarded them of neurotic origin.

Dr. Otis in this connection asked if there had been any special nervous shock or impression in the case narrated by Dr. Satterthwaite. Dr. Satterthwaite replied that there had not been.

Dr. Otis also alluded to a case of passive hemorrhage from the bladder, which had been controlled by ergot.

Dr. Nathan Bozeman presented a

CYST OF THE PANCREAS.

which had been mistaken before removal for ovarian cyst.

The patient was the wife of a physician of Texas, 41 years old, robust, and weighed 200 pounds. She had been perfectly healthy up to seven years ago, when she began to suffer from pain in the right inguinal region, hip and thigh, and her abdomen began to enlarge.

This gradually progressed up to six or seven months ago, when she was examined by an eminent physician of New Orleans, who diagnosed ovarian cyst. She was subsequently sent to me, and I also thought the tumor ovarian, and decided on operation. This was done December 2d. Instead of ovarian cyst, I found the tumor attached to the pancreas at junction of outer one-third and inner two-thirds, at the point where the ball was found encysted in the case of Mr. Garfield.

The patient had been prepared for the operation by administration of salicin 15 grs. t. i. d., and was thoroughly cinchonized the day of the operation.

The patient after operation progressed as satisfactorily as any case of ovariectomy. There had been no symptom of interference with the function of the pancreas before operation.

Dr. Porter presented a specimen of

COMPRESSED LUNG,

secondary to effusion into pleura and to empyema. Also a specimen of

SARCOMA OF LEFT KIDNEY,

which was attached to stomach and pancreas, and there was secondary deposit in the heart. Also a third specimen of

PRIMARY CANCER OF THE BLADDER

in the horse.

Dr. F. N. Otis presented a specimen of

BONE FOUND IN AN INDIAN MOUND

at Alexanderville, Ohio. It had been forwarded to him from Washington by Dr. Huntington, Assistant Curator of the Army Medical Museum.

It was interesting from the fact that the question had arisen as to whether or not it exhibited the lesions of syphilis, and it was thought that it might throw some light on the subject of prehistoric syphilis.

The bone had been sent to him to ascertain if it showed any evidence of syphilis, and he had promised to present it to the Pathological Society for their examination.

Attention had been called to this bone in an article on prehistoric syphilis, by Gustave Bruhl, in the *Cincinnati Lancet*, of May, 1880.

The specimen was evidently of great antiquity, and with the view of contrasting it with normal and also with well-authenticated syphilitic bones, he presented specimens of these also.

He believed that it was pretty well settled now in pathological histology that there was nothing specific in syphilis of bone. That osteitis, caries, and necrosis were texturally the same when associated with syphilis as when occurring from other causes.

He believed, however, that we might occasionally decide, with probability of being correct. For instance, where the ossific deposits or nodes were multiple and symmetrical, as when occurring on both tibiae, and especially when associated with bony deposits, at points protected from ordinary injury, as on the inner tables of the skull, such coincidence would give strong support to the conclusion that the origin of the trouble was syphilitic. But when it is considered that rheumatism, rachitis, traumatism, and other causes of periostitis may, equally with syphilis, produce the eburnated variety of exostosis, it is readily seen how difficult an absolute diagnosis may become.

In the present specimen there is no exostosis, simply a hypertrophy, partly of the cancellous and partly of the eburnated variety—just what is seen in parenchymatous osteitis from simple causes.

Dr. Otis could not see in the specimen anything which would lead him to suppose that the diseased condition present was of syphilitic origin.

He continued: "For my own part, I recognize only one kind of disease of bone which I believe characteristic of syphilis, namely: that to which Virchow has given the name of "dry caries" found in the bones of the skull and due to a deposit of gummy material. The external table only, or both tables may be destroyed. The integument is

not involved. The disease is characterized simply by depression of the bones without pain or ulceration.

I have never heard of or seen this form of dry caries arising from any other than a syphilitic cause.

Dr. Peabody stated that in his opinion the appearance of the pre-historic specimen presented was in no way different from that presented in bones which had been the subject of ordinary osteitis. The thickening which it exhibited could be easily explained by the existence of inflammatory processes independent of specific disease.

Dr. Satterthwaite asked Dr. Otis if Virchow did not consider the dry caries referred to as composed of specific material. Dr. Otis replied that Virchow made the statement that he (Virchow) believed this affection peculiar to syphilis; basing this belief not on any specific element found in this lesion, but on the fact that the chief characteristic of *dry caries* was the entire absence of suppuration. Dr. Otis does not think the lesion in question can be correctly termed a *caries*. It is not suppuration or death of bone. The loss of bony substance which occurs is plainly due to absorption *i. e.* fatty degeneration from pressure resulting from the presence of gummy material deposited or rather imprisoned in the cancellous structure of the bone, and further, this gummy material does not differ in its appearance or physical properties from the gummy material deposited in the soft tissues. When caries or death of bone occurs, more or less suppuration is inevitable. Analogous to this is the absorption of the gummy material with cicatricial depression and without suppuration in the tubercular syphilide.

Virchow states that the chief characteristic of the so-called dry caries of syphilis is *the entire absence of the suppurative process*. In closing, Dr. Otis remarked that Rindfleisch (in his pathological histology) states distinctly that there is nothing texturally different in the osseous inflammations, caries and necrosis of syphilitic origin, from that resulting through non-specific causes.

Dr. Gerster exhibited two specimens of

FLOATING BODIES REMOVED FROM THE KNEE JOINT

of different patients.

They illustrated the two varieties of floating bodies met with in the knee joint, viz: Those which are chipped off as the result of traumatism and those which were formed by arborescent growths from the synovial membrane which become calcified and detached.

The first specimen had been taken from the joint of a patient at the German Hospital by Dr. Gerster. The body was fixed, and, incision being made, was easily removed. The synovial membrane was sutured and primary union took place.

The second specimen had been removed from a girl of 14. There was no history of traumatism. It was a villous growth originating from a mass of connective tissue. The child was laid up, and surgeons had advised that nothing be done. Dr. Gerster had, however, determined to operate, and accordingly did so Dec. 5th, and removed a villous growth 1½ inches wide by 1 inch in length. Drainage-tubes were inserted, and the case progressed favorably after two or three weeks. When cicatrization had taken place he proposed to use passive motion.

Dr. Gerster also alluded to a case in which inability of the joint from this cause had been relieved by the patient's impacting the body and crushing it.

Dr. Elsberg presented a specimen of

FIBRO-MYXOMA OF LARYNX,

with an interesting history. The patient was a well-known physician who had objected to operative procedures, by which death might have been averted.

Dr. J. L. Smith presented a specimen of

LUNG, LARYNX, AND TRACHEA, THE SEAT OF DIPHTHERITIC INFLAMMATION.

He wished to elicit a discussion as to the best solvent for diphtheritic membrane that can be employed with safety. In experiments he had made to determine this he had concluded that a solution of liquor potassæ and lime water, 2 parts of the former to 40 or 50 of the latter, was the best.

Dr. Elsberg remarked that he had made some experiments in the same direction, and found bromine 1 grain to the ounce of water better than lime water and potash.

The Society then went into executive session.

LECTURES.

INTERNAL URETHROTOMY,

A CLINICAL LECTURE

BY

FESSENDEN N. OTIS, M. D.,

Lecturer on Venereal and Genito-Urinary Diseases, College of Physicians and Surgeons; Attending Physician Charity Hospital; Consulting Surgeon St. Elizabeth's Hospital, Etc., Etc.

Dr. Otis briefly narrated to the class the subsequent history of the case of perineal section operated upon at the Charity Hospital clinic, some weeks since, describing the condition of the patient, which necessitated the subsequent operation by internal urethrotomy, and giving in detail the method of performing the operation and the method to be adopted in examining for stricture of the urethra.

The following is a brief abstract of the lecturer's remarks:

Gentlemen: Lithiasis, and the consequent passage of calculous material through the urethra, may set up inflammation of its mucous lining. Plastic material is effused, and stricture may result though the inflammation is not specific in character.

This man had perforation of the urethra at some point. I attributed it to folliculitis, as there was no evidence of any recent acute inflammation, resulting in abscess, to account for it. He had had a urethral discharge for several years, but no difficulty in passing urine; therefore, I could only attribute the infiltration of urine, which subsequently occurred, to follicular perforation of the urethra through ulceration.

In this case the evidence of infiltration was first seen in the swelling of the scrotum. On examination we found a very small urethral orifice, practically a stricture. Behind this there were three points of stricture of 24 F between $2\frac{1}{2}$ and $3\frac{1}{2}$ inches, which were then found contracted to mm, assuming, first, that the normal calibre of the urethra was 34, as inferred from the proportional relation, the penis being $3\frac{1}{2}$ inches in circumference. After dividing the orifice, we introduced the urethrometer, which is an instrument arranged so as to contract or expand a bulb synchronously with a hand on a dial. To protect the patient and the instrument, the bulb is covered with a rubber cap. When closed or unexpanded the bulb corresponds to No. 15 of the French scale. The instrument is made with springs, and on retracting the rod the arms expand to the size indicated on the dial.

This instrument was passed to the bulbo-membranous junction, and turned up to 34. We turn the instrument until the patient expresses a sense of fullness, not of pain, and so that it is easily movable; by this means ascertaining the normal calibre of the urethra. The bulb being arrested at a point of stricture, we turn slowly down until it passes through the contracted portion, the difference on the dial indicating the amount of stricture.

The calibre of the middle penile portion is the normal calibre of the urethra, the average difference between the bulbous and the anterior urethra being two millimetres.

You will remember the arrangement of the fasciæ which separate the anterior and posterior penile chamber, and how infiltration might occur in the turn, or passing through the cribriform fasciæ, reach the groin.

While we could not ascertain the exact locality of the follicular opening, we could by a process of exclusion arrive at the fact that it was near the posterior border of the stricture that the departure occurred. It was this stricture also that delayed the healing of the perineal opening. In 99 cases out of 100 where perineal fistulæ occur there is more or less obstruction to the urine in the anterior urethra. Even with no antecedent gonorrhœal disease we may have stricture from various other causes, behind which folliculitis may cause perforation, resulting in perineal fistula or in acute infiltration of urine into the surrounding tissues. Yesterday I introduced in the case under consideration the dilating urethrotome and divided the strictured urethra to its normal calibre. I then passed a No. 34 solid steel sound. The instrument used for dividing the strictures is called the dilating urethrotome. This consists of a pair of parallel bars, connected by short arms. The upper is traversed by a staff terminating in a narrow blade. At the extremity of the bar is a slot concealing the blade. These bars are capable of being separated to 45 millimetres of the French scale.

When we come to consider the nature of every stricture, that it is made of plastic material, which comes to be fibrous and resilient, we can readily see that a knife passing across it without first making it tense, will not sever it, as we can demonstrate by making the attempt on an elastic rubber band, which will illustrate in some degree the resistance of the stricture tissue.

To make sure of division of the stricture, therefore, we must fix the stricture, we must remember that strictures are very resilient and are apt to return to their original size, unless completely divided. It is, therefore, necessary to make the strictures tense by some instrument, which will show the degree to which the tissues are being stretched.

We pass the urethrotome down until the blade is posterior to the stricture, and gradually turn it up, watching the movement of the hand on the dial, the urethra being only brought up to its normal calibre. This instrument is not a divulsor, it is not intended to rupture a stricture, simply to make it tense and thin. If the resistance is very great we draw the blade through the strictured points and dilate still farther until we reach the normal calibre. Then making the final incision, we remove the instrument. Now, taking a full-sized bulb you can pass it back and forth without the least obstruction. The stricture has entirely disappeared and by keeping up the separation until healing takes place, there will, in all probability, be no return of contraction.

Dr. Otis here referred to the report of two cases of

perineal fistule, which remained open in spite of all ordinary measures and which were promptly cured by removal of anterior strictures through the operation of dilating urethrotomy—they were quoted from Page 124 of the Second Edition of Prof. Otis' work on stricture, they have been thought of sufficient interest to quote them entire.

CASE I.—(In St. Peter's Hospital) in the service of Mr. Coulson, was subsequently published in the London *Lancet*, of August 28th, 1875, page 305, under the title of "*Perineal Section, followed by the Operation of Dr. Otis for the cure of Fistula in the Perinæum*," by Walter Coulson, F. R. C. S., Surgeon to the Lock and St. Peter's Hospitals." It is here quoted from the *Lancet*:

"The following case, considerably abridged, may serve as an introduction to some remarks on perineal fistulæ and on the operation for stricture, proposed by Dr. Otis of New York, and recently performed in this country.

"Case is that of Robert D., aged forty-four, seaman. About five years previous to his admission, for the second time, into hospital, he had been treated as an in-patient by dilatation at Grey's Hospital. Two years ago (1873) he was admitted with extravasation of urine, following retention. This condition was relieved by free incision of the perineum. The patient made a good recovery, but a perineal fistula remained, which it was hoped might be closed by continuing the dilatation of the stricture. At the time of his leaving the hospital a No. 5 English (12 French) catheter could be passed into the bladder; but the man neglected to attend as an out-patient, and when re-admitted in May, 1875, he was unable to pass any urine naturally, the whole of it escaping in a small stream, through the perineal fistula. The passage of the urine now causes great pain and scalding, which continue for some time after micturition; he suffers from constant desire to micturate; the urethra is exceedingly sensitive, the urine loaded with mucus and pus, and no instrument can be passed into the bladder. Up to the 17th of May, several attempts had been made to pass elastic instruments into the bladder by the penis, and through the perineal opening, but they failed. He has been taking fifteen minims of sandal oil three times daily, which has materially diminished the muco-purulent deposit in the urine, but has had no effect in diminishing the scalding. On two occasions he had retention of urine, which was relieved, after some difficulty, by insinuating a small elastic instrument through the fistulous opening into the bladder, but all attempts to pass an instrument along the penis, from the meatus, were unavailing. However, an extremely elastic bougie could be passed along the penis and out at the perineal opening. On May 17th I performed the following operation: A No. 8 (E) steel bougie was passed down the urethra, as near to the fistula as the thickened strictures surrounding it would permit. A free incision was then made through the fistulous opening, and the adjacent strictured portion of the urethra was freely divided. A straight-grooved director was then passed through the wound into the bladder, the edges of the fistula were pared and a No. 16 French elastic catheter was introduced into the bladder, the straight director acting as a guide. The catheter was tied into the bladder and retained there until the following evening.

"No bad symptoms followed the operation, and the temperature of the patient remained unchanged.

From this date until July 19th both continuous and occasional dilatation was employed, and the edges of the wound were touched from time to time with caustic. The perineal wound became merely a fissured opening, but still it would not quite heal, and on every occasion that the patient passed water some portion of the urine escaped through the fistula. The question then presented itself, whether the fistula might not possibly be kept patent by some constriction of the penile portion of the urethra. With the assistance of Dr. Otis an examination was made with the urethrametre, and the existence of three distinct points of stricture was demonstrated. It was therefore resolved that resort should be had to his operation. The patient was placed under the influence of ether administered by Dr. Knott, and the urethrotome of Dr. Otis was passed down as far as the fistula. The instrument was then made to indicate a dilatation corresponding to 32 of the French scale, and the three points of contraction were freely divided. The last-mentioned result was verified by the introduction of the bulbous sound (32), which was passed down as far as the fistulous opening and withdrawn without a catch. A tube, open at both ends and about five inches long, was tied into the urethra after the operation, and was allowed to remain for six hours. This was at the suggestion of Dr. Otis, but the tube was removed at the patient's request, as there was no sign of bleeding; the loss of blood after the operation was also slight. From the date of the operation, July 19th, to the 24th, no unfavorable symptom manifested itself. A 32 bougie was daily passed along the urethra to prevent adhesion of the cut surfaces, and the patient left the hospital cured. When he reported himself to me, August 16th, the fistula was completely healed."

CASE II.

Traumatic stricture and numerous penile fistulæ cured by internal urethrotomy.

Mr. Teevan related particulars of the case. The patient was a sailor who had injured his scrotum and penis by a fall twenty-one years previously. Numerous abscesses formed and sixteen fistulæ resulted, through which all the urine was passed. In the course of a few years, the fistulæ in the scrotum (eleven in number) closed, but those in the penile urethra remained open. For a period of more than three months Mr. Teevan tried three separate plans of treatment, with but partial success. 1st, Retaining a catheter in the bladder. 2d, The patient drawing off all his own urine with a catheter for two months. 3d, The application of heated wires and probes tipped with the nitrate of silver. On January 6th Mr. Teevan performed Dr. Otis's operation, and nine days afterwards all the fistulæ were closed, and remained so permanently. The points of interest in the case were

- 1st. The stricture being a traumatic one of the worst description.
- 2d. The fistulæ being in the penile urethra, always most difficult to cure.
- 3d. The fistulæ having been open for the long period of twenty-one years.
- 4th. The failure of three different methods of treatment.
- 5th. The permanent closure of the fistulæ after the strictured portion of the canal had been enlarged by Dr. Otis's urethrotome to its natural calibre, which was 31 m. in circumference.

6th. Subsequent to the operation no catheter was left in the bladder, nor was the urine drawn off.

I propose now to examine a case which will serve

to illustrate the method of examining the urethra in cases of suspected stricture. The patient comes with a gleet discharge following gonorrhœa. When we have a chronic urethral discharge to deal with, we may conclude in the majority of cases that there is a contraction of some part of the urethra. Indeed such a contraction may develop a discharge *de novo*. I may say in passing that a discharge coming on in this way, and independently of any antecedent gonorrhœa, may communicate a similar inflammation to healthy mucous membrane. A congenital constriction of the urethral orifice may set up such a discharge, especially in persons of a gouty diathesis.

Such a contraction prolongs a gonorrhœa into a persistent gleet.

This patient has had gonorrhœa for nine months. When a gonorrhœa continues longer than one month, it is most commonly due to an abnormal condition of the urethra before the occurrence of the attack. This is not an uncommon time for gleet to persist. I have known it to continue for many years. In all such cases we may reasonably suspect obstruction at some point in the canal, and this suspicion should either be confirmed or set at rest before proceeding further in the treatment of the case.

First, measure the circumference of the penis; this one is $3\frac{3}{4}$ inches. According to the proportionate relation, this would call for a urethra of 35 or 36.

A penis 3 inches in circumference calls for a urethra of a capacity of 30 mm.; a penis $3\frac{1}{4}$ inches in circumference calls for a urethra of a capacity of 32 mm.; a penis $3\frac{1}{2}$ inches in circumference calls for a urethra of a capacity of 34 mm.; a penis $3\frac{3}{4}$ inches in circumference calls for a urethra of a capacity of 36 mm.; a penis 4 inches in circumference calls for a urethra of 38 mm.; a penis of $4\frac{1}{4}$ inches in circumference calls for a urethra of a capacity of 40 mm.

In the critical examination of more than a thousand cases, I have often found this relation overrun but never to underrun such an estimate. We next take the urethrometer, which, closed, measures 15. I pass it down to the bulbo-membranous junction with ease; I turn it up to 38. Bringing it forward about an inch and one-half from the junction, it comes down to 35, and is held there. I continue drawing it forward (thus), using the greatest possible gentleness, and find no stricture in the whole length of the penis till I reach a point about half an inch from the orifice, when the instrument requires to be turned down to 21 F. The division of the orifice to the size of the canal behind it would, in my opinion, be the surest way of getting rid of the discharge in the present case.

This has been my experience in a large number of cases, and my advice to you would be in similar instances: First divide the stricture, and keep the wound separated till the parts have healed. This is best effected by gently passing a bulb or a solid steel sound of the size of the normal urethra well through the portion of the urethra operated on, but no further; repeat this procedure every second day until the wound is healed. In many instances it will be found that the simple removal of the contraction will result in the cure of the discharge without any further treatment. If not, use some simple astringent for the infectious discharge which may remain, and you will find that remedies which before were ineffectual are now sufficient, and the relief afforded will be permanent.

ORIGINAL ARTICLES.

REMARKS UPON AN ALLEGED TRANCE CONDITION FOLLOWING INEBRIETY.

BY

JOHN H. GIRDNER, M. D., New York.

We are not yet acquainted with the chemico-physiological process which takes place in the ultimate anatomical elements of the nervous tissue, when an impulse is generated and transmitted to its destination, any more than we know the physical properties of electricity, and the effect on the molecules of iron when a message is transmitted over the wires.

Certain rules, however, with which we are familiar, govern these nervous phenomena. The gray matter or nerve cells are the magazines in which is stored the nerve force, and from there it is sent out in rhythmical impulses.

This holds good of all the nerve cells, whether they preside over the heart's motions, voluntary muscular movements, or the higher mental manifestations, as reason, imagination, etc., in man.

This nerve force may be divided into the residual or reserve and the tidal.

When this tidal force has been expended, in the case of any set of cells, either from prolonged mental or physical exertion, and we begin to draw on the reserve force, it is then the protest comes, in the form of symptoms which we recognize as exhaustion or overwork. Work continued under these circumstances must be always imperfect, and attended with inconvenience, because the rhythm and force of the impulse is not up to par, and that portion of the nervous system in question is acting under protest. It is a peculiarity of alcoholic stimulants, that they increase the power, re-establish the rhythm, and altogether cause the exhausted cells to take on an action similar to that when in their normal condition. This artificial stimulation and its results can last only so long as the alcohol remains in the system, and after that leaves the nervous system in a still further exhausted condition, calling for more stimulation or rest and repair.

Examples proving the theory which I have offered must have occurred to every practitioner.

Take for instance a lawyer who is deeply immersed in business for months together. He is continually exhausting the tidal force of the nerve cells and gradually weakening their recuperative powers, until at the close of each day he feels himself mentally tired and depressed, and the whole system cries out for repair, which rest and proper food will bring. But there is a quicker and more pleasant method of temporarily relieving this depression, which is unfortunately too often resorted to, viz.: by the use of alcoholic stimulants. They relieve the depression, remove the sense of weariness, and a mind which half an hour before could not be made to think continuously on any subject is now clear and active as when in its normal condition. This is, however, a costly activity. In the nerve cells this alcohol by its action is drawing out the reserve force, the nest egg, and sending out impulses which are similar to those of a normal condition. When this stimulation has subsided we have the nervous system in a worse condition than before, and the demand for stimulants is still greater. This process, if kept up sufficiently long, produces the condition known as chronic alcoholism or inebriety. Now there is muscular tremors in the hands, because

those nerve cells which preside over the action of these muscles have none of the normal force stored in them, but must draw on their residual force, and therefore the muscular movements and co-ordination are imperfect. In this way all the symptoms of chronic alcoholism may be explained, as the palpitation of the heart, etc., etc. The state of the mind and will power in this condition is what I wish to call particular attention to, because of its medico-legal importance.

This subject was lately discussed in this city, when it was claimed that there is a state of trance following inebriety in which persons are not responsible for their acts.

Men who are ordinarily good husbands and fathers, and of quiet dispositions, will, after an extended "spree," abuse their families, destroy their furniture, and, in every other way, make beasts of themselves. To my mind these morbid manifestations are no more wonderful or deserving of that mystifying term "trance," than are the muscular tremors of the hands. The higher ganglia of the brain which evolve the will and reason are in precisely the same condition which I have described in other sets of cells, and the patient is no more able to control this storm in his passions than to overcome the trembling hand.

The individual who commits crime under these circumstances would seem not to be so culpable for the act itself as for allowing himself to be reduced to the condition which causes him to commit the act.

HOSPITAL REPORTS.

CASES OF TYPHOID FEVER IN THE PENNSYLVANIA HOSPITAL.

CLINIC OF DR. J. M. DA COSTA.

CASE I.—There are a great number of cases of typhoid fever in the wards, with all kinds of complications, and I think it instructive for you to see some of them in the acute stage. You may remember that at our last meeting I had before you a case of most marked delirium and restlessness in a man who presented the unmistakable symptoms of typhoid fever. Since you saw him there has been a decided change for the worse. The restlessness and delirium and wakefulness were controlled by the treatment then proposed, but a complication developed itself, which consisted in a spot of local pneumonia. Over this spot there was a dulness upon percussion, and blowing, breathing, and well-marked rales could be distinguished. There were also a few pleuritic sounds near by. Nor was this confined to the spot where it first appeared. First the back of the left and then the back of the right lung were congested with impaired resonance. It was what is generally called the pneumonia of typhoid fever. There was an extraordinary rise of temperature at the same time, reaching 106° . It was hard to know what treatment to pursue. Here was a case in which we wished to put the patient in a cold bath. He was sure to die if the temperature remained so high. At the same time with the intercurrent complication of pneumonia, we were running a great risk in using a cold bath. But we ran a greater risk in allowing the temperature to remain so high. A large dose of quinine—gr. 20—was given at that time, and repeated the next morning with only passing effects. The temperature was reduced, but rose again. We then thought it right to put the man in a cold bath for a quarter of an hour. The temperature was re-

duced from $105\frac{1}{2}^{\circ}$ to 100° , and since then it has never attained that height. Whenever the temperature showed a tendency to rise, it was combatted by the application of cold cloths. The nervous symptoms were favorably modified. The man is too ill to bring before you to-day. I made this change in the treatment. The turpentine and morphia were suspended; everything in fact was stopped except the moderate amount of quinine. Within the last few days we have increased the dose of quinine to twelve grains early in the morning and six grains later in the day. The quinine thus given prevents the tendency to a decided fever rise in the morning.

CASE II.—This case of marked insomnia in typhoid fever is now convalescent. During the ten days when the insomnia had reached the stage of delirium, he slept very little, only an hour at a time. The insomnia began at the beginning of the second week, and lasted until the middle of the third. Every kind of treatment was tried—the bromides; chloral, morphia, first alone, and then in combination; chloral in 15 to 20 grain doses answered best. Sometimes he had to take as many as three doses before he could get two hours' sleep. The other symptoms were about as usual. The temperature rose to $104\frac{1}{2}^{\circ}$ once, but there was no complication. The temperature was highest during the period of wakefulness. The enteric symptoms were very marked, and there was considerable diarrhoea. He was sponged with ice-cold water at nine o'clock in the morning, thus reducing the temperature from $104\frac{1}{2}^{\circ}$ to 100° . This treatment by sponging (and this is a practical point) gave more sleep than either the bromides or chloral. He obtained as much as four or five hours' consecutive sleep in this way. This is interesting, therapeutically. He is taking wine and iron now, and sleeping well. He presents the most marked nail of typhoid fever which I have ever seen. This ridge on the nail shows that the attack is over. If he has a relapse at any time, we can tell it from the appearance of the nail. You can see, at once, that this is a very useful point, diagnostically, when we possess no history of a case.

CASE III.—This man also presents some special symptoms. He is before you now for the first time. His name is N. B., and he is 24 years of age. He was admitted to the hospital on the 15th of November. About twelve days before his admission his sleep was disturbed by more or less constant headache. During this time he had several attacks of flushing of the face, attended with fever and excessive thirst. There were no night sweats and no marked chills. The bowels were open from the very onset of the attack. He had about five discharges in the course of the twenty-four hours. Upon his admission, on the 15th of November, we noticed that the tongue was dry, red, coated and slightly cracked. It was then a characteristic typhoid fever tongue, and is still so. We also noticed a great deal of flushing of the cheek, in fact of the whole face. The most characteristic rose rash was present upon admission. He, too, was restless; so much so that we had to give first laudanum and the bromides, and then chloral at night. He received a one-grain opium suppository morning and evening, to stop the diarrhoea. The man's temperature was nothing like that of the preceding case. It has not passed beyond $103\frac{1}{2}^{\circ}$, though there has been marked flushing of the face. The pulse has not exceeded 100. The respirations have not been above 28 to the minute. They have usually averaged from 22 to 24. You will wish to know, of course, the cause of the

flushed face. The patient had a slight cough, which attracted our attention, and we found upon examination (I will repeat this examination in your presence to-day) that the lower parts of the chest anteriorly on both sides were less resonant than the upper parts. This dulness is particularly noticeable in the lower part of the right chest, though it is present on both sides. The respiration over the lower part of the right chest is feeble, and the expiration is prolonged. I can also distinguish many coarse rales and many fine sub-crepitant rales. Has he expectorated? No. What kind of a cough has he? It is dry and hacking, and its amount is entirely out of proportion to the physical signs of impaired lung action. The first sound of the heart is feeble, very feeble; but the second very distinct. The tongue is red, glazed and still characteristic. He has had four movements within the last twenty-four hours. He passes his water freely. It has contained from the very first about one-eighth of its gross bulk of albumen. How does he sleep? He sleeps better, and takes more notice of my questions. His intelligence is improved. He says he has no headache. What I wish to call your attention to is (1) the flushing of the face; (2) the lung complication without quickening of the respiration—pneumonia in typhoid fever; (3) I wish you to consider with me the treatment that has been employed. He has been taking 10 minims of turpentine every three hours, with $\frac{1}{4}$ of a grain of morphia in emulsion. He has had 12 grains of quinia daily. An opium suppository has been occasionally used when the diarrhoea was worse; sometimes he took two one-grain suppositories daily; some days he had none. He has been taking 6 ounces of whiskey daily. Early in the case the bromides and chloral were used, but now they are unnecessary. The opium keeps the nervous system quiet, and gives the patient rest. This man has an eruption on his arms and legs. This is a rare position; it is generally only on the chest and abdomen. I said that this man presented a good illustration of the pneumonia of typhoid fever. Is it pneumonia? No, it is not, strictly speaking. The lung is heavily congested. Here and there the air cells are full of viscid material. But what makes me say it is not pneumonia is this: that in the greater part of the lung of such a patient after death, these air-cells can be inflated by means of a blow-pipe. There is, therefore, no true exudation present. Here and there you will meet with a piece of lung which you cannot inflate, and which sinks in water. It would therefore, perhaps, be more accurate for me to say that there was some true exudation, but that the mass of the lung was only heavily congested and filled with mucus and secretions, but not consolidated. In this lung, partly as a result of debility, partly as a result of the viscid secretion cutting off the air supply, the risk of collapse is great. To that rather than to the extensive inflammation, have we to look, and with that to deal. What evidence, except pathology, have I? How do I know that it is not true pneumonia? Partly by the autopsy, partly by the physical signs—(the diffused dulness over the lower part of both lungs, principally over the right lung here, but generally over both sides). There is not, I say, any great dulness here, as in true pneumonia. Auscultation shows the presence of rales due to exudation into the finer tubes, but no bronchial breathing—feeble respiration, prolonged expiration, dry rales, but not bronchial tubular breathing, pathognomonic of consolidation of the lung.

Here and there there is consolidation, and over

these spots you may distinguish a nearer approach to bronchial breathing and a few friction sounds. In this case this state of things is present towards the left axilla. I may add that the dry rales are here unusually distinct. Before turning to the question of treatment I ought again to dwell on the negative evidence which the symptoms afford. The respiration is no more hurried than in ordinary typhoid fever. There is so little cough that one would be very liable to overlook the congestion entirely unless he carefully examined the patient. The disease is latent unless you take the physical signs into account. Marked flushing of the face usually attends the pulmonary complications of typhoid fever. When this flushing persists in any case of the disease in question, you may rest assured that it is due in the majority of instances to internal pulmonary complications. Treatment is by turpentine internally, and small doses of morphia (no more than enough to keep the turpentine from irritating the bowels and the bladder.) My local treatment of the chest consists of dry cups and turpentine stupes; 12 grains of quinia are given daily. What is my object in employing this treatment? Why should I resort to it in preference to other methods? I am a strong believer in the advantage of the use of turpentine in the pulmonary complications of the continued fevers. It is an absorbent; a stimulant to the lung, and one of the best remedies we possess in this pulmonary complication. I give only a little morphia. Except in small quantities, opium is contraindicated in the pulmonary complications of the low fevers. Turpentine is also a valuable remedy for the dry tongue present in the second week of typhoid fever. As a general thing, I give such a patient quinia in tonic doses. In the vast majority of cases stimulus is necessary. This man takes $f \frac{2}{3}$ vi of whiskey daily.

Why do I stimulate the patient? Because I am acting on my knowledge of the pathology of the affection as well as on my clinical experience. If I think I am dealing with an inflammation which is extending, stimulus would not be proper; but in a low form of congestion, with sticky matter in the lung, with difficulty in expectorating, it is my duty to give the patient temporary strength; and this I do best by means of a stimulant which favors expectoration by the very act of stimulation, and also counteracts one of the great dangers of this complication, viz.: the tendency to collapse. For many reasons, both theoretical and practical, this treatment is the best. Far from being contra indicated, stimulants are expressly indicated in the pulmonary complications of typhoid fever. If you steady the circulation you get rid of the viscid mucus. Expectorants are of no use. There is not much to expectorate, only sticky matter. Furthermore, expectorants only disorder the stomach. We only use the aromatic spirits, or carbonate of ammonia, where there are a great many rales. These expectorants do not depress. In the case I brought before you the treatment was about the same as it is here. We kept that man, who, you remember, had a very high temperature, a great deal more stimulated. He took 8 oz. of whiskey and 4 oz. of wine in the 24 hours. His pulse was feeble and the first sound of his heart very weak.

FORMULARY AND POINTS IN PRACTICE.

IN CONVALESCENCE FROM ACUTE DISEASES.

- R Spts. etheris..... 3 iij.
 Spts. vini gallici..... 3 xii.
 Infus. cinch. flav. ad..... 3 viij.
 M. Sig.—One-sixth part every four or six hours.

IN THE STAGES OF LOW FEVER WITH RESTLESSNESS.

- R Spts. chloroformi..... 3 vj.
 Spts. vini gallici..... 3 viij.
 M. Sig.—One-sixth part every six hours.

IN THREATENED DELIRIUM TREMENS.

- R Tinct. sumbulis..... 3 i.
 Infus. lupuli..... ad. 3 viij.
 M. Sig.—One-sixth part three times a day.

TO CLEAN THE TONGUE, PROMOTE THE ACTION OF THE SKIN AND KIDNEYS, AND CORRECT THE OFFENSIVE STATE OF THE EVACUATIONS IN LOW FEVERS.

- R Liq. sodæ chloratæ 3 ij.
 Liq. tolutani..... 3 i.
 Tinct. serpentariæ..... 3 vj.
 Aquæ ad..... 3 viij.
 M. Sig.—One sixth part every six hours.

TONIC IN DEBILITY WITH LITHIC ACID DIATHESIS.

- R Liq. potassæ 3 iij.
 Tinct. cinch. co. 3 vj.
 Decoct. cinch. flav. ad..... 3 vj.
 M. Sig.—One-sixth part twice or thrice daily.

IN NERVOUS DEPRESSION WITH CONSTIPATION.

- R Spts. ammon. aromatici..... 3 iv.
 Ext. cinch. flav. liq..... 3 iss.
 Tinct. rhei..... 3 iv.
 Infus. rhei ad..... 3 viij.
 M. Sig.—One-sixth part twice or thrice daily.

IN CHRONIC RHEUMATISM AND LUMBAGO.

- R Tinct. cinch. co. 3 j.
 Tinct. aconiti..... m. xxx.
 Tinct. serpentariæ..... 3 iij.
 Aq. menth. pip. ad. 3 viij.
 M. Sig.—One-sixth part three times a day.

GENERAL WEAKNESS WITH NERVOUS EXHAUSTION.

- R Acid. nitrici dil..... 3 iss.
 Tinct. nucis vomicæ..... 3 i.
 Ext. cinch. flav. liq..... 3 ii.
 Aquæ menth. piperitæ ad. 3 viij.
 M. Sig.—One sixth part three times a day, two hours before each meal.

SELECTIONS FROM JOURNALS.

THE DRINKS, FOOD, BATHS, EXERCISE AND CLOTHING IN BRIGHT'S DISEASE.* By J. H. SALISBURY, B. N. S., A. M., M. D.

I. DRINKS.—Drink one-half pint of hot water, clear, weak tea, or clear crust coffee, one hour before each

*Dr. S. has had these instructions printed in convenient form for the use of his patients.—Ed.

meal, and on retiring. Drink a cup (eight ounces) of clear tea or coffee, or beef tea (made from beef, freed from fat and connective tissue) at each meal. When thirsty, between two hours after a meal, and one hour before the next, drink hot water, clear tea, or beef tea, freed from fat or gelatine. Take no other drinks of any kind. If the hot water sickens the stomach, sprinkle in a little salt, just enough to take off the flat taste.

II. FOOD.—Eat broiled beefsteak, carefully freed from fat, connective tissue, cartilage and bone before cooking. Have it seasoned to taste with pepper and salt. For variety use the steak (broiled), which is cut through the center of a round of a lamb or mutton, broiled oysters, broiled quail, broiled grouse, broiled woodcock, broiled snipe, broiled partridge, and broiled codfish. The whites of eggs may be taken raw or soft boiled. Avoid all fats as far as possible, only using salt and pepper for seasoning. Mustard, mixed up with hot water and lemon juice, or Worcestershire or Halford sauce, may be used on meats, if desired. A little celery may be eaten at dinner.

Avoid all pies, cakes, pickles, vinegar-sauce, soups, cheese, cream, milk, yolks of eggs, fat, sugar, crackers, bread, biscuit, beans, peas, nuts, fruits (except the juice of the lemon), vegetables, and all other food and condiments not previously mentioned. This rigid diet should be kept up till all traces of albumen and casts disappear from the urine.

When these have ceased to show themselves for a couple of weeks, the patient may be allowed one part of bread, toast, or boiled rice, *by bulk*, to eight or ten of the beef. After continuing this departure for four weeks without any appearance of albumen or casts in urine, the bread, toast, or boiled rice may be increased to one part, *by bulk*, to six parts of the meat, and a piece of butter the size of a hickory-nut allowed for seasoning.

After continuing these proportions for four weeks, if still no signs of albumen and casts show themselves, the bread, toast, or rice may be increased to one part to five of the meat with a little increase of the butter. Continue these proportions for one month. If no albumen or casts appear in the urine, increase the bread, toast, or boiled rice to one part to four of the meat, and continue this for a month longer. If all is well at the expiration of this time, give the succeeding month, one part of bread, toast, or boiled rice, to three of the meat, with a little increase of the butter. Continue these proportions for three months, and then, if no sign of the disease shows itself, increase the bread, toast, or boiled rice to one part, by bulk, to two of the meat. Cracked wheat may now be brought in as a change from the rice. After continuing this diet for a couple of months, if all goes well, and no signs of albumen or casts appear in the urine, milk, warm from the cow, two hours after breakfast and dinner, may be taken. The patient should go out to the cow and drink the milk as soon as it comes from the teat, with all its animal life and heat. Begin with half a pint, and gradually increase till the patient is taking a pint at a time. After continuing this system of alimentation for a couple of months, if the patient continues to thrive, and is advancing gradually toward health, a little fruit may be indulged in after dinner. This indulgence, however, must be carefully controlled, and the patient not allowed over one peach, apple, orange, or bunch of grapes per day. Sugar and cream, also, may be very moderately indulged in, in tea and coffee.

This system of diet should be followed out for many months; and if no signs of the disease show

themselves, it may be continued, gradually extending the diet list. It will be well, however, as a general rule, to continue to take two parts of lean meat (broiled or roasted) to one of all other food.

If at any time during the treatment, after the albumen and casts have disappeared from the urine, they begin again to show themselves, as the diet becomes more liberal, the patient should at once come squarely down to lean meat diet, as he did at the start, and proceed cautiously as before.

The patient will lose in weight during the early part of the treatment, but this need not excite anxiety; for after the first few weeks, this loss will be checked, and a gradual gain will set in.

III. MEALS.—The meals should be taken at regular intervals, and it is better to eat alone, or only with those that are living on the same diet. All temptations should, as much as possible, be removed from the patient. If three meals a day are not sufficient to satisfy hunger, the patient may be allowed a nice piece of broiled steak between breakfast and dinner and between dinner and supper. These extra meals should be taken at fixed and regular intervals. If care is taken in following out this plan of diet, it will not be long before the system gets in good order, the digestion and assimilation will go on nicely, and the patient will eat largely and with great relish. You will often be assured by the patient, that there is no food so nice as a good broiled steak, and he will surprise you by eating all the way from one to two pounds at a meal. Never eat on a tired stomach. Rest one hour before and after each meal; eat slowly, and masticate the food well.

IV. BATHS.—Take a soap and hot-water bath twice a week for cleanliness, after which rub with a coarse towel till the skin is red. Every night or day, sponge all over with hot water, in which put a tablespoonful of aqua ammonia to the quart of water; rub in well, and afterward wipe dry.

V. EXERCISE.—Ride daily in an easy buggy or carriage as much as possible without fatigue. If not able to walk or ride, the body and limbs should be rubbed, kneaded and pounded all over for from ten to twenty minutes—morning, noon and night—by some one who has strength to do it thoroughly.

VI. CLOTHING.—Wear flannel or silk next the skin, and dress comfortably warm. On retiring, change all the clothing worn during the day, so that it may be thoroughly aired for the following morning. Keep the clothing sweet and clean by changing every second or third day.

The bed should be thrown open on rising and the bedding well aired during the day, and the bed not made up till the patient wishes to retire. Good ventilation is very essential. No tonics, mineral waters, or external applications should be used; the physicians will give the remedies which are needed.

GENERAL REMARKS.—Remember that the medicines cure nothing, they simply aid in keeping the machine in good running order, while the cure is effected by the rigid alimentation—an alimentation freed as much as possible from all paralyzing and fat-forming elements. The constant and long-continued fermentation of vegetable food, fruits and sweets in the stomach and bowels, keeps the digestive organs all the time filled with carbonic acid gas. This, after a while, so paralyses the cells of the surfaces with which it comes in contact, that they lose their normal selective power, and begin to take up, little by little, and more and more, carbonic acid gas, vinegar, yeast, etc., which are

carried into the circulation, and thus reach every part of the organism.

The heart, liver, lungs, kidneys, spleen, and brain are among the first organs to suffer. The organs that are the first and most liable to be paralyzed, are the kidneys and heart, the next the portal glands.

It is not sufficient to look to weekly or monthly exposures for the cause, but to daily and hourly. In creating either healthy or diseased habits, the either healthy or pathological acts must be *regular, frequent and long continued*, in order to become confirmed states of health or established conditions of disease. We must reach the underlying causes before we can cure. We may relieve and seemingly cure, without knowing or removing causes; but such relieving and curing is not permanent. *We should remember that all these states and conditions we bring upon ourselves by something we are doing daily and persistently.* This wrong doing must be stopped, then we may use with advantage any means that will help to gradually bring back and establish healthy states and habits in the diseased structures.

TWO CASES OF DIRECT TRANSFUSION OF BLOOD FOR HEMORRHAGE IN TYPHOID FEVER.

Dr. F. A. Mahomed read a paper on these two cases before the Clinical Society of London. The first was that of an unmarried man, aged 26, who was stout, rather bloated-looking, and thoroughly out of condition. He passed through an anxious attack of enteric fever, complicated during the latter part of it by wakeful excited delirium, resembling that of delirium tremens, a complication not unfrequent during the defervescence of the specific fevers, and perhaps more especially liable to occur in persons addicted to the excessive use of alcohol. He relapsed on the twenty-fifth day of his illness; on the tenth day of his relapse, and the thirty-fifth of his fever, he had a severe hemorrhage, which recurred twice on the following day. Exhausted, anæmic, restless, with cold extremities, and a very small, thready and often irregular pulse, about 160 per minute, he was evidently fast sinking, when transfusion was performed, with the immediate result of bringing down his pulse-rate from 160 to 144. After this he rallied for a few days, and even gained ground so much as to give great hopes of his ultimate recovery. Six days after the operation, hemorrhage recurred to a small amount, which caused a sudden change for the worse; one or two more slight discharges of blood soon reduced him to a state of exhaustion, from which he could not recover. He died nine days after the operation, on the nineteenth day of his relapse and the forty-fourth of the fever.

The second case was that of a married man, who had a young family dependent upon him. He was twenty-five years of age—a powerful, well-made man, who, during his attack of fever, suffered a probably irrecoverable injury by collapse of a large part of his right lung, while in addition to this he had severe general bronchitis. On the twenty-sixth day of his illness he, too, had a relapse. On the fifth day of his relapse, and the thirty-first of his illness, he also had a severe hemorrhage; four days later he had three more severe hemorrhages, and relapsed into a state of complete exhaustion and impending dissolution. On the following day, when he appeared to be *in extremis*, transfusion was performed with the best possible effects; for two days he rallied greatly, when, during the exceptionally cold weather, his bronchitis in-

creased, and he died from the lung complication on the fifth day after the operation, on the fifteenth of the relapse, and the fortieth of his fever.

Dr. Mahomed gave some statistics showing that the average frequency of hemorrhage in enteric fever was about 7 per cent. of all cases, and that about 50 per cent. of these were fatal; that more than half of the fatal cases of hemorrhage lost their lives as a direct result of the bleeding; and that in these cases more especially the operation might be called for. He estimated that it might prove of service in about 20 cases out of 1,400 cases of enteric fever. Each case must be judged on its own merits, and he would advise its performance whenever the patient was sinking into a dangerous condition, as a direct result of the loss of blood. He claimed that by means of it fatal exhaustion and syncope might be warded off, and time given for the action of remedies; a ready stimulant and food supplied to the heart and tissues; and the danger of destructive ulceration of the intestines during exhaustion and anæmia diminished. He advocated only direct transfusion of human blood by means of Aveling's transfuser, with a small expansion and no valves. He referred to Professor Schafer's report to the Obstetrical Society in 1879, as proving the uselessness of the blood of the lower animals or saline solutions for this purpose.—*British Med. Journal*.

MEDICAL NOTES AND NEWS.

Results of the Guiteau Trial.—The expert testimony in the trial of Guiteau, would alone make it a celebrated case. Twenty-three physicians have been examined upon the stand with regard to insanity. One, Dr. Fordyce Barker, was questioned generally upon the subject, as bearing upon responsibility for crime, etc., without any direct reference to the prisoner. Seven physicians were asked and answered a hypothetical question for the defense, which assumed the insanity of the prisoner, and could hardly be answered, if at all, in any other way than by an admission that, assuming the statements to be true, he was insane. These were Dr. Charles H. Nichols, of the Bloomingdale Asylum; Dr. Charles F. Folsom, of the Harvard Medical College; Dr. Golding, of the Government Hospital for the Insane; Dr. James H. McBride, of the asylum near Milwaukee, Wis.; Dr. Walter Channing, of Brookline, Mass.; Dr. Theodore W. Fisher, of Boston, and Dr. James G. Kiernan, of Chicago. The defense made no attempt to elicit from these gentlemen the result of examinations made at the jail. It is understood that if they had been questioned upon this point, most, if not all, of them would have pronounced Guiteau sane.

Fourteen experts in insanity have testified that Guiteau is, in their opinion, sane. These included four experts originally summoned for the defense:—Dr. Samuel Worcester, of Salem, Mass., Dr. Theodore Dimon, of Auburn, Dr. Selden H. Talcott, of the New York Homœopathic Asylum at Middletown, and Dr. Henry P. Stearns of the Retreat for the Insane at Hartford, Conn. The remaining ten were Dr. Loring, the oculist, Dr. Allan McLane Hamilton of N. Y., Dr. Janin Strong of the asylum near Cleveland, O., Dr. S. M. Shew of the Middletown (Conn.) Asylum, Dr. Orpheus Evarts, of the College Hill Asylum near Cincinnati, Dr. A. E. Macdonald, of the New York City Asylum, Dr. Randolph Barksdale, of the Richmond Asylum, Dr. John H. Callender, of the Nashville

Asylum, Dr. Walter Kempster, of the Northern Asylum of Wisconsin, and Dr. John P. Gray, of Utica, N. Y. All these gentlemen pronounced Guiteau sane. To their number can be added Dr. Noble Young, the jail physician. Of the twenty-four physicians in all examined, one only—Dr. E. C. Spitzka, of New York—gave it as his personal judgment that the prisoner is insane. There were a number of experts in attendance, such as Dr. Pliny Earle, who would have testified that Guiteau was sane, but were allowed to go home on account of sickness or for domestic reasons.

The testimony given by the fourteen experts covers every ground upon which insanity has been or can be claimed. As accumulated, it is an avalanche of proof against the assassin. It has been shown that he has none of the physical signs of insanity; in the shape of the skull, condition of the skin, tongue or palate, appearance of the eye, habits of sleep, digestion, etc. It has been shown that if he is insane, he is an exception to all the intellectual manifestations seen in the experience of the most distinguished alienists. He has all the traits and symptoms which a man claiming his delusion ought not to have, and has none of the symptoms and traits which he ought to have. If he is insane there must be a new classification of insanity, and Guiteauism must be given a place in the books with mania, melancholia and dementia.

A number of persons, however, go to the courtroom and come away with the impression that Guiteau is insane, or at least of disordered mind. There is good reason to believe that this is due in most cases to the appearance of his eyes, which gives him—especially when he is at bay in the court-room—something of a wild look. The doctors state that this peculiar appearance results mainly from a weakness of the muscles moving the eyeball. This gives the left eye in particular, a strained look. Dr. Loring's careful examination of the eyes revealed no evidence of disease of the brain.

The unanimity of the experts has been remarkable. There has been practically no difference of opinion except upon the point whether or not Guiteau has been playing a part. Many of the physicians who have been present express gratification at the fact that in the trial, which will probably be a precedent upon the subject of insanity for many years, a sound and strict rule of responsibility for crime has been laid down, which is likely to put an end to many false and loose notions upon the subject.

M. Pasteur's Vaccinations.—According to *The British Medical Record*, statistics brought up to October 1 show that the inoculations of splenic fever, according to Pasteur's method, were performed on 160 flocks, comprising 68,900 sheep, of which 33,576 were vaccinated and 21,938 left unvaccinated, so as to judge of the results of the difference of treatment. Before vaccination, the losses caused by splenic fever amounted, in the whole of the flocks, to 2,986 animals. During vaccination, and until its effects were perfected, 260 sheep out of the whole number of 33,576 perished. During the same period, the mortality rose to 366 out of the group of 21,938 which were not vaccinated. When the effects of vaccination were complete in the first group, the mortality from splenic fever fell to five. This rate has persisted up to the present time, and the next statistical account will give, it is expected, the same satisfactory results as regards the groups of animals vaccinated and left unvaccinated.

Animal Venom.—Recent investigations have established the fact that the venom of serpents is not an exceptional and anomalous product, but merely an intensified condition of ordinary saliva, and it is still more remarkable to find that a modification of saliva, even in human beings, may constitute a virulent poison. There are many well authenticated instances of death resulting from the bites of animals not ordinarily considered venomous—cats, for instance; and instances have been known in which a bite from a human being has been followed by death from poisoning, just as would have been the case with some venomous reptile. Violent agitation it has been observed, seems to impart this fatal quality to the saliva of men or animals, and M. Pasteur has recently "cultivated" the poison of the human saliva to such a point as to develop the toxic symptoms of the serpent-poisons in small birds. Even in its normal condition saliva is said to be akin to poison, one of its functions being to destroy the molecular life of the substances eaten. It is thought that all violent agitation and exertion involve an abnormal waste of tissue and an excessive production of the principle which renders saliva poisonous.

Inoculating with Tuberculous Matter.—The experiments made by Chauveau upon the possibility of transmitting pulmonary disease to healthy animals show that with cows, lambs, horses, etc., the only thing that will reproduce tuberculosis is the granulation or the cheesy tubercular substances from the human being affected with phthisis. The other products of lung decomposition only develop a transitory inflammation of the spot affected; but when the tuberculous products themselves are introduced, the point of contact soon exhibits an inflamed tissue, and later, there is a generalization of the tuberculous nodules in the lungs and other organs.

Königstein on the Eyes of New-Born Children.—Through the kindness of Prof. Spath, the author was enabled to examine the eyes of the children of the second lying-in-clinic, and reports (*Med. Jahr. der K. K. Gesell. der Ärzte zu Wien*, 1881) the following conclusions.—1. The eye of the child is probably exclusively hypermetropic. 2. The color of the child's iris is not invariably, but frequently, blue. 3. The difference in breadth and appearance between the retinal arteries and veins is not so great as in adults. 4. In a great many cases remains of the pupillary membrane are to be found, and in 10 per cent. there are extravasations of blood in the retina.

Aberdeen LL.D. Degree.—At a meeting of the Senatus of the University of Aberdeen, held on Saturday last, it was unanimously resolved to confer the degree of LL.D. upon Sir Erasmus Wilson, President of the Royal College of Surgeons; and also upon Dr. Andrew Clark, in recognition of his valuable contributions to pathology, and his eminence as a physician. This is the highest honor which the Senatus has it in its power to confer. The degrees were conferred, not at the ordinary time for conferring these degrees, but as a special mark of distinction, at a special time. This graceful act cannot fail to give satisfaction to the pro-

fession; for one of the recipients is a native of the North of Scotland, and the other is a distinguished alumnus of Aberdeen University.

Pregnancy complicated with Epithelioma of Cervix.—Dr. Edis brought before the notice of the Obstetrical Society, at its meeting on Wednesday last, an interesting case of pregnancy at the sixth month complicated with extensive epithelioma of the cervix uteri. The Porro-Freund operation was contemplated, but found inadmissible, as the vaginal wall was implicated. The question now was what was best to be done, to induce premature labor, or to allow the patient to go on to full time and perform Cæsarean section? The latter seemed to be the view entertained by the majority of the speakers.

Ergotine.—May I be allowed to call attention to the value of a solution of ergotine (1 in 50) as a local application in facial erysipelas? In an outbreak of that complaint which occurred in my practice a few months back, the relief to heat and pain, the reduction of swelling, and the rapid subsidence of the disease, were most remarkable. I therefore venture to suggest its trial at the hands of other members of the profession. *Kenneth W. Millican, L. R. C. P., in Brit. Med. Jour. Ed.*

Wounds of the Lung.—In the *Lancet*, October, 1881, p. 748, are recorded two interesting cases of recovery from severe wounds of the lung. Surgeon-Major T. M. O'Farrell's case was that of a porter wounded in the late riots at Limerick. A sword-bayonet entered the right axilla, having first penetrated the muscles of the arm. Immediately his mouth filled with blood, and he felt very faint. When seen, twenty minutes afterwards, he was very faint, and complained of great oppression about the chest; his pulse could scarcely be felt, and now and again he gave a short cough, when a stream of blood issued from his mouth. In nineteen days the man was sufficiently recovered to walk about. The case is a good instance of the comparative impunity with which a young and healthy man may receive injuries of so delicate and complex an organ as the lung. Dr. Holmes' case was very singular. A miner, standing at the bottom of the shaft of a mine 225 feet deep, was wounded by a drill that fell from above. The drill was measured three feet in length, and weighed eight pounds and a half. The bit of the drill struck his back near the superior angle of the left scapula, emerging in front, on a line with the left nipple, fracturing the sixth rib. The wound was eight inches and a half in length. The drill passed through the man's body almost up to its head. The patient called upon some of his comrades to pull out the foreign body, and two men laying hold forcibly extracted it, considerably tearing, in the process, the lung and flesh. When admitted into the hospital the patient was bleeding freely, and in a fainting condition. Air at every respiration passed, with a gush of blood from each aperture. Sixteen days after the wound, the patient walked out of the hospital to see some street demonstration, and in two months he felt nearly as strong as ever; the lung, however, had shrunk to about two-thirds its natural size.

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EDITORIAL.

THE TREATMENT OF THE LATE PRESIDENT'S WOUND.

In the *Wien Medicin Wochen.* No. 47, 1881. Prof. Max Schuller, after giving a complete history of the late President's case, concludes as follows:

"Taking into consideration all the circumstances connected with this gunshot-wound, it is evident, that the determination of the direction taken by the missile, by probing, would have been extremely difficult, and if it had been possible would have been accompanied by great danger to the patient. It is probable that the track of the bullet through the muscular tissue it traversed was so irregular, and the tissue itself so torn by the projectile fired at such close range, that an immediate attempt to follow in the direction of the ball would have been futile. Among the symptoms which presented themselves immediately after the receipt of the injury, only the pain and disturbance of sensibility in the lower extremities gave an indication of the true course of the bullet.

"This disturbance of sensibility in *both* lower extremities would scarcely have occurred without a lesion of the cord (either by extravasation and pressure upon the dura, or a direct injury of a light grade of the substance of the cord) above the points of origin of the nerves distributed to these members. If however the supposition had been entertained that the vertebral column was wounded, the question of indications for treatment would not have been different from that instituted by the attending surgeons.

"To prevent sepsis in gunshot injuries and to bring to a successful issue such a wound as that received by President Garfield is one of the most difficult achievements, and cannot always be accomplished even with the most careful and assiduous application of antiseptic surgery."

Dr. Schuller has fallen into the error of supposing that nervous sensations or pains can always be traced to some specific lesion of the nervous system; while nothing is better established than that such sensations are often wholly unreliable as a means of exact diagnosis. The literature of nerve injuries is replete with examples which illustrate the truth of this statement. Lesions of the *ganglionic* system, where there is no lesion of the nerves of common sensation or of motion, often cause reflex pains and paralysis in one or both extremities or in other parts of the body. Ordinary colic, or distension of the stomach by gas may cause pains in various parts of the body; and if the disturbance or lesion of the ganglionic nerve is persistent, as it would be in case of its being traversed by a ball, the reflex pains would necessarily be persistent. There was no *positive* evidence, therefore, furnished by the pains, first in the right foot and then in the left, that they were not caused by such an injury, and especially since these pains only lasted a short time.

It is true, also, as shown by Mitchell, that an injury of a spinal nerve is not always expressed by a pain in that part of the body which corresponds to its distribution. The author relates the case of a man who, being wounded by a ball in his right thigh, felt pain only in the left thigh; and in another case cited by him an injury of the right sciatic nerve caused paralysis of the right arm and only paresis of the right thigh. But in a matter so well known to medical men it is unnecessary to cite examples. We do not deny that the rule is otherwise, so far as lesions of nerves of common sensation are concerned, but the exceptions are so frequent as, in the total absence of any other evidence but a temporary, symmetrical pain in the lower extremities, to justify the inferences made by the surgeons in the case of the late President. It is certain, also, that even in case it were to have been necessarily inferred from the pains in the feet that the spine had been injured, it could not indicate whether it was simply a concussion, the ball having then glanced off in some other direction, or an actual penetration of the spine, the ball remaining embedded in that structure, or a complete perforation, the ball being lodged at some point remote from the spine. It would determine, in short, nothing of any practical importance, and as Dr. Schuller justly says, it would not have changed the indications of treatment, or to use his exact language "the treatment would not have been different from that instituted by the attendants."

While we were writing, the *British Medical Journal* for December 27, 1881, came to hand, and we find in it a very full expression of opinion on this subject by its editor. He thinks that during the first 24 or 48 hours after the receipt of the injury some farther exploration might properly have been made; but it is evident from his statements that he was not well informed as to the extent of the explorations which were actually made by Drs. Wales, Bliss, and Woodward. He does not doubt that the splenic artery was injured, nor does he think that any exploration, however thoroughly made could have averted the fatal

result; and in this conclusion he declares himself in accord with the opinions of Drs. Sims, Ashurst, and Hodgkin, as expressed in their several papers published in the December number of the *North American Review*.

"When, therefore," says the editor of the aforementioned journal, "the injury came in the form of a severe gunshot fracture of two ribs, and of perforation of the vertebral column, not to mention the other accompanying lesions, the chances of escape became so infinitesimal that the wound might strictly be regarded as a mortal one. No particular mode of surgical treatment, no amount of skilled nursing and attention, could hold out a reasonable hope of being able to avert the fatal result. Professional skill, devotion, and extreme watchfulness, might prolong life, as we believe they did to its utmost tether in the President's case; but, either in the form of blood-poisoning, or, if not in that, in the form of exhaustion, or in some other manifestation of the kind, the fatal end was sure to follow. We have expressed regret that the early exploration of the wound was not more complete, in the belief that the diagnosis and prognosis would have been rendered clearer had it been, and that some of the passing complications which ensued might probably have been evaded; but it never occurred to us, when once the true nature and extent of the lesions were fully exposed at the examination after death, that the exploration could have exerted such an influence as to stop the final result."

As the editor of the *British Medical Journal* alludes to the matter of *placing the patient in the same position in which he was when the ball was received before proceeding to probe*, but naively remarks that, owing to the shock, this may not have been possible in the President's case, we take the liberty of suggesting to him that this rule, given in the writings of certain surgical authors, was never intended to apply to anything but muscular wounds, and especially wounds of the extremities, in which a restoration of posture does occasionally cause a restoration of the channel made by the ball, and which would otherwise be obliterated by the action of the muscles as sliding valves; but even in these cases it is seldom, as all army surgeons know, of any value. No surgeon of experience, of reputation, or who has ever given the subject a moment of thought, has ever advised this to be done in the case of a gunshot wound of the belly or of any of the large cavities; for the reason that it could be of no possible use—the channel through the viscera could not thus be restored. This is especially true in case the ball has entered the abdomen. The intestines, especially after being wounded, are in constant motion; and to think of restoring the channel of the ball by this method is simply puerile, and its mention is unworthy a medical student. If the ball had passed through the liver, whose position is changed by every degree of inflection of the body, the difficulties would be the same. There are other reasons; also, why surgeons have never taught that, in case of an abdominal wound such as that suffered by the President, the patient should be put again upon his feet; namely, first, that if the intestines have been perforated, the effect of this would be to hasten and make certain the escape of their contents into the peritoneal cavity, and thus vastly increase the danger of a fatal result. Second, there may be, for ought we can know, a concealed hemorrhage, which would be necessarily increased by such a change of position; and, third, that the patient is almost invariably suffering under such extreme prostration from the shock, that to maintain him in an erect position until the

probing was completed and the ball extracted, would be simply impossible or promptly fatal.

Surgeons have, therefore, always enjoined *perfect rest in the horizontal posture* from the first moment after the accident; and they are not likely hereafter to teach any other doctrine, or to disturb the viscera with probes, after belly wounds, in any position of the body. No one has as yet followed these absurd and dangerous suggestions, or if he has, he has taken good care to conceal his results.

The London *Lancet* for Sept. 24, 1881, concludes a somewhat lengthy review of the President's case as follows:—"The fact that life had been so long preserved is the best evidence in favor of the surgeons."

We wish to add to these rather desultory remarks a word or two more in reference to the question of the practicability of introducing probes or drainage tubes into the track of the wound.

It is a matter of fact capable of the easiest demonstration that the course of the ball was not straight. These are the known facts, denied by no one. The ball struck the 11th rib, about three inches from its anterior extremity; then the 12th rib near its posterior extremity; then the fibro-cartilage between the last dorsal and first lumbar vertebra, near the root of the transverse process; from which point it passed forward and downward, emerging from the front of the first lumbar vertebra only a little to the left of the center; and here was again deflected to the left, until it became lodged under and below the pancreas, two or three inches to the left of the spine. In this course it had suffered, as any one may demonstrate on the skeleton, four marked deflections; first, on the 11th rib; second, on the 12th rib; third, as it entered the spine; fourth, as it emerged from the spine. Such being the actual fact, to have carried a probe or a drainage tube through its channel would have been impossible. But admitting that the channel had been straight, every surgeon knows that such channels in the cavity of the belly do not remain open for the convenience of the surgeon and as we have already stated, they cannot be re-established. It is, to our mind, evidence of a lack of knowledge and of experience in surgery for any man to say that he could carry a probe safely among vital tissues to the depth of seven or ten inches; and, (as in the President's case it must have been carried), behind the kidney, between the liver and colon, or behind both to the spine, and through the spine to the seat of the ball. Mr. Garfield had a very broad chest, and it is quite probable that the distance of the ball as found, in a straight line, was 12 inches. Whoever talks of cutting or of probing for the ball, or of satisfactorily draining it through drainage tubes seems to us to talk nonsense; and we are not surprised therefore that the almost unanimous expression of the medical profession at home and abroad is, that the surgeons pursued the only course which presented any chance of saving or of prolonging the life of the patient.

CASE OF FICTITIOUS HIGH TEMPERATURE.—*Dr. Stephen Mackenzie* reports a case in a *neurotic* woman, æt. 42, in whom the temperature rose to 120. The patient subsequently acknowledged that she had caused the high temperature by poultices, hot bottles, &c., which she used with sufficient cleverness to elude the vigilance of her attendants.—*Med. Times and Gazette*, Nov 5.

BOOK NOTICES.

A Manual of Midwifery. By Alfred Meadows, M.D., Lond., F. R. C. P. *Physician Accoucheur to St. Mary's Hospital and Lecturer on Midwifery and Diseases of Women and Children at St. Mary's Hospital Medical School. Consulting Physician Accoucheur to the Royal Herts Infirmary and to the St. Johns Wood and Portland town Provident Dispensary, etc., etc. Assisted by Albert J. Venn, M. D., M. R. C. P. Obstetric Physician to the Metropolitan Free Hospital, Phys. to the Victoria Hospital for Children, etc. The Fourth Edition revised and enlarged and illustrated with one hundred and thirty-seven wood engravings Published by G. P. Putnam's Sons. New York, 1882. Price \$2.50.*

This very excellent little manual, which embodies so much of midwifery as to rapk with more elaborate treatises, is familiar to many in its unrevised form. It has been carefully revised by the authors before publication in its present form and its usefulness enhanced by omitting what seemed superfluous and adding what it lacked to make it complete and in harmony with the most recently attained knowledge on this subject.

A Manual of Ophthalmic Practice. By Henry S. Schell, M. D., *Surgeon to Wills Eye Hospital, and Ophthalmic and Aural Surgeon to the Children's Hospital. With fifty-three illustrations, published by D. G. Brinton, Philadelphia, 1881.*

To the general practitioner, who wishes, with a small expenditure of time, to familiarize himself with the generally accepted principles of Ophthalmology and to learn how to treat intelligently the forms of eye diseases most commonly met with, this manual of Dr. Schell, will be most acceptable.

It, however, pre-supposes that the physician is able to recognize the nature of the disease presented, and has left out the colored plates that are usually thought necessary to make a work of this kind practical and complete. It moreover has detailed only those methods of treatment which the author himself relies on.

But these apparent defects are more than compensated for by the directness and clearness with which the subject is treated, the author giving a very minute description of the treatment which experience has proven to him to be the best, which in the main is that of the best authorities.

The illustrations are very simple, and not very important. The form of the book is excellent. It is printed from large type, on good paper and tastefully bound.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK COUNTY MEDICAL SOCIETY, DEC. 25th, 1881.

The President Dr. F. R. Sturgis, presided. After the transaction of routine business, a paper entitled, "OPIUM SMOKING FROM A MEDICAL STAND-POINT"

was read by its author Dr. H. H. Kane. The paper elicited active discussion from the members, in the main favorable to the views maintained. The following is a report of Dr. Kane's remarks:

In speaking of the moral effect of opium-smoking

on both the individual and nation it must be considered that the Chinese never had any fixed religious belief. They are of very elastic conscience, notably untrue, and a race of satirists and gamblers, long before the opium-pipe made its advent among them. Says Williams, "gambling is universal, they are provided with a cup and saucer and the clicking of their toasts is heard at every corner. Gaming-houses are open by scores, their keepers paying a bribe to the legal officers. Porters play by the wayside while waiting for employment. Hundreds of dollars are bet on dice between playing cricket and ball. Men gamble away their money, homes, wives, children, even their lands to satisfy this unnatural passion. In Mott street, the headquarters of the Chinese in this city, I venture to say that there are in the majority, besides the dwelling-houses, first, gambling-houses; second, smoking dens; third, stores. I introduce these facts that may at first sight seem irrelevant to illustrate how many vices must be considered as private factors entering into this complex problem of the physical and moral character of the Chinese.

The evil effects of opium smoking have been exaggerated. In spite of this so-called national vice, the mental and physical activity of this people seems but little, if at all, impaired. The most successful merchants are found in almost every country in which the Chinese have migrated. The ones who suggest enterprise are the Chinese. Of the students who have come from foreign lands, none adapt themselves to our methods of thought and fashion so readily as the Chinese. All the merchants, students, and laborers of this nation are not opium smokers, but it is estimated that at least 30% are. 'Let it be fully understood here, that while I claim that the evils of opium smoking have been exaggerated, I at the same time do not deny that such evils do exist. For to this very subject I wish to call your attention. There must be fully 5,000 confirmed smokers among the Americans. The rapidity with which this vice has spread, is well expressed by the figures, regarding the import of smoking-opium, having a duty imposed upon it six times greater than that of common opium. In 1878 the amount of opium imported reached from 67,000 to 70,000 pounds, an increase of 17,000 pounds over 1877. This can be accounted for only by the increase of population in China where 700 tons are used yearly. The smoking-opium comes to us in the form of a molasses-like substance in cans containing about 5¼ oz., about three cans to the pint. Almost all the opium that China gets comes directly from India. It is brought from Malaya and the Canaries; it is put through a long process of boiling, skimming, straining and repeated coolings until finally it reaches the consistence of molasses. It is estimated that there are 4,000,000 acres in India devoted entirely to the cultivation of the poppy to the exclusion of grain and food that would go to the support of the entire population. In China seventeen provinces are devoted entirely to the cultivation of the poppy which contains 3½ per cent. morphia to 7½ per-cent. nicotine; 33% of the opium becomes ash and this ash is very rich in morphia, from 7 to 10 gr. of this ash put in a syringe and injected into the vessels of a rabbit will completely paralyze it. Some of the old habitues who cannot get any effect from No. 1 opium, take to eating the ash. The Chinamen taking ash No. 1, and boiling it up with gum make opium No. 2. The original opium may yield enough material for three or four different grades of opium.

The ash is worth \$6 a pound. Nobody seems to know the origin of the opium pipe. They are of var-

ious kinds, usually made of bamboo with bowls of different varieties. Smokers are usually divided into the long-draw and short-draw men. The long-draw men get much better effect than those who take short inhalations. The ordinary smoker will consume 2 drachms of No. 1 opium in a day. In spite of Dr. Allen's assertion that one can absorb more readily from the lungs than from the stomach, a smoker who will smoke from 2 to 6 drachms in a day will satisfy his entire craving by eating one single pill after being cooked. The Chinese believe that if you take one pill without being cooked it is certain death.

In this city Nos. 4, 17, and 39 Mott street, and 45 Baxter street, are the principal smoking places. The ordinary smoker will smoke from 3 to 5 hours per day. Hard smokers have been known to consume as much as three and four dollars' worth of opium per day, about 12 to 14 drachms.

The effects of opium smoking upon the individual may be classified as the physical and moral.

The physical effects are those upon the digestion, nutrition, urinary, nervous apparatus and muscular system.

The first effect of opium smoking upon the novice seems to be concentrated upon the digestive organs. He commences to feel a little dizzy, slightly nauseated and perspires profusely in the coldest weather. The face is flushed and the head feels unnaturally full. Slight sense of nausea may be felt, intensified on assuming the erect position. Micturition becomes extremely distressing and is followed by profuse vomiting. At first the appetite for food is wholly destroyed, but soon returns as the individual uses a larger and larger amount of the drug. The drug seems to exercise some decided effect on the nerves governing nutrition and morbid tissue waste. There is no excessive action in the material producing a condition like uræmia; a sallow complexion; a peculiar intermittent fever; cold sweats; irregular, chilly sensations; bad taste in the mouth; cloudy intellect and irregularity of circulation. Atrophic changes in the skin are rare; the constipation is extremely distressing, more so than with any other form of the opium habit. Hemorrhage as a consequence and pruritis ani are very common and distressing. The stools are usually of good color. Upon the eyes the effect is very decided. The pupils are contracted, like in the ordinary habitual user of opium. The eyelids are usually very puffy, and the smoker looks dropsical. Intense itching more pronounced than when the drug is used in any other way is experienced. This is most marked during the first month. One smoker now is so thoroughly excoriated that the whole scrotum and a portion of the back is one mass of sores. Upon the urinal organs the effect, while decided, is variable. In the majority of males the urine is more acid at first and produces an irritable condition of the neck of the bladder. There is a spasmodic contraction of the urethral muscles and a peculiar condition of the bladder obtains so that the habitue is often obliged to stand for several moments before the stream of water starts. In women an irritable bladder leads to frequent urination. I have never found sugar in the urine, but albumen in twenty cases. The amount of albumen, however, is very small and not nearly so large as you get with the average albuminuria. From the hypodermic use of morphia, as a rule, less urine is passed than in the normal condition.

The organs of generation are very decidedly affected. There is an increase in sexual power most marked in women, who lose all modesty. Recognizing this fact,

rascals have enticed young girls and ruined them. In California and Nevada the penalty for finding opium on a person is \$500 and six months in the penitentiary. Complete suppression of the menses, common in morphia takers, is less marked in female smokers. There are very few smokers in this city or country who are married. Of the females who smoke, a great many are prostitutes.

Upon the heart there is a double effect, one produced by smoking and the other by sudden abstinence. The one is over-stimulus, the other is lack of stimulus. The first made manifest by palpitation and slight pain in the precordial region; the second by same symptoms and marked dyspnoea. From the repeated sphygmographic tracings made on a number of smokers, I have found that the use of the drug first stimulates the heart, contracts the arteries, and more especially in the novice who is usually markedly nauseated, increases still further the frequency of the heart beat and relaxes the artery, while oftener the pulse falls below the normal. This varies according to the peculiarity of the individual strength, habit and amount of drug used. In organic cardiac disease beneficial results obtain, but so great is the danger of forming the habit, so disgusting the surroundings and so many efficacious remedies are known to us that its therapeutic application will be necessarily very limited. I know one case where opium smoking seemed to retard disease of the lungs. This was in the case of a Chinaman suffering from phthisis, but as soon as the habit was discontinued the disease reasserted itself. Thereupon, I advised a renewal of the habit. Upon the respiratory tract of a perfectly healthy person opium smoking usually produces a low grade of bronchitis with profuse expectoration; also some slight catarrh of the nose. Upon the mind and morals the effects of this habit are especially marked. At first there is a dazed condition followed by slight mental stimulus, which applies to the free flow of mixed thought and increasing fancy rather than to vigorous capability for mental effort. In the student the reasoning power of concentration and application are impaired. There is less and less satisfaction in the comparative mental inaction or action of the lightest kind. Hope and ambition are present. Obstacles that appeared serious at first rapidly melt away, and assume their importance only when the effect of the drug is worked upon the brain. After smoking the habitue does not, as seems to be the universal opinion, fall into a deep sleep. The effect is to awaken rather than to cause repose. The temper suffers also. Wife and children are neglected, cursed, and sometimes beaten. The smoker will break out into the most terrible fits of temper upon the slightest provocation. If the procural of opium is concerned, he will lie and rob, and, in China, has been known to commit murder. The moral sense is always decidedly blunted. One of the marked evil effects of the practice is the abundant issue. As to the production of actual insanity on the opium smoker there is considerable difference in opinion. From the Chinese we can learn nothing. Where insanity has occurred the cause is probably to be ascribed to syphilis and dissipation rather than to smoking. The percentage is, however, very small. Death in the den may have been simply a coincidence. It would not seem surprising if, during the period of intense nausea and prostration, a diseased heart should give out. Two smokers have recently died in this city, one a Chinaman and the other a white man, both from acute peritonitis. Irregularity in eating, constipation, for weeks sometimes, and the effect of opium on the

abdominal sympathetic may probably result in this way. The symptoms of abstinence after opium smoking are just the same as with the morphine taker. Profuse discharge from the nose, collection of mucus in the throat, running of tears from the eyes, gnawing sensation, colic pains in the belly, aching in the small of the back, seminal emissions, sometimes purging and sometimes vomiting, chilliness, headache and numbness, restlessness, darting pains in the limbs. These conditions are graphically described in my forthcoming book on smoking. Smokers divide their companions into different classes of habits. They say a man has a single, double or treble habit, according to the time of day he smokes—morning, evening and midnight habit.

The treatment of the smoking habit is very satisfactory. Chloride of gold, sodium, Indian hemp, hyoscyamus, &c., have been used. Hot baths and electricity form the basis of the treatment, modified to suit the peculiarities in each case.

None of my cases have relapsed. Of 153 persons dismissed from the Opium Hospital all but one relapsed.

The great obstacle to a permanent cure in these cases is the fact that a man has to withdraw himself from his usual resorts, where the persuasion of his old associates prove too much for the will. The habit once broken the person regains his mind and will power. His sexual appetite increased four-fold returns. The fact that this habit is destructive to ambition, the discharge of mental and physical action, physical health, and the destroyer of family ties should prove sufficient ground to justify the enactment of laws to do away with this vice. Experience has shown in both California and Nevada that the severe laws there, heavy fines and imprisonment in the penitentiary, have proved useless to stop the evil. The duty of six dollars a pound on smoking-opium should be raised to twenty-four dollars, and on every pipe entering the country a similar duty should be levied. More public dens may then be closed and some abandoned.

LECTURES.

THE DELIRIUM OF TYPHOID FEVER.

BY

J. M. DaCOSTA, M.D.

This patient has only been in the house a few days. The striking feature of the case is active delirium. The man was admitted on the 8th of November. Until eight or nine days ago he was in good health. Then he began to feel poorly. He had headache, disturbed sleep, poor appetite, pain in the head and lumbar regions, and general malaise. Seven days before he was admitted he had a slight chill followed by fever, which has lasted ever since, but without night sweats. The bowels were regular at first, then he had from four to six stools daily. There was some slight epistaxis and pain at the lower part of the abdomen. Upon admission we noticed that his face was flushed, his countenance dull, his eyes injected, and that he was slightly deaf. His nose bled, his tongue was dry, and coated in the middle with red edges and very tremulous. The characteristic rose-spots made their appearance on the abdomen. There was some congestion of the lower part of one lung, with cough. Both lungs posteriorly were slightly dull, showing evident congestion. Pulse,

84; temperature, $104\frac{1}{2}^{\circ}$. Notice the disproportion between the pulse and temperature. When the temperature is $104\frac{1}{2}^{\circ}$, the pulse is usually from 110 to 130. The patient was placed upon the ordinary treatment, dilute muriatic acid, liquid diet, small amount of stimulus, small quantity of quinine, one grain suppositories of opium to check the diarrhœa. On the 9th of November, the delirium was active, he tried to get out of bed. The diarrhœa was not so easily checked. He had five movements in the twenty-four hours. The stools were dark, thin, and very fetid. November 10th, he is even harder of hearing than on admission. The delirium is considerable, especially at night. He is often stupid during the day. During the night when the delirium is active, he mutters, tries to get out of bed, is very sleepless. As a means of controlling the sleeplessness and delirium, we have given him during the last few nights from forty to sixty grains of bromide of potassium, in divided doses. The influence of this treatment has been good, it has kept him quieter at night, has removed the active element of delirium, and also procured some sleep for him on the second night. The case is remarkable by reason of the amount of restlessness, of active delirium during the night, and of stupidity during the day. The temperature was as high as $104\frac{1}{2}^{\circ}$ three evenings in succession, with from one to one and a-half degrees of morning remission. The case is one of continued fever with marked exacerbations. We have here the dull stupid, flushed face of a case of typhoid fever in which certain symptoms are pronounced. The face is very characteristic. The pulse is soft and compressible, and this morning was 82 to the minute. It is less soft and compressible than we generally find. The respirations are 26 to the minute. Let us examine the heart and see what its state is. I find this striking peculiarity. I barely hear the first sound. The second sound is distinct and marked. At the middle of the heart the first sound is barely distinguishable. It is more, but not much more distinct at the apex. There is no murmur. I examine the abdomen and find the characteristic rose-colored spots.

They are unusually profuse here (more than the average number), are slightly raised and disappear on pressure. The man winces when I press in the right iliac fossa. There is no tenderness in the left. He has had only one stool in the last twenty-four hours, owing to the opium suppositories. We have thus succeeded as you see in checking the diarrhœa. The patient has a good deal of throbbing of the carotids low down, but unassociated with murmur. The pupils are sluggish and tend to be dilated. They are not so this morning, because he is under the influence of opium. The conjunctivæ are not injected. He puts out his tongue. I wish you could take a model of this typical typhoid fever tongue. He protrudes it with some difficulty. It is tremulous, dry, glazed, cracked here and there; its coat is irregularly distributed. His teeth are covered with sordes. This usually happens in cases of more than average severity. There is no albumen in the urine. I told you that this case presented some unusual nervous symptoms, with very slight headache, great deafness, and rather high temperature. The delirium of typhoid fever is not generally an active delirium. In the majority of instances it is simply that form of which this man presents the type, a muttering, dull delirium. The man is hard to rouse, but the delirium is active at night. This is a rare form. This delirium, while it has a more violent and different character, has also set in rather early. It began in the first week, or rather in

the beginning of the second. He was delirious when admitted, delirious, in fact, some days before admission. On what does this active delirium of typhoid fever depend? On inflammation of the brain or its membranes? Has it anything to do with the state of the kidneys? Is it like uræmic delirium? Or, is it the expression of a profound disturbance of the nervous system by the typhoid fever poison aided by the altered condition of the blood? Now, whatever may be the question, as to the existence of uræmic delirium in typhoid fever, it is not present here, though sometimes in graver cases. Is it a sign of inflammation of the brain? No. The dilated and not contracted pupil show us this. Vomiting usually accompanies delirium due to inflammation of the brain; here it is absent. Moreover, the post-mortem appearances, no matter how violent the delirium, show us no inflammatory action in the brain. From the clinical evidence and the necropsy, it is not caused by inflammatory lesions, but is rather due to a profound perturbation of the nervous system aided by the lack of nourishment carried to the nerve-centres, due to the altered state of the blood. There is a great profusion of rose-colored spots where the blood is much affected. The absence of headache is further evidence against its inflammatory origin. Having explained the delirium to you, you will want to know the proper treatment. The small doses of opium, 1-gr. suppository, three times a day, which we give for the diarrhœa, has a good influence, to some extent, over the disturbed action of the nerves. It quiets the delirium. Nor in cases where it did not produce speedy action by bowels or stomach, should I hesitate to give it hypodermically. The patient must have one-sixth of a grain hypodermically if he tries to get out of bed. But we can further improve the action of the opium by certain remedies acting on the circulation, and as sedatives to the nervous system. The combination of digitalis and opium is a good one. It is best suited to cases where there is considerable rapid action of the heart in addition to the delirium. Here the heart is rather slow and the digitalis does not come under the law just enunciated. There are different remedies for calming the nervous system. The best are the bromides and chloral. One drachm of the bromides, in divided doses, did great good here and gave sleep. Often the bromides will not answer, (we give it with opium here). When given alone they are not generally active, and have to be combined with opium. If this combination fails, chloral must be given in decided doses—fifteen grains every two hours until its effect is produced. In these cases cold applications to the head are also indicated; or, putting the patient in a bath relieves the delirium and wakefulness and produces profound sleep. I shall illustrate this subject further with other cases.

JAUNDICE—INTERMITTENT FEVER—CEREBRAL HEMORRHAGE.

A CLINICAL LECTURE.

BY

ALONZO CLARK, M. D.

Professor of Practice of Medicine, College of Physicians and Surgeons, New York. Visiting Physician Bellevue Hospital. Consulting Physician St. Luke's and St. Mary's Hospitals, etc.

CASE I.—Male, aged—, occupation, milkman, has been jaundiced for a couple of years, can only walk one flight of stairs, has had pain in the knee joints and

at times gets very drowsy; has clay colored stools; is sometimes very costive, at others has diarrhœa.

The first organ we shall have to examine in this case will be the liver. He has been more or less jaundiced for two years, the jaundice disappearing half the time. The conjunctiva shows the jaundice more distinctly than any other part of the body. The most common cause of jaundice is an obstruction to the transit of the bile from the liver to the intestines, and the most common cause of obstruction is the gall stone. This is substantially a case of painless jaundice. There are several affections of the liver, that tend to produce it. The carcinomatous affections do not produce it except when a tumor is in a position to press on the gall bladder. Certain inflammatory actions of the liver will produce it, and certain hypertrophies are attended by it. The patient complains of diarrhœa alternating with constipation, this will be produced by the retention of feces in the intestinal tube, and being retained for some time they become irritant and produce watery secretions causing watery discharges.

Enlargement of the liver is sometimes attended by jaundice and sometimes not. Fatty degeneration is an enlargement, but before it comes to a terminus is always attended by jaundice. Simple hypertrophy, resulting from disease of the heart, is not generally attended by jaundice.

Observe, first, that there is no marked fullness in the region of the liver; there is a little more sinking on the right side than on the left. My finger now rests on the lower edge of the liver, and that organ is sunken away from the walls. I should not know I had my finger on the edge of the liver if he did not move with his breathing; it presses against my finger as he takes a long breath, and the pressure is removed when he breathes out. The upper border of the liver is nearly up to the nipple; it is not very large. The left lobe of the liver should extend $4\frac{1}{2}$ inches to the left of the median line. At that point, however, we get resonance, marked through the liver; it is 7 inches enlarged upwards to the left but not downwards. It is not easy to find the upper portion of the left lobe of the liver, because the diaphragm presses upon it, and the liver is directly under the diaphragm. I cannot feel the liver to ascertain whether it is irregular or whether there are nodules on it; the integuments are not very thick, but they prevent my making certain of there being irregularities. The liver then is a little enlarged; the object of my examination was not so much that I supposed it probable that the jaundice is attributable to disease of the liver structure itself as the suspicion that it might come under a class of cases that I think are not described in your text-books, in which from some unknown cause there has been an inflammatory action in the capsule of Glisson at the point of its entrance into the liver, and that inflammation has thrown out new material. New fibres have been formed, and they have so contracted as to partly close the ductus communis before it enters the intestine. That is one of the forms of painless jaundice.

I strongly suspect that there is a narrowing, not an entire closure, of the ductus communis; there is no abscess or tumor that could be referred to the gall duct that does not extend below the border of the ribs, and yet there may be a slow delivery of the bile into the intestine from a narrowing of the tube. I come to the conclusion because we find nothing else that can fairly account for the condition. I assume that it is not an absolute closure, for then the liver becomes enlarged. I have a liver which weighed 24 lbs.

entirely in consequence of the closure of the ductus communis. What should produce that enlargement it is difficult to say. I suppose it to be a congestion resulting from irritation of the bile in the liver, the liver in such cases is dark and yellow, and if the disease has had a considerable duration it may become almost black; there will be a great amount of black pigment matter deposited in it. Sometimes it shows in spots at other times the dark color is generally throughout the organ. There are two modes in which a jaundice color can occur: one is the scanty circulation of the blood in the liver, leaving the elements of bile in the blood, that is the liver does not act as a sieve to separate them, but they are retained in the system, and finally give the patient a light yellow color. The other is the obstruction that I refer to, in which the bile is secreted, passes into the ducts and cannot pass through, being absorbed into the blood again. The effect of that sort of jaundice is, if extreme, to produce very much that condition of the brain that uræmia does, when it is extreme, namely, a stupor. If the patients die from the disease they die unconscious; rarely of convulsions, as in uræmia.

Treatment.—The treatment for this case consists in giving bicarbonate of soda. I give it because it is an element of the bile, and an element that makes it more fluid than it would naturally be. It can therefore escape through a narrower passage than the ordinary thick bile. It has about as much power to cause secretion from the liver as calomel. I should give it in doses of 1 to 2 drachms per day, 15 or 20 gr. at a time, to be stirred up with water. The best time to take it is after digestion is completed, about 3 hours after taking food. It is the very best remedy against the effusion of gall stones. I have given it for 30 or 40 years and have effected some quite unexpected cures. In that case it is given by the test; the patient supplies himself with slips of litmus paper and tests his urine once or twice a day to see if it is acid or alkaline; as it is not desirable to keep the urine alkaline, for any length of time, the rule in such a case is, to take the soda without reference to quantity, until the acidity of the urine is reduced to its minimum. There is a chance of the formation of calculi, and the good that you want to effect can be accomplished by keeping the urine in the slightest degree acid so that it turns litmus paper to the very faintest red. With reference to gall stones the carbonate of soda will not dissolve a gall stone already formed, but it will prevent the formation of any more. Gall stones are constituted in very large degree of cholesterin, and the presence of the soda in the system prevents the formation of cholesterin.

CASE II.—History.—Male, aged —, had chills and fever last summer while residing in West Farms. The chills began in July; had a chill every day for about two weeks. While he had the quotidian type the attack came in the evening, 9 P. M.; when it became "tertiary" the attack came on at 10 A. M. This lasted for six weeks. Has also had malarial fever.

A person who has had chills and fever for so long a time as represented in this case is very likely to have an enlarged spleen. There is an unnatural dullness in the left side, extending through a pretty large space. The spleen is not as large as my fist, and it naturally lies back of and just above the kidneys, and almost against the backbone. It extends forward, and just about meets the left lobe of the liver. The habitual use of quinine is the only thing that is likely to reduce a spleen that has been enlarged by intermit-

tent fever. I should advise that he take about 10 gr. a day for a long time, whether he has signs of intermittent fever or not. There is another point in this case. After his fever had gone he had pain, coming nearly every other day, in both temples. The patient wants food, but the food would not serve him with this enlarged spleen as it would with a normal one. He has a cachetic look. I think it very likely that the chocolate-iron lozenges would do him good. They contain $1\frac{1}{2}$ gr. of carbonate of iron, the rest being chocolate. The protocarbonate is the most soluble of the iron preparations.

CASE III.—History.—Male, carpenter by occupation, had a paralytic stroke on the 5th of December. A dull faint feeling came over him and he could not stand on his feet; has a tendency to bend forward. He was unable to drag his leg along except with the assistance of one or two men. He could not raise his left hand at all; all the left side of his face was numbed and a feeling of fullness in his head. The right side of his face shows more muscular action than the left, though the left is by no means paralyzed.

This is either embolism or apoplexy, and the lesion is upon the right side. To ascertain if it is embolism we have to inquire of the heart; if there is embolism the probabilities are that we shall get a murmur of the heart; it may be either in the mitral or aortic valve.

I examine and find there is no murmur. The apex stroke is nearly $3\frac{1}{2}$ inches from the median line, as is normal. There is no hypertrophy and I hear no murmur. The conclusion then is, that a small vessel has given way in the right side of the brain, and as sensation and motor action are pretty nearly equally affected, it is very likely it is in a position between the corpus striatum and the optic foramen on the right side. On making an examination for the loss of sensation, two pins at the distance of $4\frac{1}{2}$ inches seem like one. If the sensation were normal, he should feel the two pins at $2\frac{1}{2}$ inches; hence both his sensation and muscular force are impaired.

Treatment.—This man has a little clot in his brain, it must be absorbed before he will get the natural use of his limbs. To facilitate that absorption, you must keep his general health fair, the carbonate of soda has an effect upon the arteries.

No man ever had an apoplexy whose cerebral capillaries were not diseased, and commonly it is an atheromatous degeneration of the arteries that caused them to yield. I think there are a good many men living who might have died of a second attack of apoplexy if they had not taken carbonate of soda.

Its office here is analogous to that of the previous case; it saponifies the fat in the blood and carries it off by the liver so that there will be rarely an excess of fat deposited as a morbid product in any part of the body.

Fifteen or twenty grs., three or four times a day should be given. This may enable him to carry on his work for a great many years. This attack of apoplexy may be regarded as a benevolent occurrence for it gives warning of the condition of the arteries, and suggests the use of carbonate of soda to prevent progress in that disease.

M. CHARLES RICHET has lately made a communication to the Paris Societe de Biologie, in which he seeks to show that after the death of an animal the nerves of sensation retain their functions longer than the nerves of motion.

FORMULÆ AND POINTS IN PRACTICE.

IN DYSPEPSIA WITH SLUGGISH ACTION OF THE LIVER.

- R. Acid nitro-hydrochlor. dil. 3 ij.
 Acid hydrocyanici dil. min. xxv.
 Succ. taraxaci. 3 vj.
 Tr. gentianæ co. 3 j.
 Infus. sennæ, ad. 3 viij.
 M. Sig.—One-sixth part twice or thrice daily.

IN INCONTINENCE OF URINE WHERE THE REACTION IS ALKALINE.

- R. Acidi benzoici. grs. 30
 Glycerine sufficient to make a mass. Divide into six pills and silver them, and take one every six hours.

IN STRUMOUS OPHTHALMIA.

- R. Quininæ sulphat. gr. iv.
 Acid. phosphorici, dil. min. xx.
 Syr. Jaurantii. 3 iv.
 Aquæ ad. 3 iv.
 M. Sig.—One dessert-spoonful three times a day.

FOR HYPODERMIC INJECTION IN INTERMITTENT FEVER.

- R. Quiniæ sulphat. grs. 64
 Acid. sulphur. dil. min. 10
 Aquæ. 3 iv.
 M. Sig.—From 15 minims to half a drachm may be injected into the subcutaneous connective tissue; only a clear solution to be used. The injection may have to be repeated three or four times before a cure is effected.

TONIC IN WEAK AND IRRITABLE STOMACH.

- R. Ferri et quin. citrat. grs. 30
 Tinct. chirate. 3 i 1/2
 Aquæ, ad. 3 8
 M. Sig.—One-sixth part three times a day.

IN SKIN DISEASES, WITH IMPOVERISHED BLOOD.

- R. Tr. quiniæ. 3 j.
 Liq. arsenicalis. min. 18
 Ferri et ammon. citrat. grs. 30
 Aquæ aurantii, ad. 3 8
 M. Sig.—One-sixth part three times a day, after meals.

IN SLOW DIGESTION.

- R. Quiniæ sulphat. grs. 12.
 Pulv. ipecacuanhæ. grs. 12.
 Ext. gentianæ. grs. 24.
 M.—Divide into twelve pills and order one to be taken every day at dinner.

IN MUTTERING DELIRIUM.

- R. Tr. quiniæ. 3 i.
 Glycerini. 3 6.
 Spts. ammon. aromat.
 Spts. ætheris. aa 3 3.
 Ext. opii liq. min. 30.
 Infus. aurantii ad. 3 8.
 M. Sig.—One-sixth part every six hours.

IN MILD CONSTITUTIONAL SYPHILIS.

- R. Syr. ferri iodidi. 3 4.
 Mucilag. tragacanthæ. 3 i.
 Olei morrhue. 3 4 1/2.
 M. Sig.—One tablespoonful twice or thrice daily.

IN ERYSIPELAS WITH ABLUMINURIA.

- R. Tr. ferri perchloridi. 3 2-4.
 Glycerini. 3 4.
 Tr. card. co. 1.
 Aquæ. ad. 3 8.
 M. Sig.—One-eighth part every three or four hours.

IN TORPID STATE OF THE COLON.

- R. Spts. ammon. aromat. 3 4.
 Ferri et ammon. citrat. grs. 40.
 Infus. quassia. 3 6 1/2.
 Glycerini. 3 i.
 M. Sig.—One-sixth part three times a day.

IN CHOREA.

- R. Ferri peroxid. hydrat.
 Mellis depurat. aa. 3 2.
 M. Sig.—One teaspoonful twice a day.

SELECTIONS FROM JOURNALS.

HARTMANN ON EPISTAXIS.

The author (*Zeits. fur Ohren.*, Theil x; *Ann. des Maladies du Larynx*, etc., July 1881) warns against the dangers of plugging the posterior nares, especially if perchloride of iron be made use of at the same time. The presence of the tampon is not only, he says, very disagreeable to the patient, but is apt to cause great irritation of the mucous membrane. If perchloride of iron be used, fresh hemorrhage frequently occurs when the plug is removed, from the tearing of the mucous membrane to which it has adhered. Dr. Hartmann has seen three cases in which plugging of the posterior nares has been followed by inflammation of the middle ear.

SCHÆFFER ON OZÆNA.

Ozæna, according to Dr. Max Schæffer (*Monats fur Ohren*, No. 4, 1881; *Ann. des Maladies du Larynx*, etc., July 1881) is nearly always the result of serofula or of syphilis. It may be due, however, though rarely, to a primary affection of the bones or cartilage. He distinguishes two stages of the affection, a hypertrophic and an atrophic. In the former the secretion is abundant, thick and creamy, and forms thick crusts, especially in the naso-pharynx. The crusts, when detached, give rise to hæmorrhages, and leave behind them erosions, which are apt to run on to superficial or deep ulceration. The mucous membrane is livid, thickened, and pits on pressure. In the atrophic stage the secretion is less abundant, more fluid and viscid, and forms fine crusts, its capacity being due to the admixture of epithelium. The mucous membrane is pale, thin, and very adherent to the bones, and undergoes fibroid degeneration, whilst the glands are destroyed. The spongy bones are atrophied, and the meatus on each side is considerably enlarged. When due to hereditary syphilis, the ozæna is frequently developed during the first weeks of life, the hypertrophic stage lasting in these cases eight to ten years. The duration is the same when serofula is the cause. In acquired syphilis the stage is shorter, lasting from six months to a year. Here the affection does not begin in the mucous membrane, but in the periosteum and cartilage of the bone. The author recommends injections of chlorate of potash to be used twice a day, and

in the intervals he introduces, in the atrophic stages, plugs of cotton-wool. He condemns the use of carbolic acid, and says that in cases cured by its use smell is permanently lost. Constitutionally, he makes use of the usual remedies.—*Lon. Med. Rec.*

BRESGEN ON CHRONIC CATARRH OF THE NASAL FOSSÆ AND PHARYNX.

Dr. Bregen (*Annales des Maladies du Larynx, etc.*, July 1881) enumerates the causes of the above affection as frequent colds, enlarged tonsils, elongated uvula, abuse of tobacco, snuff, and the vitiated atmosphere of warm rooms. Syphilis, he says, is not a cause, as it only affects the nose when it is previously the seat of catarrh. Among the symptoms, he insists on the importance of bleeding and redness of the nose as certain signs of commencing chronic rhinitis. His treatment consists in the insufflation of powdered nitrate of silver and starch (from 0.5 to 10 per cent.), and in obstinate cases he applies the galvanocautery. He seldom resorts to injections, except in cases attended with much fœtor, and condemns the use of the plug recommended by Gottstein. To facilitate the inspection of the posterior nares he inserts the index finger of the left hand—preferring it to the hook of Voltolini—to draw the palate forward. To overcome the hyperæsthesia of the palate, fauces, etc., frequently present, Dr. Bregen paints the parts with iodide of glycerine (iodide 0.5—0.1, iodide of potassium 2.5—5, glycerine 25) and affirms that in three applications a sufficient degree of insensibility is obtained. During these applications the patient is forbidden the use of tobacco, alcoholic drinks, and strongly spiced food.—*London Medical Record.*

MICHAEL ON CHRONIC LARYNGEAL AFFECTIONS IN CHILDREN, THE RESULT OF ACUTE INFECTIOUS DISEASES.

The author describes (*Deutsches Archiv für Klin. Med.*, Band xxvii, Heft 6) a series of cases of obstinate chronic laryngeal and tracheal catarrh in children, occurring as a sequel to various infectious diseases. Four cases were those of children in whom a slight hoarseness and shortness of breath on movement remained after the primary affection (whooping-cough, small-pox, diphtheria). Laryngoscopic examination revealed a slight swelling of the hinder laryngeal wall; and upon it a distinct grey zone one millimetre thick (probably of thickened epithelium). An elliptical chink remained between the vocal cords on phonation. In three cases (two after small-pox, one after diphtheria) there were suffocative fits, and the voice was almost extinct. On the hinder laryngeal wall a white or greyish-white zone was seen, consisting of numerous small excrescences. In one case these growths pressed between the vocal cords, and prevented the glottis from closing completely. The vocal cords themselves were normal. In all cases, the internal thyro-arytenoids were partially paralyzed, probably from atrophy. The treatment indicated in the milder cases is astringent inhalations; in the severer forms, painting with iodo-glycerine, or cutaneous application of the induced current, or dilatation with Schroetter's bougies. With regard to the troubles which are apt to follow tracheotomy, and which tend to prevent the removal of the canula, Dr. Michael enumerates the following: 1. Granulations springing either from the tracheal wound or from the hinder

wall of the trachea; 2. Inflammatory hypertrophy about the vocal cords; 3. Paralysis of the posterior crico-arytenoids; 4. Spasms of the glottis; 5. Cicatricial stenosis of the larynx and trachea; 6. Softening and consequent yielding of the tracheal rings; or, 7. The combination of two or more of these causes. To prevent ulceration of the hinder wall of the trachea, consequent upon pressure of the canula, the alternate use of a long and a short canula is recommended.

[Ulceration of the tracheal wall may be very readily prevented by the use of Mr. Marrant Baker's flexible tracheotomy tubes. The comfort to the patient, and the immunity from danger which the use of the soft tube ensures, does not seem to be appreciated by foreign writers as it ought. In the reporter's experience it is the anterior and not the posterior wall that is apt to suffer from the pressure of the ordinary silver canula.]—*London Med. Record.*

SEILER ON ASCITES IN CHILDHOOD.

Dr. Seiler (*Berlin Klin. Woch.*, June 27) divides cases of ascites in children into two primary classes: 1. Those dependent upon some affection of the peritoneum; 2. Those resulting from obstruction in the portal system, exclusive of such varieties as so-called chylous ascites, or fatty degeneration of the peritoneum, or the ascites which forms part of a general dropsy. In the first group are included (a) tubercular peritonitis, the exudation in which is always serous, and never hemorrhagic, as is often asserted; (b) primary carcinoma of the peritoneum, which often runs a painless chronic course, with a constant sanguineous exudation; (c) a primary peritoneal exudation, the result of inflammation similar to pleuritic effusion, is of very doubtful occurrence. In the second group are to be enumerated (a) medullary sarcoma of the liver pressing on the portal vein; (b) syphilitic gummata, or cicatricial contraction of the liver; (c) cirrhosis of the liver. This is the most important. The precise cause of this condition in all cases is obscure, but in the majority, where alcohol is excluded, a diffuse syphilitic hepatitis may be looked upon as producing it. Such cases are curable by mercury and iodide of potassium.—*Lond. Med. Rec.*

STRANGE ON CHOREA.

The results of the treatment of 100 cases of chorea in the Worcester Infirmary by Dr. Strange (*Brit. Med. Jour.*, July 16 and 30), lead him to regard the disease, along with some of its congeners, as "a pure inorganic neurosis, the term implying that it has no anatomical or true pathological basis, *post mortem* examinations not having given to it any definite morbid anatomy; and to be looked upon, therefore, as the outcome of a merely functional disturbance with a substratum of that undefined and, perhaps, for ever undefinable alteration in nutrition of the nervous centres, which we must suppose underlies all the effects of their functions." The author regards the disease as essentially one of debility or deficiency of nerve-power, and considers that the greater frequency of its occurrence in ill-nourished subjects, as well as the excessive motility or want of power to restrain, as well as duly to coordinate muscular movement, are proofs of this proposition. Fright operated as the exciting cause in at least two-thirds of the cases. Hemichorea was of rare occurrence; and in a few cases the affection was limited to several muscles or even the diaphragm only, producing in this case every two or three minutes, except during sleep, a sharp jerky hiccup. The writer

considers that everything points to defective nutrition of the brain, and, perhaps, of the spinal cord also. Agreeing with Dr. Sturges in the value of the moral treatment of this malady, Dr. Strange considers that it alone is not sufficient, and that tonics, friction of the limbs, and gymnastics, are equally necessary. One of the most successful tonics the author has found to be the daily administration of 3 to 6 ounces of port wine.

KENNEDY ON WHOOPING-COUGH.

Dr. Kennedy, in the course of some remarks on pertussis at the Dublin Obstetrical Society (*Dublin Jour. of Med. Science*, Sept.,) expressed an opinion that the disease is partly neurotic and partly of a specific inflammatory character; and he considers that during the existence of the disease some poison circulates in the system. In justification of this view, he refers to the paroxysmal and convulsive cough which often occurs in the gouty diathesis, and in that form of influenza known as 'la grippe', as well as in varicose irritation, or cases of worms. The author is further of opinion that there is some temporary enlargement of the lymphatic glands, especially those of the thorax. Referring to the frequent difficulty in diagnosis before the whoop appears, he refers to the following points as helping to come to a conclusion; the persistence of the cough and its resistance to treatment; the liability of the child to be suddenly awakened by the cough from a quiet sleep; the congested and slightly swollen fauces. Dr. Kennedy is quite of opinion that the disease is amenable to treatment, and should not be regarded as necessarily to run its course. He advises a strictly fluid diet, chiefly milk; and, looking to the fact that the cough is worse at night, he directs the medicine to be given in the afternoon and on into the night, a dose after each paroxysm. The inhalation of one or two whiffs of chloroform he has found of marked service in lessening the violence of the fits. A mixture containing bicarbonate of potash and tincture of belladonna, an old remedy, is often efficacious in diminishing the intensity and frequency of the attacks; for which also 2 to 4 grains of extract of conium may be given. Chloral however, gives the best and most constant results, and may be given in doses of half a grain to an infant a month old. When the bronchial secretion is profuse, expectorants, of which ipecacuanha is best, are indicated; and rubefacients, especially if rubbed on the stomach, are often useful.—*Lond. Med. Rec.*

FILATOFF ON THE ETIOLOGY AND DIAGNOSIS OF ACUTE PERITONITIS OF CHILDREN.

The diagnosis of acute peritonitis offers no difficulty, so characteristic are the symptoms; but the explanation of a cause is not always so easy, and in many cases is quite unknown, or included in the vague term rheumatic. Dr. Filatoff, after pointing this out, proceeds to recount a case in which all the marked symptoms of the disease were present, and which he considered was due primarily to a straining of the abdominal muscles by excessive gymnastic exercise, followed by improper diet. He refers to another case, in which the symptoms of acute peritonitis were closely simulated by an affection of the recti abdominis, also brought on by excessive gymnastics.—*Lond. Med. Rec.*

PARKER ON THE CURVATURES OF THE LONG BONES IN RICKETS.

In the course of some remarks on the curvatures in the long bones in rickets, Mr. Parker takes exception to the usually received explanation of their cause. He says that after diligent searching he has never seen "soft and yielding" long bones in rickets, either *post mortem* or in the course of osteotomies, and he quotes Virchow in denying rickets to be a malacia. Mr. Parker states that the majority of curves occur between the second and third years; and he is inclined to regard them as exaggerations of the natural curves, and further considers their great similarity to contra-indicate softening as a cause, which should rather lead to indiscriminate flexures. The exceptional recorded cases of undoubted rickets, where the curvatures commenced in advanced childhood, and even during adolescence, when softening of bones does not seem at all possible, as well as the spontaneous disappearance of the curves without keeping children off their feet, and without artificial support, as well as the very slow recovery often seen with mechanical restraint and perfect rest, are all adduced as arguments by the author against the current explanation. Without offering any reason, Mr. Parker believes that the long bones may assume various and considerable curves without undergoing infraction, or without previously becoming soft. The relaxed and flabby condition of the muscular system generally to be found in such cases, exclude muscular action as a cause for the curvatures of the long bones. [It should not be difficult to determine whether rachitic bones be soft or not. There is an acknowledged deficiency in hard mineral constituents, and an excess in the soft spongy ossifying material, even to the extent that "thick bones may be cut with a knife or pair of scissors" (Aitken). The deformities of the spine and chest, as well as the very frequent flexures of the long bones, in directions other than those of the normal curves, and the liability to "green stick fracture" in rickets, can scarcely be explained on any "hypertrophic view" unless the hypertrophied tissue be unduly soft.—*Lond. Med. Record.*]

GREEN ON CEREBRAL PYREXIA IN CHILDREN WHO HAVE BEEN EXPOSED TO PADDLING AT THE SEASIDE.

In the *Practitioner*, Feb., 1881, p. 100, Mr. W. E. Green records the results of his observations upon children who suffered from sun-fever, after exposure to the hot sun of the past summer, whilst paddling in the sea. The affection is nearly allied to sunstroke. Cases in Mr. Green's practice have been diagnosed as acute tuberculosis and typhus and typhoid fevers, but presented the following distinctive characters: 1. The temperature rises at once to its highest point, and there remains, or else falls to 102.4, when it continues steady until its final fall; and, unlike typhoid, if there be any variation, it falls a little toward night, and returns to its original standard in the morning. 2. The pulse may be rather rapid for the first day or two, but soon falls to a full bounding pulse of from seventy-two to eighty-four; the pulse in typhoid generally rising *pari passu* with the temperature. 3. The tongue is rarely dry, the diarrhoea is only occasional, there is no tympanites, and as a rule very little thirst, the patient liking milk, but showing great distaste to other food.—*Lond. Med. Rec.*

THE DRINKS, FOOD, BATHS, EXERCISE AND CLOTHING IN DIABETES MELLITUS.* BY J. H. SALISBURY, B. N. S., A. M., M. D.

DRINKS.—Drink one-half pint of beef-tea, made from pure lean meat fibre, free from tendon, cartilage and fat, at each meal, and the same amount between two hours after breakfast and one hour before dinner, between two hours after dinner and one hour before supper, and between two hours after supper and one hour before breakfast the next morning—making in all three pints of beef tea in the twenty-four hours. Take no other drinks of any kind or description, unless it be a few mouthfuls of clear tea or coffee with the medicine.

FOOD.—Eat broiled beefsteak which has been entirely freed from fat, tendon, cartilage and bone, before cooking. Have it seasoned to taste with butter, pepper and salt. For variety, use the steaks (broiled) which are cut from the center of a round of lamb or mutton, broiled oysters, broiled fish that are free from fat, broiled quail, broiled woodcock, broiled partridge, broiled grouse and broiled codfish. The whites of eggs may be taken raw or soft boiled occasionally with the meat. Use butter, pepper and salt for seasoning. Worcestershire and Halford sauces may be used on the meats if desired. This lean-meat diet and the drinks should be rigidly followed out for at least two or three months, or longer if the healthy functions of the liver and kidneys are not by that time fully restored and established, so that the diseased conditions do not return by departures from the lean-meat diet.

The urine should flow at the rate of three pints daily, and stand at or near a density of 1.020. This state of things should be present continuously for five or six weeks before bread and vegetable food should be ventured upon. When it is thought the right time has arrived, begin by allowing the patient one mouthful of bread at each meal. Take this bread after the meat is eaten. If after a few days the urine continues to remain at 1.020 density, or thereabouts, and flows at the rate of three pints only in twenty-four hours, increase the bread to two mouthfuls at each meal. In this way, advance gradually and cautiously, step by step, till at the end of four or five weeks the patient is taking two parts of lean meat to one of bread, toast, boiled rice, cracked wheat or potato. Keep up this kind of diet, in the above proportions, continuously for the following six months, before fruits (except the lemon) are ventured upon. A little lemon-juice on the meats, or after meals, may be indulged in at any time during the progress of the cure. After the patient is sufficiently recovered to take, with safety, one part of bread, toast, boiled rice, cracked wheat or potato, to two of the meat, half a pint of clear tea or coffee may be substituted for the beef-tea at each meal. During the entire treatment, all sweets, pies, greens, cakes, vinegar, pickles, sauce, preserves, puddings, soups, crackers, crullers, cheese, milk, mush, cream, fruits and vegetables should be rigidly avoided.

BATHS.—Take a soap and hot water bath twice a week, for cleanliness, after which oil all over with sweet oil and glycerine, rubbing in well. Every night or day sponge all over with hot water, in which put from half to an ounce of aqua ammonia to the quart of water; rub in well and wipe dry afterward. Every day put a teaspoonful of dilute nitro-muriatic acid in

six ounces of hot water, and rub in thoroughly over the region of the liver. Keep this up till a miliary eruption appears, when stop it till eruption disappears; then resume it again till eruption again shows itself, and so on during the progress of cure.

CLOTHING.—Wear flannel or silk next the skin, and dress comfortably warm. On retiring, change all clothing worn during the day, so that it may be thoroughly aired for the following morning. Keep the clothing sweet and clean by changing every other day. The bed should be thrown open on rising, and the bedding well aired during the day, and the bed not made up till it is time to retire.

EXERCISE.—Ride and walk daily in the open air as much as possible without fatigue. Four to six hours in the twenty-four should be spent in this way. If not able to walk or ride, the body and limbs should be rubbed and pounded all over for twenty minutes, morning, noon and night, by some one who has strength to do it thoroughly.

MEALS.—The meals should be taken at regular intervals, and it is better not to sit down at a table where others are indulging in all kinds of food. Eat alone, or with those only who are on the same kind of diet. After the system gets in good running order, which is indicated by the urine flowing at the rate of from three to four pints daily, and standing at a density of from 1.020 to 1.026, the appetite becomes good, and often ravenous. Frequently in this stage of the cure, more than three meals a day are desired. This desire should be gratified by allowing the patient a nice broiled steak between breakfast and dinner and dinner and supper. These extra meals should be taken at fixed and regular hours.

GENERAL REMARKS.—Avoid all anodynes and other medicinal agents that tend to get the stomach, bowels, kidneys and skin out of order. The cure is accomplished by removing the unhealthy alimentation that has culminated in the disease, and in aiding the removal of the pathological states of the deranged organs by the use of such remedial agents as assist in restoring normal healthy action.

By judiciously and persistently following out the foregoing plan of alimentation, treatment, etc., the diseased organs and system generally soon begin to take on a more and more healthy state. The urine contains every succeeding day less and less sugar, its density becomes less and less, the quantity decreases, the color heightens, the appetite improves, the eyes become brighter and brighter, the skin loses gradually its dryness, and becomes more and more soft and oily, and the mucus membrane less and less feverish and dry; the thirst ceases and the entire organism takes on little by little, yet certainly and surely, the actual appearances, states and conditions of health.

In less than one week's time after this treatment is thoroughly entered upon, the quantity of urine decreases from gallons to about two quarts; the density falls from 1.040 to 1.060 down to 1.026 to 1.034, varying with the advancement and severity of the disease. The thirst usually ceases in about three days, after which the sufferings of the patient are comparatively slight.

The slightest deviation in the patient from the course marked out can be detected by the watchful and expert physician at once. A single mouthful of bread, vegetables, fruit, sauce, sugar, or any fermenting farinaceous or saccharine food will elevate the density of the urine many degrees, by increasing the sugar in it, and the quantity voided will be much greater. The physician should be able to detect at

* These instructions have been printed in convenient form by Dr. S. for the use of his patients.

once any departures of the patient, and call him to strict account. No one need hope to handle this disease successfully without a rigid observance of the foregoing rules and regulations.

Medicines alone will not cure the disease. They are only aids in restoring healthy states after the cause, or the unhealthy alimentation, is removed. None but careless feeders ever have this disease, unless, as in rare instances, it may be imperfectly developed by local injuries. As the desires and appetites of the patient have to be entirely ignored, the physician must endeavor to so inspire his patient that his soul and body will be in the good work. Unless he can do this, his patient will steadily yield to the awful cravings of a diseased appetite too often to permit a cure possible. The patient can tear down more in one minute, by indulging in the forbidden, than the physician can put up in three days. Hence, you see the odds are with the patient in his downward course unless the physician can inspire him with such a sense of duty and responsibility to himself that the feeling of doing right, under every and all circumstances, will override the cravings of diseased desires and appetites.

Diseases in organs, which arise from defective or unhealthy alimentations, are the result of confirmed habits in eating too exclusively and continuously food, which, in the way and proportion in which it is taken, cannot be well digested; consequently it is unfitted for assimilation. The chemical and vital changes of fermentation, decay, and cryptogamic development set in, resulting in the production of agents debilitating and poisonous to the various vital organs which they reach, by being more or less taken up by the gland cells of the digestive apparatus.

These desires are pathological habits in the organ or organs affected, and have been brought on by being continuously compelled to do and to be exposed to labors unfitted for it or them to perform or endure, without becoming more or less overtaxed, enervated, deranged, paralyzed and changed in function, and eventually in structure.

To produce these states, conditions and changes, requires time and persistent and continued exposure to the before-mentioned abnormal causes and labors. To cure them also requires time and the persistent and continued avoidance of all causes producing them, and the constant and unflinching use of such food and medical means as will keep the system constantly and continuously in the most perfect running order. This is indicated by the urine flowing at the rate of about three pints daily, standing at a density of 1.020, clear, no sediment being deposited on cooling, and no sugar, albumen, or other pathological body or condition present; the bowels moving once or twice a day, and at the regular time; no pains or aches; head clear; no dizziness; skin and mucous membranes in good order; mind cheerful, and all the normal functions going on in a healthy manner.

In this disease, the lobules of the liver or that portion of the gland which is connected directly with the blood vessels, and which organizes glycogenic matter or animal sugar, is the part that is directly involved. This portion of the liver is too active, and makes more animal sugar than is required. This excess has to be eliminated, and the kidneys have this additional work to do. Soon they, too, become over active, and little by little become involved *indirectly* in the disease.

To effect a cure, we must cut off all food (as far as possible) that goes to make animal sugar. This includes vegetable food, fruits, animal fats, tendon and

connective or glue tissue and cartilage. Also, all excess in drinks. This lessens the labor of the diseased parts, and little by little, their excessive activity ceases, and normal states ensue, which, if persisted in for a few months, with appropriate medication, breaks up the diseased habit; normal conditions are restored and become permanent, and the disease is cured.

SAUNDBY ON THE TREATMENT OF CONSUMPTION.

Dr. Robert Saundby, in the *Practitioner*, Oct. 1881, p. 249, gives a very valuable *resume* of this subject. Cod-liver oil and quinine are Dr. Saundby's sheet anchors, the hypophosphites having disappointed his expectations. Good nourishment and attention to the digestive functions form the best treatment of cough. If a consumptive patient want to take a short cut to the next world, he has only to take an opiate, paregoric for example. Codeia is most valuable. Camphor inhaled, a lump under the pillow, or some powder in a jug of boiling water, forms an effectual anodyne. To prevent dryness of the mouth, a compressed tablet of chlorate of potash and borax in the cheek remains all night, and causes sufficient salivary secretion to keep the air-passages moist. The bronchitic attacks are to be met by the use of turpentine vapor and counter-irritation, and sulphur internally. Nothing controls the profuse secretion of the bronchial mucous membrane so readily as fifteen to twenty grains of sulphate of iron, given in pills or mixture during the day. The use of oro-nasal inhalers, charged with carbolic acid or eucalyptus oil, is strongly advocated. For anorexia, quinine does more than any other drug; while the peptones, Hoff's malt-extract, and such like preparations, are, in many cases, most valuable. Cod-liver oil, in doses of one teaspoonful, after meals, thrice a day, Dr. Saundby believes to be quite sufficient, larger doses not being assimilated. The diarrhœa is always controlled by two drachms of dilute sulphuric acid to the pint of sugared orange-water, drunk *ad libitum*, unless ulceration be present; and then starch and laudanum enemata, or an enema of half an ounce of liquid extract of ergot, will in most cases give relief. The sweating is generally controlled by the same means as are used for the diarrhœa; but if not, then atropine or picrotoxine must be used. Hæmoptysis Dr. Saundby treats with ergot internally or subcutaneously. In conclusion, a tabulated view is given of the different remedies. Specific: quinine, cod-liver oil; Cough: liquorice, camphor, codeia lozenges; Bronchitis: turpentine inhalations and epithems; Purulent expectoration: eucalyptus inhalation, sulphate of iron; Anorexia: quinine, peptonized food, malt extracts, cod-liver oil, ether, alcohol; Diarrhœa: Sulphuric acid, starch and opium enema, ergot enema; Sweating: sulphuric acid, ergot, ergotine. A good prescription in many cases is the following: R. Quiniæ sulphatis, gr. j; specific, tonic: Ferri sulphatis, gr. v.; For profuse expectoration: acidi sulphurici diluti, m. xv.; For sweating, diarrhœa, and hæmoptysis: aquæ, ad ʒj. M. To be taken thrice daily. If the sweating be not thereby checked, a minim of solution of sulphate of atropine may be added, and codeia lozenges may be given, with cod-liver oil in addition, if need be.—*London Med. Record.*

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EDITORIAL.

THE NEW YORK PHYSICIANS' MUTUAL AID ASSOCIATION.

In looking over the thirteenth annual report of this association we have been impressed as never before with the usefulness and scope and grand possibilities of such a society as this, with aims so laudable, so conspicuously beneficial to the families of medical men. A glance at its work for the past year shows that its labors both in adding to its membership and influence and in giving substantial aid to the families of deceased members, have not been barren of result.

The financial status of the society has been rendered more secure by liberal donations to the permanent fund. The members have been prompt to respond when called upon to pay their dues, the meetings have been well attended, many distinguished names have been added to the roll of membership and other signs of vitality and progress are not wanting to show that the association is greatly extending the sphere of its usefulness.

In view of the well known fact that the majority of physicians, even those who have enjoyed a lucrative practice, leave their families unprovided for at their decease, it is indeed surprising that the interest evinced in an association such as this is not more general, and that there is not greater enthusiasm over a society which has in the past so markedly demonstrated its general usefulness and benevolent purpose.

Certainly it is not too much to say that every member of the profession owes it to himself, to his family, and his profession to connect himself with such an

association as this; if he is not financially independent its advantages are self-evident, if fortune has been kinder to him than his less favored fellows he should give to the society his influence and financial aid.

We sincerely trust that the increased interest manifested by the profession in the Physicians' Mutual Aid Association during the past year, may be auspicious of a new era in its history, which shall bring it up to the full standard of its beneficent usefulness.

BOOK NOTICES.

Diphtheria—Its Nature and Treatment—Varieties and Local Expressions. By Morell Mackenzie, M. D., London, Senior Physician to the Hospital for Diseases of the Throat and Chest; Consulting Physician to the North Eastern Hospital for Children, and Lecturer on Diseases of the Throat at the London Hospital Medical College. Published by Birmingham and Co., New York.—1881.—Price 20 Cents.

A treatise on the nature and treatment of so dread a scourge as diphtheria, embracing the medical views of the best authorities on this subject, *a priori*, must merit acceptance by the profession, and after a careful perusal of Dr. Mackenzie's book, one cannot fail to be impressed with the simple and yet complete manner in which he has discussed the questions of the etiology, symptomatology, diagnosis and treatment of diphtheria, of which the author justly remarks, "that a malady which under various names has existed for so many thousand years, which has been so widely diffused, and has caused such dire havoc, the progress of which sanitary science has not yet learned to bar, must always be of interest to the student of medicine.

The author defines diphtheria to be "a specific communicable disease, occurring epidemically, endemically and solitarily, and characterized by more or less inflammation of the mucous membrane of the pharynx, larynx or air passages, and by the formation on the surface of those parts, especially on the mucous membrane of the fauces and windpipe, of a layer or layers of lymph or false membrane, generally showing signs of bacteroid mycosis. During an epidemic other mucous surfaces exposed to the air and wounded surfaces of the common integument occasionally, but less frequently become covered with a layer of lymph, subsequently to or independently of a formation of membrane in the more ordinary situations. The disease is generally of an adynamic character, is often associated with a disturbance of the renal function (albuminuria), and is frequently followed by lesions of innervation, rarely giving rise to permanent paralysis. The symptoms as regards respiration, vocalization and deglutition vary with the site of the disease. By far the larger proportion of fatal cases terminate by gradual apnoea, but a certain percentage sink from asthenia, blood-poisoning, and cardiac thrombosis."

In regard to etiology the author claims that the exciting cause is a specific contagium, and that the disease does not originate *de novo*. He looks upon tender age as the principal predisposing cause.

He maintains the now generally accepted theory of the disease, viz., that it is "an acute general disease with local manifestations."

In alluding to the protective influence of an attack of diphtheria, he states that "as in the case of typhoid fever and cholera an attack probably affords a protection, though a very slight one, against recurrence."

The primary septicæmia he considers due to the specific poison, and secondary infection to absorption from the decomposing lymph.

It is, however, from that portion of the book devoted to treatment that the medical reader will derive the most satisfaction, for here the author has been most explicit and clearly defined the methods which should be followed. He divides the remedies recommended into four kinds, viz.: The recuperative agents; the alleged specifics; the antiseptics; and the expectorants.

He believes that there are few cases of diphtheria in which systematic feeding does not constitute the most important part of the medical treatment.

He condemns the practice so much in vogue, of detaching the false membranes, except in urgent dyspnoea, where putrefying membrane is lying low in the throat, as membrane thus removed rapidly reappears and often with increased activity and over a wider area.

In conclusion he discusses laryngo-tracheal diphtheria, nasal and secondary diphtheria.

The book is well written, terse, thorough and practical, and will without question be consulted with interest and instruction by the profession.

Photographic Illustrations of Cutaneous Syphilis. By George Henry Fox, A. M., M. D., Clinical Lecturer on Diseases of the Skin, College of Physicians and Surgeons, New York; Surgeon to the New York Dispensary, Department of Skin and Venereal Diseases; Fellow of the American Academy of Medicine, etc., etc. Forty-eight Plates from Life, colored by hand. Part 10. Published by E. B. Treat, New York.

Part 10 comprises four plates illustrating five cases of Syphiloderma ulcerativum. Dr. Fox's series of illustrations of cutaneous syphilis are already so well and favorably known that it is unnecessary to comment at length on this addition to the numbers already published. It maintains the uniform excellence of the series and affords the best possible substitute for the study of the ulcerative lesions of syphilis in the living body.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, DECEMBER 28, 1881.

Dr. Satterthwaite, the president, presided. The minutes of the previous meeting were read and approved.

Dr. Porter, for a candidate, presented a specimen of LACERATED LUNG SECONDARY TO PNEUMONIA.

The patient was admitted to the hospital in an unconscious condition, having fifteen minutes before fallen from a height, sustaining a multiple fracture of the ribs. The pupils were unequally dilated. Lungs in an emphysematous condition. Patient very irritable and drowsy. Temperature 101°. Pulse 120. Respiration 44. Œdema of the lungs set in. Patient grew gradually worse, and died December 25th. The point of interest in the case was the fracture of the upper sixth rib, causing rupture of the lung and croupous inflammation on the opposite side.

Dr. Satterthwaite, for a candidate, presented a portion of the

LARYNX AND TRACHEA FROM CASE OF LARYNGEAL DIPHTHERIA.

Child, 3½ years old; was taken ill December 26th. On the 27th cough, with marked dyspnoea, developed, which was relieved by emetics. Respiration was greatly embarrassed, though there was no exudation in the throat and no coughing up of membrane. Tracheotomy was done, after which the child did well for some time, but was suddenly seized with dyspnoea and the obstruction to respiration was found to be membrane, which when expelled was followed by relief. He had, however, repeated attacks, and finally succumbed.

The points of interest in the case were the limitation of the disease to the air passages and the limited amount of exudation in the larynx.

Dr. Porter presented a specimen of

RETICULATED ROUND-CELLED SARCOMA OF ORBIT WITH METASTATIC DEPOSITS OCCURRING IN A HORSE.

Dr. Wyeth presented parts of two specimens interesting on account of their rarity. One of

INCARCERATED FEMORAL EPIPLOCELE.

Family history of the patient of no interest; 20 years before he had gonorrhœa with swelling in right groin. He had entered Mt. Sinai Hospital last June. Six months before, while laboring, a tumor appeared in right groin. Operation was done and it was found that a piece of omentum had come down in the right inguinal canal. Patient has been well since operation. Dr. Wyeth remarked that it was the only case of the kind he had ever seen. He exhibited a second specimen of

UNILOBULAR CYSTO-ADENOMA OF THYROID GLAND.

The patient was a German woman, æt. 40, who had had the tumor for 12 years. It was treated by injecting tincture of iodine but without effect. Before operating Dr. Wyeth had tied the superior and inferior thyroid arteries and there was practically no hemorrhage. Patient had a good recovery, and was well to-day. Fourteen cases had been reported in the last two months and all had been cured by operation except one.

Dr. Beverly Robinson presented three specimens, one of

ATROPHIED LUNG.

The patient had entered St. Luke's Hospital with a history of pulmonary phthisis. Man æt. 35, German. Family history of phthisis. The interest of the case centres in the fact that lung tissue was very greatly atrophied as a result of pleurisy on both sides. He exhibited a second specimen of

CALCAREOUS DEPOSIT ON MITRAL VALVE with aortic regurgitation. Also a third specimen of MITRAL STENOSIS.

Patient æt. 38 widow, a teacher, was admitted to St. Luke's Nov. 19th. She was suffering from dyspnoea but had no Œdema of the lower limbs. She was prostrated with pelvic abscess, was profoundly anæmic and obstinately constipated. There were no cerebral symptoms. A presystolic murmur was detected, of greatest intensity midway left nipple and sternum. The face and whole body were marked by extreme pallor. The dyspnoea was intense. No Œdema. No purring thrill. The case was diagnosed

mitral stenosis with regurgitation secondary to it. The stenosis, as it were, dominated the situation. Extreme pallor with no œdema lend a certain amount of weight to diagnosis in these cases.

At autopsy 20 ounces of flocculent fluid was found in the abdominal cavity and 24 ounces in pleural cavity. No adhesions of left lung were observed. The semilunar valves normal. The diagnosis of mitral stenosis confirmed.

Dr. Satterthwaite remarked with respect to the first case of atrophied lung that he had never met with an obliterated lung.

The society then went into executive session.

LECTURES.

LUMBAR COLOTOMY — OPERATION, WITH CLINICAL REMARKS,

BY

HENRY B. SANDS, M. D.,

Professor of Surgery, College of Physicians and Surgeons; Attending Surgeon New York and Roosevelt Hospitals; Consulting Surgeon St. Luke's Hospital, Etc., Etc.

History—F., æt. 36, widow, has had 11 children; last child born five years ago. Recently remarried. Became pregnant and miscarried. Last April was found to have a stricture of the rectum; and in searching for a cause, inquiries have been made as to the existence of syphilis, dysentery and injury. She denied ever having any venereal disorder. She also says that she has never been attacked with dysentery. In regard to labor we discovered that in two confinements she had to be delivered by the forceps; the 2d and 7th; she stated that she has had backache and weakness, with pain at stool and slightly bloody discharges from the rectum and vagina since last confinement. I fail to detect on examination any fistulous communication between the rectum and vagina, suspected to exist.

We rarely have the opportunity of studying these cases from the beginning. Patients suffer from constipation, but this symptom is so common that it attracts no notice. Last July she began to complain of pain on defecation; the stools were quite small; the pain very severe, and lately almost constant in the course of the rectum. To avoid pain excited by the act of defecation, she has refrained from going to stool oftener than was absolutely necessary. For two weeks prior to admission into the hospital, she has had no discharge whatever from the bowels, nor has she had any since her admission. Her appearance is anæmic. An examination of the uterus has been made, and a double laceration of the cervix discovered. By examination of the rectum, made the other day, a tight stricture is found within reach of the forefinger, about 4 to 5 inches from the external orifice. No ulcer is detected; the mucous membrane, 2 to 3 inches below the stricture, is thickened and thrown into folds. There is some thickening of the tunics external to the mucous membrane, but no well-defined cancerous deposit can be felt.

The question arises; What is the nature of this constriction? There are two kinds of stricture, cancerous or malignant and benign or fibrous. Ordinarily we find no difficulty in coming to a conclusion respecting the nature of the stricture. In this case the difficulties are considerable and I am uncertain whether this stricture is malignant or not. On examination of the

rectum I miss the evidences of the cancerous deposit commonly found in cases of cancer, neither do I detect ulceration. On the other hand I find a good deal more thickening of the mucous membrane than is usual in cases of fibrous stricture. I am therefore somewhat in doubt as to the nature of the stricture. This, however, does not affect the treatment. Whether cancerous or fibrous, in either case the stricture is situated so high as not to be amenable to local treatment by dilatation. The treatment by dilatation of a stricture beyond easy reach of the finger is fraught with great danger of perforation of the peritoneum with fatal peritonitis.

If this is a cancerous stricture dilatation would be manifestly improper. The patient's condition demands prompt relief, now that considerable accumulation of fæces has taken place in the intestines above the point of narrowing.

If constipation is absolute, death must finally come unless an artificial opening is made above the point of stricture, to relieve the gut of its contents. When the point of obstruction is situated in the rectum, the proper operation is colotomy.

There are several methods of performing the operation. Inguinal colotomy was proposed by Littre in 1710, and has been frequently performed. An incision is made above Poupart's ligament, in such a way as to cut through the entire abdominal wall and open the peritoneum. The distended colon is then stitched in the wound and opened. The danger of this operation is the liability to peritonitis, and the accidental escape of fæcal matter into the peritoneal sac. Amussat in 1839 performed an operation which was a modification of one proposed by Callisen. In this the intestine is opened without interfering with the peritoneum. Amussat is said to have once missed the colon and incised the kidney. After dividing the skin and subcutaneous fascia, the external oblique and latissimus dorsi muscles must be cut through and afterwards the internal oblique and transversalis. The fascia investing the quadratus lumborum muscle should then be sought for, the intestine lying in front of this fascia, opposite the external edge of the muscle. At the anterior part of the incision lies the peritoneum. One great risk in the operation is that of opening the peritoneum. Sometimes the colon is said to pursue an abnormal course so as to be inaccessible, but I believe it will rarely be missed if looked for in the right situation, and not too far from the spine. Accidents have mostly occurred from the operator having divided the peritoneum near the anterior extremity of the incision. The intestine should be sought for along the anterior margin of the quadratus lumborum muscle, and should be exposed by tearing through the fat that covers it, after complete division of the fascia transversalis. The gut may be recognized by its greenish color, its size, its muscularity, and by the arrangement of its blood-vessels. The worst accident possible is that of simultaneously wounding the intestine and the peritoneum. In cases of cancer, the operation of colotomy makes the patient more comfortable. In cases of fibrous stricture, life may be prolonged for an indefinite period.

History subsequent to Operation.—After the operation, nearly all parts of the wound united by adhesion. The bowels were kept constipated, so that the fæcal discharges should not interfere with the healing of the wound. At the end of a week, without the use of cathartics, the discharges came on naturally, and the abdomen was relieved of its distension. At about the end of ten days the woman, whose mental condition

had already been somewhat peculiar, began to show signs of cerebral excitement, amounting in the end to acute mania. She refused food, cried for morphine, which she had been in the habit of receiving, and became very abusive to the gentlemen who had the immediate charge of her. She tried to tear off the bandages, smeared herself with fæces, put her fingers in her mouth, &c. She died from exhaustion.

She did not die from any wound-accident following the operation, such as peritonitis, diffuse suppuration, or extravasation of fæces. The operation possibly hastened her death. Nevertheless, only a limited post mortem examination was permitted. The rectum for the length of six inches upward was closely contracted, in consequence of a cancerous deposit, which had taken place in the several tissues of the gut. The cancerous disease in this case was rather peculiar, from the fact that although the infiltration was very extensive it was at the same time very uniform. Commonly such deposits are more marked on one side of the gut than on the other. It is very rarely so evenly distributed as in the present instance. There is superficial ulceration of the mucous membrane, but none of those deep ulcerations so common in cases of cancer of the rectum so far advanced.

CARCINOMA UTERI—CHRONIC OVARITIS.

A CLINICAL LECTURE.

BY

PAUL F. MUNDE, M.D.,

Clinical Professor of Gynecology, College Physicians and Surgeons, Asst. Surg. Woman's Hospital, Visit'g Phys. Maternity Hospital, etc., etc.

CASE I.—Carcinoma Uteri.—F., æt. 57; married; 4 children; 2 miscarriages; last delivery 24 years ago; was sick 6 months; menopause 8 years ago at 49; complains for the last 4 months of a bloody yellowish-white discharge, and pain in the back; digestion is good, she is constipated, and urination is painful. Her physician told her she had a polypus. I examined her and was not very much surprised to find what I am apt to expect in patients of her age presenting these symptoms. No menstrual discharge for eight years after the natural cessation of the ovarian function, no bloody discharge for a time and then gradually a leucorrhea and a bloody discharge appearing again. These are symptoms generally significant of one thing, and that is carcinoma, not only of the cervix but of the vagina as well. The mass attached to the anterior wall of the vagina accounts for the painful micturition. The posterior wall of the vagina is filled up with a mass neither epithelial nor scirrhus. These are three varieties of cancerous growths: first, the encephaloid, showing itself either in the shape of a flabby ulceration or cauliflower growth; second, medullary infiltration; third, scirrhus, which is very rare. This disease is now in the ulcerative stage. These three varieties differ in the different proportion of their constituent elements, fibrous and cellular tissue, or in the growth of papillæ. You may have a scirrhus variety out of which may come the epithelial, and from the epithelial may develop the medullary cancer, or you may have the medullary in between the scirrhus and the epithelial. I have no doubt that this patient has had the disease over a year. It probably began by a gradual enlargement of the cervix. The duration of the disease in a case like this is only determined by the lethal termination and the length of time which that is to be put off depends

very much upon the health and strength of the patient and very little upon the treatment.

You will notice the patient, although for 4 months losing more or less blood, has not yet any cachectic symptoms; you have only to wait a few months and cachexia will develop entirely in proportion to the amount of discharge, which is chiefly sanguineous. The patient's strength will probably be kept up by general tonics. Give her iron and arsenic, which generally acts as a blood tonic, and then treat her palliatively in a local way.

Under such treatment, local and general, it is possible that the patient may live a year. The vagina and uterus are both infiltrated and sloughing will soon take place. The vesico-vaginal wall will become thinner and thinner in one spot and on some sudden exertion it will rupture and she will have vesico-vaginal fistula formed. This will affect her general health and tend to diminish her length of life, she may have also perforation of the rectum and opening of some large blood-vessels with very severe hemorrhage, from which she may not recover.

Treatment.—Knowing that this patient is soon going to have a cachexia and bleed very profusely and that this mass is going to break down I think the proper indication is to remove as much of this tissue as is likely to break down. Cauterize the base as thoroughly as possible, after a while remove it again and again, give the patient full liberty to take all the morphine she pleases within reasonable limits. There is no danger of her acquiring the opium habit.

CASE II.—Chronic ovaritis.—I will now show you a case, gentlemen, which is very common. It is a disease which Dr. Thomas himself admits that he can do very little for. The patient came to me about three weeks ago complaining of pain in her left side, immediately over left ovary. She is 24 years of age and has been married 4 years, has had children, no miscarriage, last delivery 15 months ago. She was sick 2 months before she came to see me; at the present time she complains of pain in the back, legs, and abdomen; has her courses every 3 weeks: first appearance at 12 years, duration one week; amount rather profuse; last appearance Dec. 1st; she is constipated, for which she takes laxatives; urination painful. On examination I found an enlargement of the ovary and tenderness of the enlarged ovary. On pushing my finger upwards I detected the tumor, which was movable up and down and was about the size of a lemon. It was very tender to the touch; it was not attached to the uterus and could not therefore be a fibroid. From the position, tenderness and pain, there was no question that it was an enlarged ovary, it was enlarged by inflammation, probably not of the acute character, because acute ovaritis is very uncommon in the non-puerperal condition. This is not an inflammation properly speaking; an inflammation is an affection accompanied with an increased temperature. But we do not have increased temperature here in the ovary, we simply have enlargement and tenderness. It is what I am inclined to call chronic congestion of the ovary.

We probably all have had more or less tonsillitis: the tonsils swell, but you know that this is not always inflammatory swelling, as in quinsy sore throat. The tonsils are a little tender outside, and would be much more tender if you could squeeze them more thoroughly. This is nothing but acute congestion of the tonsils. In a few days or weeks it gets to be a chronic congestion, and in a few months we have a permanent enlargement of the tonsils, which is a hyperplasia, the formation of

new tissue. This is what we have in the ovary from exposure to cold. It is possible that this patient may have gotten up barefooted. She may have been unwell at the time and had a chill. The result was that her ovaries became enlarged and congested. I have frequently seen this condition brought about by too much exercise. Excessive coition will also produce it. The left ovary is much more frequently congested than the right. The chief symptom is pain in the left ovarian region, pain during menstruation, defecation and coition, and bladder irritation, which seems to be sympathetic. There is also general nervousness. The significance of chronic ovaritis is quite sufficient to call for advice and treatment. The probable causation of sterility is another consequence to be considered. This patient is not sterile. Supposing her enlarged, congested, tender ovary keeps on in this condition, and, as it very frequently happens, and has happened in her case, the tissue surrounding her ovaries becomes inflamed, and the peritoneal envelope congested, exudation then takes place. The ovary is surrounded by plastic lymph, which does not become entirely absorbed. It contracts; and we have an explanation of the causation of sterility. No ovum can get out; no spermatozoon can get in; so that, as far as that ovary is concerned, the woman is permanently sterile. If both ovaries are involved sterility is a necessary consequence. It is therefore all important that treatment should be employed for this condition. Another sequence is the formation of ovarian cysts. A congested ovary contains more blood than it ought to. If at the same time the covering of the ovary is thickened the Graafian follicles do not rupture as readily as they ought, but at each menstrual period a little blood is exuded into 1 or 2 Graafian follicles. They increase in size and number, coalesce, and we have the beginning of ovarian cysts. Besides the enlarged congested ovaries prolapse, and get down into the cul-de-sac between the rectum and uterus and then increase still more in size, become adherent with all the concomitant symptoms which I have spoken of. The treatment for chronic ovaritis is a very unsatisfactory one. If we can keep down the ovary and reduce the congestion we can relieve her so much that she will suffer no pain.

The treatment is almost entirely local. A blister should be applied once or twice a month over the ovarian region, to be alternated in the intervals with tincture of iodine; then pack the vagina full of cotton soaked in glycerine; use injections of hot water with the addition of a little glycerine twice a day, a gallon each time, the patient being in a recumbent position with the hips elevated in order that the water may stay in as long as possible.

This should be continued for weeks and months. Internal treatment consists chiefly of the administration of tonics. There are two or three ovarian sedatives, the bromides may be given either in combination with sodium or potassium. You may reduce the size of the ovary by giving the patient morphine or bichloride of mercury 1-24 of gr. 2 or 3 times daily, combined with the muriate of ammonia in 5 gr. doses. The chloride of gold and sodium in doses of 1-20 to ¼ gr. three times a day in a pill may also be given with advantage.

The Order of the Cross and Collar of Knight Commander of the Crown of Italy has been conferred upon Sir William Mac Cormac by King Humbert, in recognition of his distinguished scientific attainments.

SELECTIONS FROM JOURNALS.

A NEW METHOD OF TREPHINING THE SKULL AND OTHER BONES. By JOHN B. ROBERTS, M. D.,—Lecturer on Anatomy and on Operative Surgery in the Philadelphia School of Anatomy.

A short time ago I became cognizant of the method used by Prof. James E. Garretson for the removal of the coccyx. This he effects by uncovering the bone and grinding it away with the Bonwill surgical engine armed with a burr. A few days later, by his invitation, I saw him remove in a similar manner the right superior maxilla, which was the seat of an antral exostosis. The delicacy of manipulation, the absence of facial scarring, and the undoubted power of the engine, combined to give me a very high appreciation of its possibilities. Especially was this the case because my experience some three years ago with the so-called dental engine was very unsatisfactory in surgical operations on bone.

During Dr. Garretson's operation some one of the by-standers suggested to me that the engine might be used for trephining, and, as I had shortly before been teaching this operation to my class, I was struck with the idea. It has been heretofore suggested, I believe, that the engine might be employed to drive a trephine, and thus cut out a disk or button of bone.

My idea, however, was that, as the ordinary trephines are usually of too great diameter and cause larger openings than are required for the insertion of the elevator, it would be practicable to bore a small hole in the skull by using in the engine a burr cut or roughened on its flat extremity.

As no patient was at hand, I utilized a cadaver for the experimental demonstration, and fractured the skull by means of a hatchet. I found that the burr called by the dental instrument-makers a fissure-burr, and which has a cut face, answered admirably. I applied it to the sound bone at the edge of the depressed fracture, and found that I could quite readily make a circular cavity in the outer table. This was carefully deepened until the vitreous table was perforated. As there was no disk to remove, and as the burr, which I kept moistened with water, dropping from a cloth, threw out all bone-dust, the depth and character of the perforation were readily watched. When the skull was thus pierced by a round orifice about one-quarter of an inch in diameter, the elevator was inserted and the depressed fragments elevated and, where loose, removed. Sharp and irregular edges were equally well trimmed smooth or cut away by the burr.

When the rapidly-rotating burr is placed in contact with soft tissues, as one's finger, it can be pressed upon with considerable firmness without abrading the surface, while osseous tissue is quickly ground away. Hence it seems as if the meninges of the brain might be touched by the burr without injury being inflicted at the time the vitreous table is perforated. In fact, I am inclined to believe that the dura mater would be pushed in front of the burr and remain practically uninjured. This can only be tested in living animals or human beings, because in the cadaver the brain does not entirely fill the cranial cavity, though the dura mater may remain attached to the inner table. The depressed fracture, moreover, usually pushes the dura mater downward, which would thus be likely to be

torn off from the sound bone nearest the depression.

The ease and success with which the long bones, containing abscess cavities, could be perforated by this method are unquestioned. My experience in once breaking the handle of the ordinary trephine, while endeavoring with difficulty to bore into an abscess in the head of the tibia, makes me hail the improvement with satisfaction.

The method of trephining the skull with the surgical engine of Bonwill, which I believe to be the only one sufficiently powerful, would then be as follows. Pick out a burr one-fourth or three-eighths of an inch in diameter, well tempered, and having a flat face deeply cut; then, fixing it in the mandrel, close up to the hand-piece, have the engine-crank turned with great rapidity. When the skin and periosteum have been dissected up, apply the burr to the sound bone nearest the *most* depressed portion of the fracture, and at first tilt the burr a little on the edge until a shallow groove has been made on one side of the proposed perforation. This prevents the burr slipping from the smooth convex column. Keep the burr constantly moistened by means of a wet sponge held over it and occasionally squeezed. When the perforation has been made, use the elevator as in ordinary trephining. If there is difficulty in elevating or removing the fragments, cut away with the burr the edges which cause locking. Hey's saw or bone-cutting forceps will not be required.

The ordinary burr furnished by makers of the engine is sufficient, but the face could with advantage, I think, be cut deeper. Instead of the ordinary burr the central portion of the face might be bored out, leaving then a burr that would remove a disk like the ordinary trephine does, and which might also be made conical. These changes, however, would be of doubtful advantage, though I shall probably experiment with this form of burr.

The use of the surgical engine for perforating the cranium is, as far as I know, novel, but it is very possible that others may have experimented on the cadaver or living subject and found similar results.—*Phila. Med. Times.*

INTESTINAL OBSTRUCTION RELIEVED BY INVERSION OF THE BODY AND INJECTIONS OF WARM WATER. BY M. E. POYNTER, M. D.

Early in July, 1881, Mike Collins, section-boss on the L., C. & L. R. R., was suffering for several days from acute dysentery, which yielded to the ordinary treatment in a few days. He had as many as fifteen to twenty discharges in the twenty-four hours, mainly bloody mucus, attended with great pain and tenesmus. The weather was insufferably hot, and after being housed for about a week, his dysentery having disappeared, he attempted to resume the superintendency of his work, which was the laying of steel rails along his section of the road.

The first morning he resumed work he says he felt as well as he ever had, with the exception of some feebleness resulting from his attack of flux. After reaching the point on the road where work was to begin he felt a desire to evacuate his bowels. Having just eaten breakfast, and stepping to a favorable spot, he made the attempt, but to his surprise without result. Feeling no relief, in a few minutes he was forced to repeat the attempt, but with similar failure. More and more the desire manifested itself; and he asserts

that twenty times within an hour he felt obliged by the urgency of the desire to defecate to make the attempt, and of course strained every muscle directly concerned in or in any way an auxiliary to the accomplishment of the one object. Yet with all this effort he got no relief; rather the more he tried the more intense was the desire.

This was the history given me upon visiting him at about nine o'clock in the morning, when I found him half recumbent, with no pain when lying still, but quick, nervous pulse, profuse perspiration, and every two or three minutes (against my earnest protest) getting up to stool and going through the process of straining until indeed his condition became pitiable. His countenance was most anxious, and, saying that he believed he should die, asked permission to send for his spiritual adviser.

I neglected to state that he was probably forty-five years of age, a very short, heavy-set, "fat" man, and had previously always enjoyed good health.

My diagnosis—obstruction of the bowels—was easily reached, but brought little light with it. Was it hernia in one of its various forms, or intussusception, or something else? At what point would hernia be most likely found, or, if the bowel was invaginated, in what situation and how could it be reached? These were the practical questions rapidly revolving in my mind, and requiring as rapid answers.

In the first place, I gave him half a grain of morphia sulphate hypodermically to stop the urgency of his appeals to go to stool.

Upon careful examination I could find no trace of hernia nor locate the point of obstruction beyond the surmise that it was in the rectal region, the patient himself referred all his symptoms to that point and insisted that it was beyond relief. Hurriedly dispatching a messenger to the nearest drug-store for chloroform and a Davidson syringe, I at once had a large tub of very warm water brought in and had him seated in it. In this position, with the water up to the waist, and assistants to splash his body thoroughly and constantly for nearly half an hour, I felt quite disappointed that he found no relief. He continued after getting out of the water to insist upon going to stool every few moments.

In less than an hour after inserting the morphia the man returned with chloroform and the syringe, and placing the patient on his knees with face resting upon the floor I attempted to inject the rectum with warm water, but to my surprise after a few ounces were thrown in the water returned in a sharp stream beside the pipe. Oiling my finger I explored the rectum, found it free of fecal matter, but as high up as the finger would reach detected a blind pouch or cul-de-sac, beyond which no opening or passage was apparent. Whether this was an invaginated part of the colon descended to this point, or a knot of small intestine lodged in the pouch of Douglass, it was impossible to determine.

In this doubtful state of mind it occurred to me to try a remedy that suggested itself to me suddenly, and calling stout men to assist me, asked them to seize his feet and *stand him on his head*, explaining to him in the mean time the object of the procedure. With his head and hands resting on the floor and his body inverted perpendicularly by the men, his legs held well apart, I took the syringe and basin of water and proceeded to pump him full. The first and second bulb-fuls met some obstruction and partly regurgitated, but by firmly and slowly persisting I felt the obstruction give way and the whole basinful was

passed in without further hindrance. The patient himself recognized the moment of relief and announced that he was "all right."

Soon after letting him down he passed the water from the bowel without further difficulty, and with it a natural fecal discharge. The cure was accomplished and required no further treatment, and in a couple of days he resumed his occupation, and has since had no reminder of it.

Remarks.—"Obstruction of the bowels" enables you to have at hand a diagnosis; but having that, how near are you to a solution of the difficulty? In the haste and urgency of symptoms such as a case like this brings, conclusions of a widely divergent character may be easily reached. The suddenness of the attack, preceded by no antecedent warnings, however, might justify the elimination of all other causes than either hernia or invagination of the bowel. But when you have gotten thus far you are yet wide of accurate knowledge, for if you find no knuckle of intestine engaging in any of the abdominal openings, yet omental adhesions and other complications are protean in form, and if intussusception be suspected, where is it situated?

Before inflammatory action has set in it would be next to impossible to determine. In either event, however, the treatment adopted would be equally adapted to the relief of the symptoms.

From all the circumstances I am inclined to believe the trouble was prolapse of the small intestine into the pouch of Douglass. If the attack had occurred during the illness from dysentery, ten days before, and while suffering from great tenesmus, the idea of invagination of the colon into the sigmoid flexure might have been accepted; but coming unheralded, and being so low that the mass could be approached by the finger in the rectum, and the perfect and immediate relief from the means employed, all lead me to the position here mentioned.

In regard to the method used I may indicate my ignorance of the literature of the subject, but have no recollection of ever having seen "my method" suggested by any writer. I am aware that the "knee-elbow" position has been suggested in *hernia*, and injections in invaginations; also that it has been suggested to stand the patient on his head in *hernia*, but that position *together with the enema* for the relief of obstruction of the bowels was to me original at any rate.—*Louisville Med. Journal.*

THE SIXTEEN COMMANDMENTS OF THE PARIS ACADEMY OF MEDICINE.

The Academy of Medicine in Paris has condensed into the following sixteen propositions the most important hygienic rules for the care and management of infants. We reproduce them here with the sincere hope that all mothers and nurses will commit them to memory and observe them as faithfully as the ten commandments of Holy writ:

I. During the *first year* the only suitable nourishment for an infant is its own mother's milk, or that of a healthy wet nurse. Suckling should be repeated every *two hours*—less frequently at night.

II. When it is impossible to give breast milk, either from the mother or a suitable nurse, cow's or goat's milk, given tepid, reduced at first one-half by the addition of water slightly sweetened, and after a few weeks one-fourth only, is the next best substitute.

III. In giving milk to an infant always use glass or earthen-ware vessels, not metallic ones, and always ob-

serve the most scrupulous cleanliness in their management, rinsing whenever used. Always avoid the use of teats of cloth or sponge so frequently employed to appease hunger or quiet crying.

IV. Avoid carefully all those nostrums and compounds so liberally advertised as superior to natural food.

V. Never forget that artificial nourishment, whether by *nursing bottle or spoon* (without the breast), increases to an alarming degree, the chances of producing sickness and death.

VI. It is always dangerous to give an infant, especially during the first two months of its life, solid food of any kind—such as bread, cakes, meats, vegetables or fruit.

VII. Only after the *seventh* month, and when the mother's milk is not sufficient to nourish the child, should broths be allowed. After the first year is ended, then it is appropriate to give light broths of paps, made with milk and bread, dried flour, rice, and the farinaceous articles, to prepare for weaning. A child ought not to be weaned until it has cut its first 12 or 13 *teeth*, and then only when it is in perfect health.

VIII. A child should be washed and dressed every morning, before being nursed or fed. In bathing a child, temper the water to the weather, carefully cleanse the body, and especially the genital organs which require great cleanliness and care; and the head should be carefully freed from all scabs and crusts which may form. Where the belly-band is used, it should be kept up at least one month.

IX. An infant's clothing should always be so arranged as to leave the limbs freedom of motion, and not to compress any part of the body.

X. An infant's clothing should be studiously adapted to the weather; avoiding at all times exposure to the injurious effects of sudden changes in the temperature without proper covering; but nurseries and sleeping apartments should invariably be well ventilated.

XI. An infant should not be taken into the open air before the fifteenth day after birth, and then only in mild fair weather.

XII. It is objectionable to have an infant sleep in the same bed either with its mother or nurse.

XIII. No mother should be in too great a hurry to have a child walk; let it crawl and accustom itself to rising on its feet by climbing on articles of furniture, or assisted by the arms of a careful attendant. Great care should be taken in the too early use of baby-wagons, etc.

XIV. No trifling ailments in infants, such as colics, frequent vomiting, diarrhoea, coughs, etc., should be neglected—a physician's advice should be at once obtained.

XV. In cases of suspected pregnancy, either of mother or nurse, the child should be weaned at once.

XVI. A child ought to be vaccinated after the fifth month, or earlier should small-pox be prevalent.—*Translation of D. C. Halliday, M. D., in N. O. Med. Jour.*

OBESITY: ITS CAUSES AND CURE.

Dr. de Saint-Germain has recently given a lecture on obesity at the Hospital for Sick Children in Paris.

This lecture is reported in *L'Union Medicale* for November 29th, 1881, *et seq.*, and will form part of a forthcoming work, *Les Malformations et leur Thera-*

peutique. M. de Saint-Germain commenced his lecture by remarking that, although this subject, so far as he knows, has never been treated in works on orthopædics, he is of opinion that it is included in the study of the anomalies or malformations which are the object of orthopædic surgery. Obesity is also an obstacle to the application of many orthopædic methods, and is cured by the adjuvant methods of orthopædics, by hygiene and gymnastic exercises. The history of obesity considered as a disease was commenced by Hippocrates, and has been continued up to the present time by a large number of publications of various kinds.

Dr. Sedam Worthington, in the new edition published in 1878, of his Paris inaugural thesis (1875), has given a very copious bibliography of works on obesity. His thesis, which is full of valuable information of all kinds, is, in its amended form, a thorough theoretical and practical library of everything relating to obesity.

M. de Saint-Germain then gives a sketch of the present state of pathological knowledge in relation to obesity. Obesity, he says, is a disease of the celluloadipose tissue. It is characterized by a morbid accumulation of fat on those points of the animal economy where it is normally deposited. The cellular tissue under the skin, which gives a comely roundness to the form and that condition of plumpness so generally admired, may, in becoming infiltrated with much fat, engender the characteristic deformity of certain obese individuals. Phenomena of compression from without inwards are then developed in certain regions, and are added to other troubles produced by internal fat, so as to bring on serious disease; it is in this way that pressure on the pneumogastric nerves in the neck and in the mediastinum produces, at the same time, obstruction of the lungs, palpitation of the heart, and dyspepsia. At the same time, the hypertrophy of the intrapericardiac or cardiac adipose parts brings on fatty overloading of the heart and asystolism. Nevertheless, according to Robin, the circulatory area becomes increased to suffice for the nutrition of the excess of adipose tissue, and there is multiplication, or at least elongation of the capillaries. The demand for red corpuscles increases when the blood-forming function is attacked in all its factors at once: anæmia with deficiency of red corpuscles ensues. The abdominal viscera are twisted or compressed by the omentum and the mesentery, their invasion by fat being the starting-point for the obese belly. They easily become congested. Finally, the too little recognized increase of fat in the track of the artery of the vas deferens and the veins of the spermatic cord may, Dr. de Saint-Germain believes play an important part in the production of the well-known sexual apathy of obese persons. It is a certain fact, that the fat which accumulates on the sides of the umbilical ring has some share in the production of umbilical hernia, which is a very serious disease in obese persons, especially when it is strangulated, which only too frequently occurs.

The pathological anatomy of obesity is set forth by Dupuytren (*Journal de Corvisart*), Russell (*British Medical Journal*), Schaeffer, and Aran. The most noticeable point in the necropsies was the condition of the heart. In Aran's typical necropsy, the hypertrophied heart was quadrupled in size; the cardiac cavities were filled with a blackish jelly-like substance; the orifices and valves were perfectly healthy. In the sixty-nine authentic reports collected by Chambers, of necropsies of obese patients, the heart was examined in fifty-seven instances. In fifty necropsies out of the fifty-seven, serious cardiac lesion was found; hyper-

trophy without dilatation in sixteen cases: hypertrophy with dilatation in eight instances; dilatation alone twenty-six times; atrophy alone eleven times. In sixteen cases, fatty overloading of the heart, was found.

M. de Saint Germain finds that one predominant question in the etiology of obesity, is to determine whether it is hereditary; and he believes that, under certain reservations indicated further on, it is extremely probable that such is the case. It is sometimes congenital, and may cause dystocia. M. de Saint-Germain has himself, at the Cochin Maternity Hospital in Paris, used, and has also seen M. Tarnier use, the forceps for the extraction of infants weighing ten pounds and a quarter, and eleven pounds. Out of the eighty-six cases of obesity noted by Professor Charles Bouchard, thirty-one showed an hereditary tendency, either in a direct, collateral, ascending, or descending line. Out of the thirty-eight cases noted by Chambers, hereditary obesity was found twenty-two times in the direct line, and seven times in the collateral line. The connection of obesity with the diatheses, now demonstrated, permits the multiplication of the demonstrations of heredity, and, so to speak, admits the existence of latent heredity (*l'héredité larvée*); thus in M. Charles Bouchard's eighty-five cases, besides the thirty-one cases of heredity, or concurrently with that heredity, the observer noted sixty-three times rheumatism, gout, gravel, asthma, hemicrania, and hereditary or collateral scrofula.

Women are more subject to obesity than men. Amongst M. Charles Bouchard's cases, there were sixty-two women to twenty-four men; and eight women to four men in the case of M. Teissier of Lyons. Chambers and Sedam Worthington's lists show an equal number of men and women; Mr. Wadd reckons more men than women. Women are more inclined to obesity than men, by the softness of their tissues and the usual sedentary nature of their lives. Amongst the working classes, the husband, who gets his meals away from home, and is much better nourished than his wife, is not always the fatter of the two. Alcoholic drinks would fatten him, but the hard work which he is obliged to do from time to time re-establishes the equilibrium.

With regard to age, instances of obesity are found from an early age; according to Bouchard, at two years of age; to Teissier, at nine; to Chambers, in four cases out of thirty-eight, obesity showed itself at five years of age in two cases, at from five to ten years, in two out of ten at fifteen years of age, in seven out of fifteen at twenty, in four from twenty to twenty-five, and in thirteen out of twenty-five at thirty years of age. We here meet with an obesity of young persons which seems to have intimate relations with heredity, and which has often been considered as the most serious. Dr. Philbert, who turns his attention specially to the cure of obesity by the mineral waters of Brides, wished that the appellation "polysarcia" should be reserved for the most serious form of obesity—that which supervenes during adolescence.

The best known among efficient causes of obesity are the taking of a large quantity of food, insufficient exercise, and consequently insufficient elimination, the taking of too large quantities of wine and other alcoholic liquors, especially beer, and too much sleep. Dr. de Saint-Germain points out some less generally recognized causes of obesity: convalescence from severe attacks of fever, the too great prolongation of the menstrual flux, and lengthened mercurial treatment. Wadd considers mercury as the heroic remedy for leanness, *modus pinguefaciendi*, Liégeois, surgeon to

the Hopital du Midi in Paris, maintained the same opinion in the Societe de Chirurgie, where Desprez had commenced an active campaign against mercurial medication. Liegeois declared that, during his long course of practice, he had always seen syphilitic patients gain fat and improve in appearance under the influence of mercury. Boerhaave has recorded a case of obesity which promptly—indeed, almost immediately—showed itself after copious venesection. It would seem that, after a great loss or a violent depression of the organism by privation, cold, or fatigue, there is a danger of the supervention of obesity as a result of the repair of unusual tissue waste itself, which seconded by an appropriate alimentation, may exceed the desired object. The deprivation of a limb, or castration, predisposes to obesity; everyone knows the effect of castration on oxen, cats, and fowls.

M. de Saint-Germain then proceeds to develop the therapeutic means proper to combat obesity, amongst the principal of which he ranks regimen and exercise. He relates in detail the case of a well-known French medical man. Descended from parents who were not particularly fat, and rather lymphatic than sanguineous, this gentleman reached the age of twenty-one without the least tendency to obesity. During the first years of his studentship, he was much the thinnest and tallest of his companions. When he obtained a house-surgeonship, under the influence of the change of diet, and especially of the larger quantity of wine he took with his meals, he became much fatter in a single year. This development of fat once set up continued to increase, until, in 1864, when twenty-eight years old, he weighed 214 lbs., with his clothes on, which represented about 204 lbs., when undressed. From 1864 to 1872, he constantly increased in weight, until, in 1873, he attained the weight of 230 lbs. Determined to resist this morbid growth of adipose tissue, he undertook, by advice of a friend, the classic treatment consisting of Vichy water, iodide of potassium, Marienbad water, gluten bread, exercise, etc. He obtained some result, in so far that, at the end of about six weeks, he had lost 20 lbs. in weight, but he found it impossible to continue this treatment. The least fatigue induced copious perspirations, he was out of breath if he went up two flights of stairs, and he had fallen into an advanced stage of anæmia. Discouraged by this want of success, he resumed his former way of life, regained his previous weight of 230 pounds in a few weeks, and, with the weight, his usual vigor and vivacity. From 1873 to 1877, there was nothing particular to note, except some alternations of becoming thinner or fatter, almost always coincident with the less or greater absorption of fluids. He grew fatter in the summer, and a little thinner in the winter. Finally, on January 4th, 1881, our friend found that he weighed 216 pounds without his clothes. He felt that he must really set seriously to work to reduce himself, and commenced the following system of exercise and regimen. He rose at five o'clock in the morning, and rode at a quick trot, first one hour, then, after some time, an hour and a half, then two hours. After this exercise, he found himself absolutely covered with sweat. Putting on a warm overcoat, he immediately walked about two miles in twenty minutes. He then went home, dried and dressed himself, and went to the hospital. After two months, he changed the order of his exercise: began by walking two miles at a rapid pace, and ended by two hours' fast riding. So soon as a certain amount of reduction of his obesity permitted, he began fencing, and went on for five months on the following plan: walking two miles in

twenty minutes, two hours' fast trotting on horse-back, and twenty-five minutes' fencing; to these exercises he added swimming every other day. The regimen must now be taken into consideration; and here M. de Saint-Germain points out that regimen has a powerful effect on obese patients; in fact, so powerful, that a patient may be tempted to abstain from the fatigue of exercise, and to trust entirely to dietetic regulations; one thing, however, must not be overlooked, and that is, that the loss of weight due to regimen alone is accompanied by muscular weakness. Exercise must be taken, if muscle is to be strengthened by diminishing the adipose element. The French first breakfast, generally composed of chocolate, coffee and milk, or soup, was in this case absolutely cut off; the second breakfast, answering to our luncheon, was invariably composed of two boiled eggs, a mutton cutlet, with salad or fruit, a cup of coffee without sugar or brandy, and not any bread or wine whatever. M. de Saint-Germain insists greatly on total abstinence from bread and wine, which, in his opinion, forms the cardinal point of the cure; and more especially on the abstinence from wine, which he believes, fattens, both by the alcohol it contains, and by the amount of liquid it introduces into the animal economy. The patient in question drank water only with his breakfast, and cold or tepid coffee only, if he required any other drink during the day. For dinner, the diet was one dish of meat, one dish of green vegetable, and some fruit; neither soup, bread, nor wine was allowed. One of the first results observed from this regimen was the disappearance of the irresistible sleepiness he had suffered from after breakfast and dinner, and the perfect calm of his nights, which had frequently been disturbed by an insatiable thirst. He found also that the regimen was strengthening to him, and that he had never been able, at any period of his life, to go through the exercise already described so quickly, and with so little perspiration. M. de Saint-Germain insists strongly on the necessity of patients under treatment for obesity keeping an exact register of their weight from day to day, made with great care, so that if the reduction be too rapid the severity of the diet may be relaxed, or the amount of the exercise reduced. He gave some elaborate tables in support of his practice, too long to be reproduced here, but which show immediate increase of obesity if his dietetic rules be infringed. He enters a vigorous protest against the folly and danger of systems of reduction of obesity, based on the use of alteratives and purgatives. This method, he asserts, only influences obesity by inducing a cachetic condition in the patient, and its smallest drawback is that it can only be continued for a certain time. M. de Saint-Germain states that, for children especially, when obesity is concomitant with infantile paralysis, the treatment should be residence in the country at a high and perfectly dry level, near woods; with strengthening baths, shampooing, and stimulating saline baths.—*Brit. Med. Jour.*

TOTAL EXTIRPATION OF THE UTERUS THROUGH THE VAGINA.

This important operation is one of the latest conquests of modern—that is to say, antiseptic—surgery; and it is believed that statistics of future operations will give even a higher rate of success than twenty-four per cent., as shown by the cases as yet reported. In the *American Journal of the Medical Sciences* for January, 1882, there is a valuable paper on this opera-

tion by Christian Fenger, M.D., of Chicago, with the report of a successful case.

The case was one of mixed cylindrical and multi-form celled carcinoma of the cervix and lower half of the fundus of the uterus, of over eight months' standing, in a woman of forty years of age. There was enlargement of the fundus, but no tangible infiltration of the broad ligaments, bladder, rectum, or vagina; total extirpation was accomplished through the vagina, with complete recovery from the operation.

Malignant growths of the uterus have thus far been the only indications for the vaginal extirpation of that organ. Comparing the statistics of the abdominal with those of the vaginal operation, it is safe to say that whenever the total removal of the organ is indicated, and this can be done through the vagina, the latter method is shown by Dr. Fenger to be preferable to the operation by abdominal section.

As regards the control of hemorrhage from the broad ligament in total extirpation, Fenger agrees with Billroth, Mikulicz, and Schroeder, that the ligature *en masse* is the safest and the most easily accomplished. His method of treating the peritoneal wound is in accord with Czerny and Martin, as opposed to the practice of Billroth, Mikulicz, and Schroeder, in that he closes the wound throughout its entire extent as carefully as possible, while he lays great stress on the value of permanent irrigation as contrasted with drainage-tubes, particularly when the bladder or rectum has been opened. He also describes a modified form of Mikulicz's irrigator, which offers considerable advantages.

REMOVAL OF UTERINE APPENDAGES FOR THE ARREST OF UTERINE HEMORRHAGE.

In the *American Journal of the Medical Sciences* for January, 1882, there is an elaborate and interesting paper on this subject, by Mr. Lawson Tait, in which he advocates in the strongest terms the removal of the uterine appendages for intractable uterine hemorrhage. He reports thirty-one cases, in four of which death occurred, while in all the others there was either complete arrest of the hemorrhage, or marked improvement, with the exception of one case, in which he operated for hemorrhage due to malignant disease, a mistake sure to occur occasionally in the most experienced hands. In most of the cases, ergot and potassium salts had been used without benefit.

In these cases Mr. Tait apparently demonstrates that, as far as its primary results are concerned, removal of the uterine appendages for the arrest of intractable uterine hemorrhage is an operation which is quite as easily justified as any of the major operations of surgery, and that, as far as its secondary results are yet known, it is an operation which yields abundant encouragement for its further trial.

As conclusions which are indicated, but not wholly proved, the statement may be formulated that removal of the ovaries alone is not sufficient to arrest menstruation, but that removal of both tubes and ovaries does at once arrest it. As far as some of these cases have gone the arrest would seem to be permanent. This conclusion is quite in harmony with what is known of removal of both ovaries for large cystomata, for in such cases the tubes are almost uniformly included in the clamp or ligature, and menstruation is arrested. Three at least of the cases, and probably

two others, show that the arrest of menstruation by this means leads, or may lead, to the atrophy of the tumors.

Finally, there is some close connection, here pointed out, it is believed, for the first time, and worthy of very clear study, between uterine myoma and its accompanying hemorrhages, and cystic disease of the ovaries. In two of the cases the cystic disease seemed to be the cause of the hemorrhage, without any myoma intervening.

Another important point, to which attention is drawn by Mr. Tait, and one which deserves close study, is that menstruation and sexual feeling may persist even after the removal of both ovaries; a point which, if correct, would invalidate a reproach which is often urged—one which may be merely sentimental in view of the advantages gained—as to its implying the unsexing of the patient.

THE ACTION OF SALICYLIC ACID UPON BLOOD-CELLS AND UPON AMÆBOID MOVEMENTS AND MIGRATION.

It was shown by Dr. T. Mitchell Prudden, in the January number of the *American Journal of the Medical Sciences* for 1882, that dilute carbolic acid possesses an inhibitory power over the amœboid movements and the capacity for emigration of the white blood-cells; and it was suggested as extremely probable, therefore, that a part of the favorable action of carbolic acid in the healing of wounds, at least in so far as the prevention of undue suppuration is concerned, is owing to the reduced activity of the white blood-cells. In view of this suggestive probability, for absolute proof is scarcely to be expected with our present facilities for investigation, it is evidently important to know whether the effects of other agents which exert a like favorable influence upon the healing process can be partially or entirely accounted for on the same grounds. As one of the most important competitors for favor in antiseptic surgery salicylic acid is the first to suggest itself, and it is of interest to compare the results which Dr. Prudden has obtained from experiments with it with those obtained when carbolic acid is employed.

Dr. Prudden finds that the latter is less inimical, in solutions of the same percentage strength, to the life and functions of the blood-cells than is salicylic acid. For neither upon the slide nor in the blood-vessels or the tissues can the movement of the leucocytes be re-established when they have been brought to rest by salicylic acid, and the morphological changes produced by it are much more prompt and marked. It does not of course follow from these experiments that the action of salicylic acid in restraining emigration is peculiar to it in virtue of any properties other than those which it possesses in common with such dilute acids as acetic and hydrochloric, for these also in dilute solution are capable of restraining emigration, although with the exhibition of somewhat different phenomena. It is sufficient to show experimentally, that salicylic acid does restrain emigration, and is inimical in strong solutions to the life, and in dilute solutions to the activity of the white blood-cells; and to suggest, as was done in the case of carbolic acid, the probability that some of its favorable effects, when applied as a surgical dressing, are due to its direct action upon the living white blood-cells.

MELSENS ON THE TREATMENT OF BRONCHIAL AFFECTIONS OF PULMONARY PHTHISIS BY AMMONIACAL INHALATIONS.

M. Melsens highly recommends (*Bull. de l'Academie Belge, et Paris Med.*, Oct. 22, 1881) the therapeutic employment of ammonia by inhalation in phthisis. Knowing that ammoniacal emanations may be respired without danger, of which the proof is the perfect health of workmen who dig guano, and also knowing the good effects of the air of cow-houses in pulmonary phthisis, effects which are generally with justice attributed to the emanations of carbonate of ammonia generated in these stables, M. Melsens conceived the idea that continuous but moderate respiration of this salt might be useful in other affections of the respiratory organs. He decided, after an attack of acute bronchitis, to make the experiment on himself. For that purpose, he wore outside his shirt a bag containing some pieces of carbonate of ammonia; after some time he was absolutely relieved from the affection; improvement set in from the first day. Several invalids who employed the same means obtained great benefit from it, even in cases of long continued chronic bronchitis. Amongst others, a physician at Brussels, who had suffered for a long time from an obstinate cough, due to chronic bronchitis, with dilatation of the bronchi, complicated with emphysema, asthma, and sometimes to acute laryngitis. He used the bag of carbonate of ammonia, and found himself perfectly cured.—*Lond. Med. Rec.*

VIDAL ON TURPENTINE COMPRESSES.

M. Vidal, in a communication to the Therapeutical Society of Paris, Oct. 26, 1881 (*Gaz. Hebdom. de Med. et de Chir.*, Nov. 4, 1881), reminded the Society that in 1871 he had recommended the use of compresses of flannel, wetted with turpentine and covered with oiled silk. If the compress remain *in situ* for more than half an hour, vesication is generally obtained. The intensity of the revulsion may, however, be diminished by not putting on any impermeable covering, such as oiled silk, and allowing the turpentine to evaporate freely. M. Vidal attributes the remarkable success which he has obtained in cases of peritonitis not of a puerperal character, not only to the energetic revulsory character, but to the absorption of the turpentine by the skin; the pulse rises, the general state and facies rapidly improved, and cure is abundant in cases which seemed desperate. He has also obtained excellent effects in the broncho-pneumonia of infants.—*Lond. Med. Rec.*

FORMULÆ AND POINTS IN PRACTICE.

IN PHTHISIS AND TABES-MESENTERICA.

℞ Sodæ hypophosphitis..... gr. 30-50
Infus. chiratæ..... ʒ 8

M. Sig.: One-sixth part three times a day.

The above with a pill containing nitrate of silver is of service in progressive locomotor ataxy.

IN AMENORRHŒA WITH TORPID CIRCULATION.

℞ Potass. iodidi..... gr. 18-30
Ferri et ammon. citrat..... gr. 40
Tinct. nucis vomicæ..... ʒ 1
Infus. quassia ad..... ʒ 8

M. Sig.: One-sixth part three times a day.

Or,

℞. Syr. ferri iodidi.
Glycerini..... a a ʒ j
Olei limonis..... min 10

M. Sig.: One teaspoonful in a wineglassful of water three times a day.

IN AMENORRHŒA WITH HYSTERIA.

℞ Ferri valerianat..... gr. 18
Olei sabinæ..... min. 24
Ext. aloes Barbadosensis..... grs. 6
Pilulæ assafoetida co..... grs. 36

M. Divide into twelve pills, one to be taken three times a day.

WHERE THE MENSTRUAL FLOW IS SCANTY AND THE LIVER SLUGGISH.

℞ Podophylli resinæ..... grs. 6
Ext. hyoscyami..... grs. 24
Ext. nucis vomicæ..... grs. 4
Pil. aloes et myrrhæ..... grs. 30

M. Divide into twelve pills, one to be taken at bedtime three or four nights in succession.

MEDICATED VAGINAL PESSARIES.

IN CHRONIC INFLAMMATION AND INDURATION OF THE LABIA UTERI, IN OVARITIS, PELVIC CELLULITIS, AND CHRONIC CYSTITIS.

℞ Plumbi iodidi..... grs. 80
Ext. belladonnæ..... grs. 24-40.
Ext. conii..... grs. 100.
Olei theobromæ..... ʒ 1-1 ½.
Olei olivæ..... ʒ 2.

Mix. Melt into a mass with gentle heat, pour into a tube or roll of paper about eight inches long and of the circumference of the little finger. Divide into eight pessaries and order one to be introduced into the vagina every night or every other night.

IN DYSMENORRHŒA AND OVARIAN IRRITATION WITH REFLEX DISTURBANCE.

℞ Coniæ..... grs. 8.
Geladini..... grs. 160.
Glycerini..... ʒ 2.

M. Divide into eight pessaries. One to be introduced into the vagina every night.

AS A LOCAL ANÆSTHETIC IN CANCEROUS AND OTHER PAINFUL UTERINE DISEASES.

℞ Iodoformi..... grs. 80.
Olei theobromæ..... ʒ 1.
Glycerini..... ʒ 2.

Mix. Divide into eight pessaries.

IN CHRONIC LEUCORRHŒA, ACUTE AND FOLLICULAR VAGINITIS.

℞ Plumbi acetat..... grs. 20.
Ext. opii..... grs. 24.
Olei theobromæ..... ʒ 1.
Glycerini..... ʒ 2.

Mix, divide into eight pessaries and order one to be used every night.

OR,

R Zinci oxidi vel Bismuth carb.....grs. 80.
 Ext. belladonnæ.....grs. 40.
 Olei theobromæ..... $\frac{5}{8}$ 1.
 Olei olivæ..... $\frac{3}{4}$ 3.
 Mix, divide into eight pessaries and order one to be used every night.

MEDICAL NOTES AND NEWS.

The Medical Board of Charity Hospital, Blackwell's Island, elected the following officers for the present year at the annual meeting, held January 3d, at the Academy of Medicine:

For President—Dr. Wm. F. White.

For Vice-President—Dr. Beverly Robinson.

For Secretary—Dr. Edward S. Peck.

Metropolitan Throat Hospital.—The annual meeting of the trustees of the Metropolitan Throat Hospital took place on January 11th, at the residence of Dr. Clinton Wagner, No. 35 West Thirty-eighth street. The following gentlemen were elected trustees for the ensuing year: John D. Jones, William H. Fogg, Dr. William A. Hammond, Theodore K. Gibbs, A. B. Herrick, J. M. McLane, Colonel Floyd Jones, William H. De Lancey, Clinton Wagner, John W. Bigelow, Dr. Marion Sims and F. O. French. The Medical Superintendent reported that twelve hundred new patients were treated during the past year. Dr. Jones was re-elected President and Dr. Wagner was elected Medical Superintendent of the hospital.

Artificial Hunyadi Janos Water.—The natural Hunyadi Janos water was observed to be an efficient, safe and agreeable purgative in many chronic cases. It is, however, found to be too expensive for hospital use, and it was resolved to try it artificially. At first it was made according to Liebig's analysis of the natural water, but this was perceived to be too weak, and it failed to produce purgative action. Ultimately it was made thrice the given strength, according to the following recipe: Sulphate of magnesia, 514.92 gr.; sulphate of soda, 519.64 gr.; sulphate of potash, 2.76 gr.; chloride of sodium, 39.15 gr.; bicarbonate of soda, 15.60 gr.; water, 16 oz. Dose, two ounces and upward. It will be observed that the chloride of calcium is omitted, but the proportion is so small that even when it was included there was no difference in the action. This inexpensive mixture, made for a penny per quart, can be effectually recommended. It will be found to possess every advantage attributed to the natural variety, the necessity for buying which seems to be done away with.—*London Lancet*.

Mr. Walter Whitehead, of Manchester, Eng., lately performed the triple operation of gastrostomy, tracheotomy, and excision of the tongue, upon a man suffering from an epithelioma, which had commenced in the tongue, and finally extended into, and blocked up, the pharynx. The patient, up to December 19th, we learn, is doing remarkably well, and expresses, in writing, great satisfaction at the result of the operation, and writes that he is now quite free from pain and independent of sedatives; whereas before the

operation his sufferings were intolerable, and scarcely influenced by morphia.

Professor Freund, of Strassburg, has been offered the chair of Obstetrics in Breslau, vacant by the death of Professor Spiegelberg, and has it is reported, accepted it.

OBITUARY.

ROBERT A. BARRY, M. D.

Doctor Robert A. Barry, of this city, died of heart disease on Jan. 6, at the residence of a relative in Brooklyn. Born in Philadelphia in 1824 he graduated from Williams' College at the age of twenty and came here to study medicine. He was a member of the class of 1851 of the College of Physicians and Surgeons, and since then, besides building up a large practice, he took an active part in the Academy of Medicine as well as in the national, State and county medical societies. Of late Dr. Barry resided at No. 233 East Thirteenth street, and had been for the past seven years chairman of the school trustees in the Seventeenth ward. After the battle of the Wilderness he was sent by the Sanitary Commission to take charge of the corps of physicians on board the steamer Daniel Webster, on which many of the wounded were brought to this city.

Dr. E. A. Adams, Assistant Medical Superintendent of the Michigan Asylum for the Insane, at Kalamazoo was fatally stabbed by a patient in one of the wards while making his daily rounds Jan. 6. The patient was hitherto supposed to be harmless. The stabbing was done with a large pocket knife which was recently lost by one of the attendants.

Cartwright Lectures.—The second course of the Cartwright lectures of the Alumni Association, of the College of Physicians and Surgeons is now being given by Prof. John C. Dalton, at Association Hall, corner of 23rd street and Fourth Avenue, on Tuesday evenings, Jan. 24, 31, and Feb. 7th. Subject of the course; The Experimental Method in Medical Science.

LECTURE 1.—Galvani and Galvanism, in the study of the nervous system.

LECTURE 2.—Buffon and Bonnet, in the eighteenth century.

LECTURE 3.—Nervous Degenerations, and the theory of Sir Charles Bell.

Dr. H. S. Thomas, the Michigan avenue cancer doctor, with others have organized an affair which they term "Detroit University," capital \$30,000 of which \$15,000 is paid in the form of notes signed by the several stockholders. The University will confer degrees in law, theology and medicine. It is stated that Thomas offered the degree of L.L.D., to the lawyer who witnessed the articles. Some days since one of the announcements of the above affair was presented to our notice. As the late Dr. Buchanan of Philadelphia, was not long since the guest of Dr. Thomas, while playing "hide and seek" with the detective, it is easy to see whence the inspiration of this new "University" springs. It seems more than probable that Detroit will have a genuine diploma mill. Is there any law to prevent it? None with which we are acquainted.—*Detroit Lancet*.

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BOOK NOTICES.

Headaches—Their Nature, Causes and Treatment—By Wm. Henry Day, M.D., Member of the Royal College of Physicians, London. Physician to the Samaritan Hospital for Women and Children, etc. Third edition. Published by Birmingham & Co., New York, 1881. 104. 8vo pp. Price 35 cents.

There is perhaps no more frequent and obstinate class of diseases met with by the general practitioner than the different varieties of headache. Many a physician has had his medical ingenuity and skill taxed to the utmost and in vain to relieve this troublesome malady.

We believe much of this want of success in treating headaches is to be attributed to the fact that the majority of physicians have failed to recognize the special causes on which they are dependent, and their pathological import, and have relied on empirical treatment because there was no tenable theories advanced which clearly indicated the pathological changes of which headache was only the most marked manifestation.

The profession is to be congratulated therefore on having placed at its disposal such a treatise as Dr. Day's, which is based on the deductions drawn from the experimental researches of Ferrier, Fritsch, Hitzig, Liveing and others, and supplemented by notes and observations recorded by the author, extending over a period of many years of actual trial of the methods and management advocated for the treatment of the various forms of headache.

The following is the classification adopted by Dr. Day, and although it at first sight appears to be unnecessarily refined, careful examination of the author's subsequent descriptions shows that the distinction between the different divisions is well marked.

His three main divisions are into "headaches depending on causes within the brain (Intra-cerebral headaches)." "Those dependent on causes external to the brain (Extra-cerebral)," and "Headaches of childhood and early life. Of the first class he gives eleven varieties, viz—the headache of cerebral anæmia, the headache of cerebral hyperæmia, sympathetic headache, dyspeptic or bilious headache (known also as sick headache) congestive headache, headache from plethora and increased vascular action, headache from exhaustion or from some peculiar change in the cerebral tissue (nervous headache), nervo-hyperæmic headache, arthritic or gouty headache, toxæmic headache, organic or structural headache, headaches of advanced life. Under the second class he includes rheumatic headache, headache from affection of the periosteum, neuralgic headache.

It is evident from this classification that the author goes very deeply into the etiology of headaches and having treated so exhaustively of their causes he is equally minute in defining the proper treatment to be followed.

One hundred and sixteen formulæ, which have proved of service in the author's experience, have been added.

We have met with few treatises which have so carefully avoided the presentation of mere theory and been so wisely confined to what must be admitted to be facts.

The American publishers have done a great service to the profession in supplying them with this excellent treatise, at so trifling a price.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE JAN. 5TH. 1882.

The President, Dr. Fordyce Barker, presided. The minutes of previous meeting were read and approved.

The annual report from the council was on motion read by title. The Treasurer's report and that of the Board of Trustees was read and accepted. Charles Jewett M.D., and Wm. D. Schuyler M.D., were elected resident fellows.

Balloting for officers to be elected resulted in the election of Dr. H. T. Hanks Vice-President, Dr. J. E. Janvrin Committee on Admissions, Dr. C. A. Leale Com. on Ethics, Dr. F. A. Burrall Committee on Education, Dr. J. C. Peters Committee on Library, Dr. Jacobus delegate to State Medical Society.

The Statistical Secretary announced the death of Dr. John W. Draper. The President alluded to the scientific attainments of the deceased, and stated that a memoir of Dr. Draper would be prepared and read before the Academy.

The paper for the evening, entitled

"THE TREATMENT OF DISEASES OF THE MIDDLE EAR AND CONTIGUOUS PARTS BY Milder Measures than those COMMONLY IN VOGUE,"

was read by its author, Samuel Sexton, M.D., and subsequently discussed by Drs. Burnett, St. John Roosa, Pomeroy, and Webster.

The following is a brief summary of Dr. Sexton's paper:

He stated that the larger number of cases of acute inflammation of the middle ear recover without treatment, that in presenting a cursory review of the subject as he was obliged to do he would necessarily avoid details and give more time to the consideration of treatment.

He divided the causes of suppurative disease of the middle ear into those of nervous origin, those due to extension of catarrhal inflammation to the middle ear, and those of traumatic origin. More than one cause was often operative at the same time.

Adult males were the most liable to attacks of aural catarrh. He had been led to believe that where violent measures, such as leeches, blistering and untimely incisions were used the inflammation was more severe.

Dr. Sexton cited typical cases of middle ear disease, and exhibited photographs illustrating the lesions of middle ear inflammation. He then passed to the consideration of treatment, maintaining that general and constitutional measures were better than radical ones; that leeches, blistering and painting with iodine were to be avoided as too irritating in effect. He advised that in middle ear inflammations, the drum head be examined by the speculum, and if only slightly distended to do nothing, if much distended paracentesis might have to be done. The pain may be due to inflammation of the periosteum. The meatus should not be kept greatly obstructed by cotton wool as was often done. Causes of inflammation, such as dental caries and erupting teeth should be removed. Hygienic and rational remedies were to be employed. To relieve some cases it was only necessary to wipe away the secretions or use hot air or hot vapor. He regarded sulphide of calcium as a most valuable remedy in inflammation of the middle ear and believed that it both prevented and arrested suppuration, or it might limit the inflammation and hasten maturation. In acute inflammation he would recommend its employment in $\frac{1}{2}$ grain doses every 3 or 4 hours. For the pain in middle ear inflammation he did not advise the profound narcotics, but would give such remedies as aconite, pulsatilla and gelsemium.

As regards leeches he had not met with a case in his practice for a number of years in which he regarded their application necessary.

Dr. Burnett, of Philadelphia, said that he endorsed all the gentleman had said as far as his experience went. He narrated cases of nervous origin and of mastoid disease which had recovered without interference.

As regarded sulphide of calcium, he had tried it in one case with very marked good effect. He believed it a valuable remedy. There was one point about it, he would ask if its use was to be limited to those of full habit or was it to be given to all.

Dr. Roosa said: The essayist has been very frank, and I will also be frank. As regards etiology, I have little to say. The speaker perhaps laid too much stress on reflex nervous symptoms. With regard to necrosis the paper is sound, and I agree with the author, but with respect to the use of sulphide of calcium, pulsatilla, gelsemium, and abstaining from surgical interference, I am totally at variance. I was taught as a cardinal surgical principle to give free vent to pus and to make free incisions into inflamed periosteum, and I have found this principle verified in my practice. I have never known the sulphide of calcium have any effect whatever. The question is largely one of personal

experience. I will formulate briefly my opinions. Given a red membrana tympani and serious pain referred to the ear, I believe if it be not remedied by the warm douche there is no remedy comparable to leeches, and if the drumhead be bulgy and there is considerable pain, I believe it should be incised.

Now in regard to mastoid inflammation. I admit that there are cases that do not require incision. I do not think that every case of aural disease should be attacked with the knife. The principles taught in the paper are those of homœopathy, and I regard them as most dangerous doctrine.

Dr. Pomeroy said: I feel embarrassed since Dr. Roosa has very effectually taken the wind from my sails. I feel it a solemn duty to say what I think, a defense of principles, I can hardly speak without heat in combating what seems to me totally opposed to well established surgical principles. I am astonished to hear leeching spoken of as a violent measure. The American otologist does not employ enough leeches to exsanguinate. The author of the paper made a good point however when he said that the bungling efforts to check hemorrhage after leeching did harm. If there is decided acute hyperæmia without relaxation of tissue the leech can not do harm.

I want to say something about syringing, I do not wish to be delivered from what has been called the sloppy thralldom of the syringe. Proper syringing with salt and water never does harm.

I have never used the sulphide of calcium, but my assistant has tried it very thoroughly and demonstrated that it is of no earthly use.

Dr. Webster said: The ground has been thoroughly gone over. All aural surgeons have many cases of disease of the middle ear, which originate in acute inflammation, and the history shows that the acute inflammation has rarely had any treatment. I fail to remember any case of acute inflammation of the middle ear which, when properly treated, went on to chronic inflammation. I know nothing about the sulphide of calcium and pulsatilla but would not like to abstain from the warm douche and opium.

Dr. Sexton closed the discussion stating that he had had his say in his paper and had nothing to add.

The Academy then adjourned.

ORIGINAL ARTICLES.

NOTES OF ONE HUNDRED AND THIRTEEN CASES OF OPERATION FOR LACERATION OF THE CERVIX.

BY

WM. GOODELL, M. D., Philadelphia, Pa.

I have had one hundred and thirteen cases of operation for laceration of the cervix, and without a death. Of these, ninety-nine were bilateral lacerations. Three were on the right side alone; eight were on the left, and three were markedly stellate, involving three sides or more. The reason why these operations show such a preponderance of bilateral laceration is simply this: In my experience, when one side alone is torn, the sound side acts so like a splint that the lips of the fissure are not liable to spread apart and cause ectropion to a pathological degree. They, therefore, as a rule do not need an operation. Of these cases union wholly failed in two. In four the union was partial; but in two of these, a suspicious-looking cervical growth had been previously removed. It, however

was not malignant, for in each a subsequent operation proved perfectly successful.

The number of cases in which the forceps were used I have not noted; but I have generally found that when the tear was an unusually bad one, the perineum was also torn and that the labors had been instrumental. In six of these cases both perineum and cervix had to be operated on. In three of these both lesions were operated on at one sitting. All were successful.

Of my one hundred and thirteen cases, thirty-five were performed in the amphitheatre or the private operating rooms of the Hospital of the University of Pennsylvania—which is a general hospital. Of these, two had serious attacks of perimetritis and of parametritis, and two had lighter attacks; all due to hospitalism. They recovered, but in one the convalescence was delayed by the formation of two abscesses in the leg. In this case, the patient next to her broke out with erysipelas on the day of the operation. In the other bad case, an explosion of erysipelas took place on her face and trunk. Strange as it may seem, the union in all these cases was perfect. I attribute this success to the fact that the stitches were not removed on the outbreak of the pelvic inflammation, but were allowed to remain a much longer time than usual. As the carbolated spray obscures vision in such operations, it was not resorted to in any of these cases. The only antiseptic means employed being a 2.5 per cent. solution of carbolic acid for the sponges, and vaginal injections of the same solution, repeated twice a day until the stitches were removed. The same means were used in my seventy-eight private cases, and of those I had but two with any symptoms of inflammation. The attack was in each case mild and manageable, giving me no anxiety whatever.

Of all my cases I had but one of secondary hemorrhage—my forty-first case. It was checked by a vaginal injection of a saturated solution of alum. This immunity I attribute to my rule of passing in the stitches very deeply. Hemorrhage during the operation has often been free and troublesome, but I have never ventured to check it by astringents. The plan which I have long adopted is to pass a wire under the bleeding vessels, and make traction on the ends, while the denudation is carried on. This wire is afterwards utilized as a suture.

Many of my cases of bilateral laceration, but not all, had become sterile after the receipt of the injury; but the exact number has not been accurately recorded in my notes. Of those whose track I could keep after the restoration of the cervix, four very shortly afterwards became pregnant. In three of these the laceration was not reproduced; in one a tear occurred on the left side, but not of sufficient extent to warrant an operation.

In my opinion the cervix should always be restored whenever ectropion of the mucosa takes place, and whenever the glands of Naboth become enlarged. Indeed, the visible presence of these glands around the os externum is a very good proof of cervical laceration. But it is not an infallible one, for I have met with them in virgins and in multiparæ with hemorrhagic tendencies from fungous vegetations. These glands often honeycomb the line of denudation, and I make it a rule, whenever it is feasible, to dissect them out. In one of my patients, whose mind hovered over that ill-defined border-land between hysteria and insanity, the cervix was literally riddled with these glands. They lay so close together and were so much enlarged as to look like the seeds in a

pomegranate. I could not dissect them all out, because too much tissue would have been removed; and yet the union of the parts was excellent. The operation cured her of an obstinate irritability of the bladder, but her brain was not much improved.

Another indication for the operation is a hereditary tendency to malignant disease. There is no question in my mind that a cancer of the cervix starts from the constantly fretted and chafed raw surface of a laceration. One would infer this from *a priori* reasoning; but it is further substantiated by the fact that this disease very rarely indeed attacks a virgin or a sterile woman. On the other hand, the more children a woman has given birth to the greater her liability to cancer. Then again, the fissure of an old rent is very often found in a cervix attacked by malignant disease. Acting upon this belief, I have operated upon torn cervixes without local or constitutional symptoms, for no other reason than that there was a history of cancer in the family.

A third indication for the repair of the cervix is the existence of stubborn and sub-acute periuterine inflammations. I make this statement with some degree of diffidence, for it is contrary to the teachings of our very best gynecologists, and especially so to those of Dr. Emmet, to whom we owe the largest measure of thanks for devising this ingenious and most valuable operation. Everyone of us has seen cases of bad cervical laceration, complicated with tender and thickened broad-ligaments, or with more or less fixation of the womb—cases which refuse to yield to treatment. Usually each menstrual period rekindles the dying embers of the inflammation, and these monthly exacerbations undo the good gained by the intermenstrual treatment. In these cases there is plainly a relation of cause and effect between the lower lesion of the cervix and the upper pelvic lesions. The cervical wound produced in the first place the phlegmon of the broad-ligament, and the monthly over-engorgement of the womb, caused by the afflux of blood to the cervical sore, brings about a pathological turgescence of the vascular appendages of the womb. Hence the persistence of the ovaritis or of the peri-uterine inflammations. Cure now the chafed and angry cervical sore—the *fons et origo mali*—and you lessen the monthly afflux of blood, and consequently the monthly exacerbations of the upper pelvic lesions. Acting upon this idea, I have on several occasions and under such circumstances performed the operation, and thus far I have had every reason to congratulate myself for taking this responsible step. For instance: fifty-six hours ago I repaired a torn cervix under the following circumstances: The lady had been operated upon six months ago by one of our best gynecologists. On the next day furious pelvic inflammation set in, which kept her bed-fast for three months. Eighteen days elapsed before it was deemed safe to remove the sutures. During that time she was deemed ill enough to have a consulting physician, and, indeed, her life was despaired of. Not only did not union take place, but a great amount of gristly cicatricial tissue had been produced by the failure. The lady was in wretched health, for the left broad-ligament was thickened, the womb somewhat fixed, the vaginal roof sore to the touch, and every movement of the bowels accompanied with pain. For the last three months she had been under the best of care, but with no improvement. Feeling sure that nothing but the radical treatment would cure her, I operated, as I stated, fifty-six hours ago. I took good care to stimulate her with opium and quinine, and to keep up the

saturation. This afternoon her temperature is 99.1° her pulse 76, and I now have but little fear of inflammation in her case.

Another occasional indication for the operation is the presence of dense cicatricial tissue in the angles of the fissure, always provided that various pelvic neuralgiæ and distant nerve perturbations can be satisfactorily traced to the cervical injury. Sometimes this can be proved by the tenderness of the cicatrix—coitus or the pressure of the sound on some point eliciting radiating pains. Oftener the relation must be inferred, either from the monthly exacerbations or from the exclusion of other causes. The diagnosis is not always easy and I am sure that I have here made mistakes—that is I have removed wedges of cicatricial tissue, without restoring by that means my patient to health. From my observations I am disposed, indeed, to believe that the painful influence on the system, of hard and gristly cicatricial tissue left after some cervical tears, has been overrated. I am willing to concede that sterility is sometimes owing to it, as it clearly was in one of my patients who became pregnant immediately after the operation. I am also ready to grant that reflex pains and visceral disorders may come from it. But I am inclined to look upon these results as exceptional, and that a tear of the cervix is too often made the scape-goat of headaches and nape aches, of spine aches and back aches, and of various other nervous explosions which are due to nervous exhaustion or to nutritive changes in nerve-centres, rather than to traumatic injury of their extremities. In other words the constitutional phenomena are dependent usually on fine central lesions and not on the reflex influence of coarse peripheral injuries. My experience would lead me to say, further, that while a woman is suckling her infant, and menstruation is thus kept away, she may not appreciate the evil effects of even a bad laceration. But as soon as she gives up suckling and the monthly congestions begin, new exacting local and constitutional symptoms soon set in.

Of the beneficial results of the operation of trachelorrhaphy, I must candidly admit that I am not now so sanguine as at first. Cases have disappointed me, but then, on the other hand, I have undoubtedly operated on some cases unnecessarily. The broad rule may be laid down that, where marked ectropion exists, associated with enlarged Nabothian glands, with leucorrhœa and menorrhagia, the issue of the operation will be a happy one. In such cases I have had capital results. The most costly present ever received by me from a patient came from a lady who had been an invalid for eleven years, but who was restored by this operation to health and to society. Dr. E. L. Duer aided me on the occasion, and will be able to corroborate my statement. When, however, I have operated on a tear without ectropion, or merely on account of cicatricial tissue in the angles of the fissure, I have met with some bitter disappointments. But I now know better when to operate, and this fact I have learned: that nervous exhaustion and spinal irritation will evoke symptoms which others as well as myself have referred to slight cervical tears, but which were in no wise dependent on these lesions.

My mode of operating is first to coaptate the parts by two tenacula, and to determine with the sound the proper site for the new os externum. At the very centre of this site the two lips of the fissure are transfixed by a powerful needle armed with a stout silver wire about two feet long. The ends of this wire being twisted together form a long loop which puts the womb

under perfect control. By it the womb is gently drawn down and put within operative reach. By hooking up with a tenaculum that portion of the wire running across the fissure, viz., its middle, the loop is doubled at the expense of its length, and by separating the two loops the lips of the fissure are drawn apart. The denudation I now prefer to make with a knife, trying always to remove all the cicatricial tissue, and in one piece if possible. After the denudation, the wire is again converted into a single loop, by releasing its middle portion and drawing it back. This brings the lips together with mathematical precision, and shows whether any further trimming is needed. I always shot my sutures, and very generally shot also the guiding or piloting suture. To facilitate the drawing down of the cervix and the removal of the stitches, I leave uncut the ends of this wire and those of the highest suture on either side. I try, of course, to operate at a time when the catamenia will not be reproduced or be accelerated. But in spite of this caution I have often had the menstrual flow to occur a very few days after the operation; yet in not a single instance has such a misadventure interfered with the prompt and perfect union of the parts. On several occasions I have, at the same operation, curetted the womb for those vegetations which are so likely to be found on the endometrium in cases of old cervical tears. But while this is a great saving of pain and of time to the woman, and has thus far not been followed by bad results, I deem it too unsafe a practice to be generally resorted to.

OBSERVATIONS IN CLINICAL THERMOMETRY.

BY

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The discovery of clinical thermometry by William Wallace Currie has proved an invaluable acquisition to medical science, and its founder deserves and merits eulogy of the highest character, for the unbounded riches he has contributed to the profession. That an instrument of such diagnostic precision should fall into disuse, and be shelved with its valuable clinical history in some medical archive, and there remain in a condition of obsolescence, is to be lamented by those of the profession whose highest ambition is the alleviation of the ills to which human flesh is heir. But thanks be to Wunderlich, the pre-eminent explorer of science and art in his department, who visited the medical archives of records, and found memoirs from the pen of William Wallace Currie, that invited investigation that eventuated in the practical application of the thermometer as a means of precision in diagnosis.

In order that we may have a thorough appreciation of the value of the thermometer as a means of influencing diagnosis, prognosis and treatment of disease, let us consider the temperature of the body in health and disease.

If we were residents of the frigid zone, or inhabiting the torrid zone, the temperature of our bodies would be about the same. There may be slight difference, but it is only to be measured by tenths of a degree Fahrenheit, or a little more. To a certain extent this result is due to clothes; and without warm clothing, by which the temperature or body-heat may be conserved, man could not maintain a temperature compatible with life among the icebergs. By admitting

that clothes are an indispensable auxiliary, this body temperature is maintained in the one case, and regulated in the other by most important processes going on within the organism. Combustion and oxidation of the material consumed as food produces all our body-heat. At one time it was thought this combustion was carried on in the lungs solely—that they were the furnaces of our bodies. Oxidation goes on in all the minute capillaries of the body. But combustion is much more active in some than others.

Principally combustion goes on in the muscular system. The actual combustion is said to consist chiefly of the oxidation of lactic acid in union with soda. The hydro-carbons are stored up, for the time being, in the liver as glycogen, which, when liberated, becomes sugar, and is then split up into lactic acid, and as such is oxidized; the muscles have each a little store of glycogen, but the principal store-house is the liver. The more permanent storage is in the form of fat, and on these stores of fuel the body lives when deprived of food. As the reserves of glycogen become exhausted, the fat is utilized to sustain the body temperature. This temperature is almost entirely maintained by the union of oxygen with the carbon and hydrogen of our food. To a small extent nitrogenized matters are oxidizable, and so furnish a small quota of heat.

In ordinary muscular action a certain amount of what would otherwise be heat goes to produce mechanical results; and there are good grounds for holding "that the products of muscular contraction, *i. e.*, the heat and mechanical results, are conjointly the expression or equivalent of the mechanical action which goes on in the muscle." (Wunderlich.)

Heat is also produced by mental exertion—very active mental exertion, a rise of temperature of from $\frac{1}{2}$ to 1 degree Fahrenheit.

A large supply of good food also produces a rise of temperature of a temporary character, caused by active digestion and assimilation.

Heat is chiefly lost by the skin; and to a less extent by the respiratory tract. The blood circulating through the skin is cooled by heat-loss, by the radiation away of the heat in the surrounding cooler air.

The larger the amount of blood circulating through the cutaneous vessels the greater the heat-loss; consequently, in cold weather, the skin is cold and marbled; it is also white and anæmic, the vessels are contracted and the heat-loss reduced to a minimum. On the contrary, when there is an excessive production, the vessels of the skin dilate; the skin is highly colored and glowing; it is in a highly vascular condition.

We have seen that a free blood supply leads to functional activity; and if the heat production be maintained, we get the sudoriferous glands thrown into activity, and perspiration ensues.

The consequence is that the cooling effects of evaporation are called into play, and still further heat-loss is occasioned.

By such means the temperature is kept at or near normal.

In tetanus and in rheumatic fever there is free perspiration often found along with high temperature; but all that this proves is that the evaporation and heat-loss are unequal to neutralizing the excessive heat production. (The body temperature often rises after death, and continues high for some hours.)

(This is due to the fact that the heat-production is no longer met by heat-loss, by radiation of heat by a blood current through the skin.) The production of heat and its loss is not only interesting, but is of the

highest practical importance, in the diagnosis, prognosis and treatment of disease. We have slightly considered body-heat physiologically. Let us consider it as it appears pathologically.

An increase of the body heat forms the condition known as fever. A pyretic condition may extend from a mere condition of feverishness, with a temperature of $99\frac{1}{2}^{\circ}$ Fahr. to $101\frac{1}{2}^{\circ}$ Fahr. states often to be found in children without any sinister meaning whatever; up to a high febrile state of from 107° to 108° Fahr. beyond which existence is possible for only a brief period, and recovery impossible; though there are some isolated cases to the contrary, this statement of Wunderlich is almost universally true.

A temperature of 113° Fahr. has been found ere actual death; while a sharp rise of temperature is a common precursor of death in febrile states. A prolonged high temperature no matter how produced will occasion that state known as "the typhoid condition."

We see it produced by hectic in the consumptive; by surgical fever and pyæmia in other cases.

Whenever met, it forms a characteristic and a terrible condition; and this consequence of a persistent high temperature is the chief danger of all fevers.

At the ordinary tempt. of the body the nitrogenized tissues wear away but slowly and their oxidation is a trivial affair. But as soon as the body temperature rises the nitrogenized tissues begin to melt down by oxidation; and there is found a corresponding excess of histolytic products in the blood.

The higher the temperature the greater the waste of the nitrogenized tissues, especially the muscles.

After a fever, the fat of the body is left comparatively untouched, but the muscles are sunken and wasted. A microscopic examination of the muscles after death from fever demonstrates that they are the subjects of extensive structural changes. Zeuker has pointed out these changes, and his observations have been corroborated by others.

The causes of these structure changes in the muscle are produced by continued high temperature.

Murchison says "There is found too, on the whole, a direct relation between the temperature and the amount of urea. According to Brattler, there is a close correspondence between the amount of urea and the temperature. The greater the amount of urea the greater the temperature."

The normal excretion of urea per diem is about 400 grains, but as far as 1065 and even 1235 grains have been excreted in one day in fever.

Nannyn found, by experiment, that an increased rise of temperature was produced by the simplest of all methods of raising it, viz.: by confinement in a heated atmosphere saturated with moisture; and along with this rise there was found an increase in the amount of urea.

These experiments corroborate the views of Traube, Vogle and others, that the excess of urea is the measure of high temperature without relation to its cause.

Let us glance at the causation of fever again. A rise of temperature is generally associated with a lowering of the blood pressure, a dilatation of the peripheral arterioles, and a rapid action of the heart. The consequence of this rise is that there is a free flow of blood through the capillaries, and an increased number of respirations per minute, with possibly some action upon the tissues themselves, about which we can only as yet speculate; all of which combined bring about an increase of oxidation, and keep up the high body-temperature. In addition to this, Cullen held

there was spasm of the arterioles of the skin, and so lessened heat loss.

Recently Traube and Senator have expounded Cul-
len's views.

The thermometer, as a means of diagnosing diseases of the brain, has been experimented with by an eminent Frenchman, M. Broca, who has, since 1873, applied his researches to the diagnosis of cerebral affections. He says, "The mean temperatures, which we are about to give, were obtained on twelve individuals of the hospital service, placed, as far as possible, in the same physiological condition. The instrument was left *in situ* more than twenty minutes. The maximum temperature of the brain was found to be $34^{\circ}.85$, Centigrade; the minimum $32^{\circ}.80$, Centigrade, giving a mean of $33^{\circ}.82$. But if the thermometers on the left side are compared to those on the right, it is seen that those on the left indicate a sensible elevation. Thus on the right side the mean temperature is $33^{\circ}.90$, while that on the left side exceeds 34° .

There is then, in the normal condition, a higher temperature on the left than on the right side, by about one-tenth of a degree, Centigrade. But it is remarkable that this inequality only exists in the condition of repose. When the brain acts, equilibrium is produced, and the two sides register alike. Should we not admit, with M. Broca, that the left hemisphere is better irrigated with blood, that it receives more blood than the right, but when the brain works the right hemisphere—being less prepared and more incapable—makes greater efforts; more blood is drawn to this side, and the equilibrium is produced between the two hemispheres! Broca found the temperature of the occipital lobe to be $32^{\circ}.92$, that of the temporal $33^{\circ}.72$, and that of the frontal $35^{\circ}.28$. These figures show how the frontal lobe predominates in functional activity over the temporal and occipital. Such are the results of Broca on brains in repose. When the brain acts, the figures are no longer the same.

Here are the results which he arrived at. The thermometer stood at $33^{\circ}.92$, Centigrade, and, after reading aloud ten minutes, it had reached $34^{\circ}.23$, a difference of almost half a degree in favor of the brain in action. The clinical researches of Broca are no less important. He has gone so far as to give to the temperature the importance of being a certain sign, in cerebral embolism, and in determining the part of the brain deprived of blood.

For a long time M. Broca has shown that, in embolism of the extremities, curious phenomena of temperature take place. He noticed, that, in embolism, the general temperature of the limb had fallen; on a level, even with vascular obliteration, the temperature had risen. In cerebral embolism, seven times to ten, the clot affects the left middle cerebral, and obliterates it entirely, or one of its branches only. What takes place theoretically in this case: The blood flows no longer to the Sylvian region, and, as a consequence, the temperature should fall. But the circulation will be more active in the frontal and occipital regions to compensate for the interference in the temporal region; and the temperature should rise in these localities.

Let us see what clinical observations show. M. Broca has made two observations relative to these facts.

The first case was that of a rheumatic woman who was suddenly stricken down with hemiplegia, with loss of speech. The thermometer was used showing a temperature as follows:

LEFT SIDE.

Frontal Lobe 32.5° ,
Temporal " 34.3° ,
Occipital " 35.6° ,

RIGHT SIDE.

Frontal Lobe 34.8° ,
Temporal " 34.8° ,
Occipital " 32.9° ,

By this table it is seen that the reduction in temperature is better marked in the temporal region, which is supplied by the middle cerebral artery. The temperature of the right temporal lobe is seen to be higher, which is the contrary of what takes place in the normal condition. It is moreover seen that the temperature of the frontal and occipital lobes, especially the latter, is very much higher than is generally obtained. Theory and practice are in perfect accordance in this case; and we should then admit that in the region of the embolism there is a diminution of temperature.

A continuation of the high claims the thermometer has upon us for its use, as a means of influencing diagnosis, prognosis and treatment, I will report the temperature taken from a case of typhoid fever that came under my observation lately. Exemplifying the clinical history it is as follows:

1879, Aug. 3d, 7 o'clock	a. m.,	Temp.	105,	Pulse 80,	Resp. 11
" " 7 "	p. m.,	"	105 $\frac{1}{2}$,	" 71,	" 10
" " 4th, 7 $\frac{1}{2}$ "	a. m.,	"	105,	" 81,	" 12
" " 7 "	p. m.,	"	105 $\frac{3}{4}$,	" 70,	" 13
" " 5th, 7 "	a. m.,	"	105,	" 68,	" 12
" " 7 "	p. m.,	"	104 $\frac{3}{4}$,	" 74,	" 13
" " 6th, 7 "	a. m.,	"	104,	" 78,	" 12
" " 7 "	p. m.,	"	103 $\frac{1}{2}$,	" 85,	" 14
" " 7th, 7 "	a. m.,	"	103,	" 93,	" 14
" " 7 "	p. m.,	"	102 $\frac{3}{4}$,	" 101,	" 15
" " 8th, 7 "	a. m.,	"	101,	" 115,	" 15
" " 7 "	p. m.,	"	101 $\frac{1}{2}$,	" 110,	" 15
" " 9th, 7 "	a. m.,	"	100 $\frac{1}{2}$,	" 110,	" 14
" " 7 "	p. m.,	"	100,	" 122,	" 10
" " 10th, 7 "	a. m.,	"	99,	" 116,	" 15

I have given a correct record of temperature, pulse and respirations, as taken by the husband of the patient, who is a very intelligent man. She was attacked July 20 and the disease terminated Sept. 12. There were variations of temperature before and after the record I have just given, but not of sufficient importance to report. A son was prostrated with the disease and it ran a similar course. Now if we will observe the register of the thermometer morning and evening, the pulse rate and respirations, the most casual will observe the paramount value the thermometer has been to us in the administration of our treatment. The two prominent factors in this case, a high temperature and slow pulse, and quick pulse and low temperature, could not have been successfully operated upon had it not been for this valuable instrument, the thermometer. Such a thermometrical range of temperature and pulse rate it has never been my privilege to observe before, and this is what has caused the preparation of this paper, hopeful that it may be instrumental in inviting some who are skeptical of its value to a careful investigation of the merits claimed for it.

An abstract of observations has been this which does not differ in any wise from others perhaps.

1. The heat of the body in health is maintained at $98\frac{1}{2}$ Fahr.

2. Any continued deviation from this indicates disease.

3. Returning to and continuing at $98\frac{1}{4}$ Fahr. ends the disease.

4. A single elevation of temperature is of importance.

5. Changes from these typical ranges of temperature in disease are important, as indicating a disturbing cause.

6. A regular high range of temperature, is more to be desired than an irregular course.

7. In connection with the temperature, the daily study of the pulse, and respirations, is of great benefit.

8. If the general symptoms and temperature agree, and the pulse disagree the two former are to be relied on.

9. If the pulse and temperature agree, and the general symptoms are not in harmony with the former, the pulse and temperature are to be accepted as indicating the condition of your patient.

FORMULÆ AND POINTS IN PRACTICE.

IN LEUCORRHEA FROM RELAXATION OF VAGINAL MUCOUS MEMBRANE.

℞ Ferri tartarati.....gr. 60.
Spts. ammon. aromat. 33.
Infus. quassiæ.....ad. 38.
M. Sig.—One-sixth part three times a day.

IN ANÆMIA DEPENDENT ON A SYPHILITIC TAIN.

℞ Tr. ferri perchlorid..... 3 1½.
Potassæ chlorat.grs. 120.
Liq. arsenicalismin. 15.
Aquæad. 38.
M. Sig.—One-sixth part three or four times a day in a wine-glassful of water. *Palmer.*

TONIC ESPECIALLY INDICATED WHERE THERE IS A TENDENCY TO NAUSEA AND DYSPEPSIA.

℞ Ferri et ammon. citrat.gr. 60.
Spts. ammon. aromat. 34.
Potassæ bicarbonat.grs. 120.
Infus. calumbæad. 38.
M. Sig.—One-sixth part twice a day with one tablespoonful of lemon juice.

IN HYPOCHONDRIASIS.

℞ Mist. ferri co.....
Decoct. aloes co.....aa 3 iv.
Zinci sulphat.....grs. xij.
M. Sig.—One-sixth part twice a day.

IN SCROFULA WITH LOW NERVOUS VIGOR.

℞ Ferri phosphat.grs. 40.
Acid. phos. dil..... 3 1½.
Syr. aurant. flor..... 3 i.
Muc. tragacanth.....ad. 38.
M. Sig.—One-sixth part three times a day.

IN RICKETS AND STRUMOUS DISEASES OF CHILDREN.

℞ Ferri phosphat.....grs. 20
Pulv. myrrhæ.....grs. 15
Sacchari alb.....grs. 30
Mix and divide into six powders. Sig. One powder night and morning.

THE FOLLOWING IS RECOMMENDED BY DR. MARSHALL HALL, AS A TONIC IN CASES OF NERVOUS EXHAUSTION:

℞ Strychniæ acetat.....gr. i
Acid acetici.....min. 20
Alcoholis..... 3 2
Aquæ destillatæ..... 3 6
M. Sig. Ten drops in water three times a day.

IN ATONY OF INTESTINAL WALLS.

℞ Zinci sulph.....grs. 24
Ext. nucis vomicæ.....grs. 6
Ext. rhei.....grs. 30
Make a mass; divide into twelve pills, and order one to be taken twice a day.

IN SPASMODIC CONTRACTION OF SPHINCTER ANI.

℞ Zinci valerianat.....grs. 12-24
Ext. belladonnæ.....grs. 3-6
Ext. gentianæ.....grs. 24
Make a mass; divide into twelve pills and silver them. One to be taken three times a day.

IN LUMBAGO AND PLEURODYNIA.

℞ Zinci sulphat.....grs. 24
Ext. aconiti.....grs. 12
Ext. quassiæ.....gr. 24
Make a mass; divide into twelve pills, and order one to be taken three times a day.

TONIC AND SEDATIVE IN CHRONIC BRONCHITIS OF OLD PEOPLE.

℞ Zinci sulphat.....grs. 12-24
Ext. conii.....grs. 36
Make a mass; divide into twelve pills, and order one to be taken three times a day.

IN NERVOUS DEBILITY.

℞ Zinci phosphat.....grs. 20-40
Acidi phosphor. dil..... 3 ½
Tr. cinchon. flav..... 3 6
Aquæ menth. pip. ad..... 3 8
M. Sig. One-sixth part three times a day.

IN EXTREME DEBILITY AND MENTAL DEPRESSION AFTER CHOREA, DIPHTHERIA, ETC.

℞ Micæ panis.....grs. 60
Aquæ destillatæ q. s. to make a mass.
Then add phosphori.....grs. i
Mix thoroughly, divide into twenty pills, and order one to be taken thrice daily.

IN TUBERCULOSIS, RICKETS AND SCROFULA.

℞ Phosphori.....gr. i
Olei morrhuæ..... 3 6
M. Sig. One or two teaspoonfuls three times a day after food.

℞ Phosphori.....gr. i
Olei amygdalæ..... 3 3
M. Sig. Teaspoonful in a glass of barley water three times a day.

THE FOLLOWING PRESCRIPTION IS RECOMMENDED BY J. ASHBURTON THOMPSON, IN NEURALGIA.

℞ Phosphori.....gr. i.
Alcohol 3 5.
Glycerini..... 3 1½.
Spts. vin. rectificat..... 3 2.
Spts. menth. pip..... 3 ½.

Dissolve the phosphorus in the alcohol by the aid of heat; warm together the glycerine and wine, mix while hot and add the peppermint on cooling.

SELECTIONS FROM JOURNALS.

SELECTIONS FROM CLINICAL LECTURES DELIVERED AT THE LONDON HOSPITAL.

By JONATHAN HUTCHINSON, F. R. C. S., Senior Surgeon to the Hospital; Consulting Surgeon to Moorfields Ophthalmic Hospital; and Professor of Surgery and Pathology in the Royal College of Surgeons.

THE PRE-CANCEROUS STAGE OF CANCER, AND THE IMPORTANCE OF EARLY OPERATION.

GENTLEMEN: The patient who has just left the theatre is the subject of cancer of the tongue in an advanced stage. As I demonstrated to you, the lymphatic glands are already enlarged. It is hopeless to think of an operation, and there is nothing before him but death, preceded and produced by a few months of great and continuous suffering. His case, I am sorry to say, is but an example of what is very common. Not a month passes but a case of cancer of the tongue presents itself in this condition. The cases which come whilst the disease is still restricted to the tongue itself are comparatively few; nor does this remark apply only to the tongue. "Too late! Too late!" is the sentence written but too legibly on three-fourths of the cases of external cancer concerning which the operating surgeon is consulted. It is a most lamentable pity that it should be so; and the bitterest reflection of all is that usually a considerable part of the precious time which has been wasted has been passed under professional observation and illusory treatment. In the present instance the poor fellow has been three months in a large hospital and a month under private care. I feel free, gentlemen, to speak openly on this matter, because my conscience is clear that I have never failed when opportunity offered, both here and elsewhere, to enforce the doctrine of the local origin of most forms of external or surgical cancer, and the paramount importance of early operation. I have tried every form of phraseology that I could devise as likely to impress this lesson. Nearly twenty years ago I spoke to your predecessors in this theatre concerning the "successful cultivation of cancer;" telling them how, if they wished their patients to die miserably of this disease, they could easily bring it about. The suggestion was, that all suspicious sores should be considered to be syphilitic, and treated internally by iodide of potassium, and locally by caustics, until the diagnosis became clear. More recently, I have often explained and enforced the doctrine of a pre-cancerous stage of cancer, in the hope that, by its aid, a better comprehension of the importance of adequate and early treatment might be obtained. According to this doctrine, in most cases of cancer of the penis, lip, tongue, skin, etc., there is a stage—often a long one—during which a condition of chronic inflammation only is present, and upon this the cancerous process becomes engrafted. I feel quite sure that the fact is so. Phimosis and the consequent balanitis lead to cancer of the penis; the soot-wart becomes cancer of the scrotum; the pipe-sore passes into cancer of the lip; and the syphilitic leucoma of the tongue, which has existed in a quiet state for years, at length, in more advanced life, takes on cancerous growth. The frequency with which old syphilitic sores become cancerous is very remarkable; on the tongue, in particular, cancer is almost always preceded by syphilis, and hence one of the commonest causes of error in diagnosis and procrastination in treatment. The sur-

geon diagnoses syphilis, the patient admits the charge, and iodide of potassium seems to do good; and thus months are allowed to slip by in a state of fools' paradise. The diagnosis, which was right at first, becomes in the end a fatal blunder, for the disease which was its subject has changed its nature. I repeat that it is not possible to exaggerate the clinical and social importance of this doctrine. A general acceptance of the belief that cancer usually has a pre-cancerous stage, and that this stage is the one in which operations ought to be performed, would save many hundreds of lives every year. It would lead to the excision of all portions of epithelial or epidermic structure which have passed into a suspicious condition. Instead of looking on whilst the fire smouldered, and waiting till it blazed up, we should stamp it out on the first suspicion. What is a man the worse if you have cut away a warty sore on his lip, and, when you come to put sections under the microscope, you find no nested cells? If you have removed a painful, hard-based ulcer of the tongue, and with it perhaps an eighth part of the organ; and, when all is done, and the sore healed, a zealous pathological friend demonstrates to you that the ulcer is not cancerous, need your conscience be troubled? You have operated in the pre-cancerous stage, and you have probably effected a permanent cure of what would soon have become an incurable disease. I do not wish to offer any apology for carelessness, but I have not in this matter any fear of it.

EMPIRICISM AND SPECIFICS.

The patient whom we are about to discharge from Talbot ward, cured of severe pemphigus, was admitted for a special purpose. He was sent in by my friend and former pupil Dr. Tom Robinson, in order that he might be cured. You will say that the hope of cure is the motive which brings most of our patients to us. True; but in this instance there was something more than this. Dr. Robinson could easily have cured him himself, but he sent him here in order that I might do the miracle of cure under your eyes, and thus claim your belief in the efficacy of drugs. You will remember his state when admitted; he was covered from head to foot with bullæ; the trunk was less severely affected than his limbs, head, and genitals; on these, there was nowhere a space as large as the palm free from bullæ, and on the trunk also there were a considerable number. He was in a miserable condition from pain and irritation. The eruption had been out about ten days, and it affected the mucous membrane of his mouth as well as the skin. You may remember that we kept him in bed for a few days before we used the magician's wand, in order that all might see that there was no natural tendency to amelioration. More bullæ came out; then, without making the slightest change in diet, we ordered a few drops of a tasteless solution of arsenic to be swallowed three times a day. The result was that, at our next visit, most of the bullæ had dried, and there were no fresh ones. He continued to improve greatly for ten days, when suddenly a few fresh small bullæ seemed to threaten a relapse. We doubled the dose of our remedy, making the dose eight instead of four drops; and, from that day, with the most trifling exception, the recovery has been uninterrupted. With such a fact before you, let me beg of you, gentlemen, to believe in drugs, and to treat empiricism with respect. In the prescription which I ordered, I availed myself solely of empirical knowledge; I prescribed, just as any old woman might prescribe, that which I knew would do good. Concerning the nature of pemphigus, I knew nothing; of its cause.

absolutely nothing; of its clinical relationship, but little; of the *modus operandi* of arsenic, I knew scarcely more; but this I did know as a fragment of assured conviction, that arsenic would cause the pemphigus eruption to disappear, and the patient to regain his health. Far be it from me to speak slightly of scientific work; let us by all means work as hard as we can in the laboratory and microscope-room, and penetrate as far as we possibly can into the mysteries of disease; let us never weary in our search after causes, or in our endeavor to find practical application for the facts of physiology. But, whilst doing this, let us remember that, as regards the relief of suffering, much of our usefulness must be based upon knowledge which is nowise scientific, but simply a matter of experience and memory. We have many specifics for many maladies, or rather for many symptoms, and he is the most successful practitioner who has stored in his memory the largest number of them. As years go on, we shall add many more to our list; and I doubt not that there are those who now listen to me who are destined to give help in their discovery; for discoveries in this direction are rarely made by single observers, but rather by the concurrent work of many experimenters, all keeping their eyes open, willing to try new things, and resolute to store faithfully the results of their observations. Iodide of potassium for tertiary syphilis, the bromide for epilepsy and as an anaphrodisiac, iodoform for phagedena and specific ulceration, balsam of Peru for scabies; so silently have these invaluable specifics been introduced into practice, that it would puzzle most of us to say who first recommended them. I mention this fact, in order to show how important is the honest labor of all in the pursuit of therapeutics. We all prescribe, and we ought all, on system, to observe and record the results of our observation as to the effect of drugs. Five-and-twenty years ago, I believe that the case of pemphigus which you have seen cured would have been found incurable in all the medical institutions of the world, with one single exception. Much more recently than that, the disease was pronounced by Hebra to be invariably fatal. So, indeed, it would have been to this day, if we had not found out arsenic. I know of nothing else that will cure it. Our patient was already beginning to emaciate, and, in the course of a few months—possibly of a few weeks—he would have had to die, worn out by the constant discharge from his skin, had we not put the arsenic into his blood. Never shall I forget seeing a poor wretched child carried on a bed into Mr. Startin's out-patient room at the Blackfriars Hospital for Skin-Diseases. It had been brought straight from the wards of one of our largest hospitals, where, during three months, all had been done for its help that benevolence, aided by the science of the day, could suggest. Yet it was emaciated to skin and bone, and so covered with sores, that it was impossible to put its clothes on. A few minims of arsenic were prescribed, and in a few weeks the child was well. So much for empirical knowledge; so much for drug-specifics.

PROMPT AMPUTATION IN TRAUMATIC GANGRENE: IMPORTANCE OF AMPUTATION HIGH UP.

In cases of traumatic gangrene, ought amputation to be performed without waiting for a line of demarcation to be formed? I believe that the reply of most surgeons to this question will be an unhesitating affirmative. Such, certainly, would be my own. We have recently had a very instructive case. A man aged more than 50, but of good constitution, was admitted

with a compound fracture of the lower third of the leg. We tried to save it, and the limb was put up in antiseptic dressings. The foot, however, became gangrenous, and, about the sixth day after admission, Mr. Tay amputated the limb below the knee, the man being at the time very ill. The amputation was done through perfectly sound parts, but it was presently followed by gangrene of the stump. The flaps became livid, and the man was in a most urgent condition. Mr. Tay and myself, in consultation, determined at once to perform a second amputation; and, within twenty-four hours of the first, this was done in the lower third of the thigh. The man did well, and the stump on the second occasion has made, as you saw the other day, a very good one. The main reason for prompt amputation in such cases is, that the gangrenous process is a very dangerous one. Whilst soft parts are dying, and the circulation still going on to some extent through them, the blood becomes poisoned by the absorption of gases and fluids from the putrescent parts, and a most dangerous condition of septicæmia results. Of this state, a rapid pulse, a sunken countenance, high temperature, and vomiting, are the most constant signs. It is remarkable how quickly they are sometimes relieved by the removal of the dying part. It may be that the process of mortification is also attended by shock to the nervous system, but I suspect that the chief part of the mischief is done through the blood. In the pyæmia which results from phlebitis, it is of no use to amputate after once the poisonous emboli have been shed from the inflamed vein into the blood. It is then too late, for the secondary abscesses will form, whether you remove the original focus or not. In the septicæmia from gangrene, however, the case is different. Here it seems to be easily possible for the blood to rid itself of the contamination. I well remember the case of a young soldier who was under treatment some years ago for a damaged foot, the consequence of a Canadian frost-bite. He had also obliteration of his femoral artery. My junior colleague at the time amputated through the tarsus. The stump never healed, and some time later I amputated in the upper third of the leg at a great distance from the disease, for the whole of his leg looked at the time as healthy as yours or mine. I went high up, because I knew that the femoral artery was occluded. The result, however, was, that the stump passed into gangrene, and very soon we had all the symptoms of the most severe form of that malady. The patient had frequent vomiting, a very rapid pulse, and was indeed in such a critical state when on the third day I decided to amputate again, that I did not dare to have him taken from his bed. The second amputation, performed high up in the thigh, saved his life. No ill symptoms occurred after it, and the stump healed well. I am inclined to believe that the usefulness of amputation in gangrene will become more widely appreciated, and that this measure will be resorted to, not exclusively in traumatic gangrene, but in all forms which are attended by serious constitutional symptoms. If a part be simply passing quietly into a mummified condition, and the patient's health not suffering, then there is no reason for interfering until you see where nature is going to make the separation. There is, indeed, no reason for interfering at all, for you must let nature finish the work. If you amputate near to the line of demarcation, your stump is almost certain to slough, and all that you must dare do in the way of help in such cases is just to saw through the bones when they are laid bare. The explanation of disappointment in amputation for gangrene, whethe

traumatic or otherwise, is, I feel sure, almost always from amputating too near to the disease. In all such cases, we ought always to go high up. If the foot be concerned, go above the knee; if the upper extremity, near to the shoulder. You must think rather of the patient's life than of the length of his stump. Adopting this rule, I have of late years more than once amputated for severe forms of senile gangrene with very excellent results.

CAN A MAN HAVE SYPHILIS TWICE?

The man whom we have just seen offers a remarkable example of the occurrence of a second chancre soon after the first. His second sore has been, as I have repeatedly demonstrated, characteristically indurated. He is quite candid, and makes no doubt that this sore was the result of contagion. Yet it is barely a year since he had his first chancre, and this was followed by an eruption, of which he had scarcely got clear when this second sore occurred. The case is proof that a man may have an indurated sore on the penis within a year of a former one, but it is not proof that he may have syphilis twice, for this patient has not as yet had any constitutional symptoms as the result of the last chancre. If, however, you ask me for an answer to the general question, Can a man have true complete syphilis twice? then I must reply clearly that he can. Such cases are rare—as rare, perhaps, as examples of second attacks of small-pox—but they do occur. I am at present attending a gentleman who has a terrible phagedenic chancre and rupial eruption and who unquestionably had complete syphilis, chancre, sore-throat and rash seven years ago. I have also a second case under care, very much milder, but illustrating exactly the same fact, with almost precisely similar dates. Second chancres are, however, far more common than second attacks of constitutional syphilis. Many of them are the result of fresh contagion, but seem to have no power to produce constitutional symptoms; but others are not from contagion at all, but form in connection with a taint still remaining from the first attack. It is a most important fact that indurations may form in the penis in every respect exactly like Hunterian chancres, not distinguishable in any way, and yet that they may be merely recurred sores and the products of constitutional taint. I have seen this over and over again; and M. Alfred Fournier, of the St. Louis Hospital, has written a very instructive paper on this form of sore. In the case of our patient it is obviously impossible to say, after the statement which I have just made, whether or not his present sore is the result of fresh contagion. It may be simply a relapse, or it may be a gumma. He, however, confesses to exposure; and, as the sore followed in due course, it is probably true that he was afresh inoculated. Second attacks of syphilis are sometimes, as in the case just mentioned, very severe. The same has, I believe, been occasionally noted in recurred attacks of variola. As a rule, however, they are mild, or even abortive. Third attacks may even occur; and so may, as we are told, third attacks of small-pox. We must explain such facts, I expect, by reference to individual peculiarity and idiosyncrasy, but it is important that they should be known. The belief that syphilis can occur but once in a lifetime is very widely spread amongst a certain class of the public. I have watched with amusement the change in expression in many a young gentleman's face when he got my reply to his smiling suggestion—"A man cannot, I suppose, have the disease a second time?"

TREATMENT OF LICHEN PSORIASIS (LICHEN RUBER).

We discharged recently from Sophia ward a middle-aged woman, who was the subject of lichen psoriasis. As I explained at her bed-side, I much prefer this name to either of the others by which this disease is known. As you know, it has been named lichen ruber by some, and lichen planus by others. It is, however, essentially a form of psoriasis. It occurs to the same class of subjects, is curable by precisely the same means, and, like psoriasis, is liable to relapse or to recur after considerable periods of health. The case which we have just been studying was of much interest in reference to the points to which I have adverted. Although it certainly was an example of the malady known as lichen ruber, yet in parts the eruption was not distinguishable from common psoriasis. It conformed to the lichen type in that it began in little papules, which occurred in groups; and, when a patch was formed, it was by the coalescence of a number of small papules. This mode of speaking is, perhaps, the chief feature of distinction between the malady in question and common psoriasis. The latter begins as a point, which, spreading at its edge, becomes a papule, which, again enlarged at its border, becomes a patch, possibly a very large one. Thus, psoriasis patches are always almost round, nummular, *i. e.*, like coins or rings, whilst those of lichen ruber are irregular, in lines or particles. In the case in question, most of the eruption was arranged in this manner, but some patches were not. On the elbow-tips and over the ulnæ were patches which, in mode of formation and in accumulation of scales, could not be distinguished from common psoriasis. Our treatment of the case was exactly that of the latter disease—tar externally, and arsenic internally. In nine cases out of ten, these remedies will cure lichen psoriasis pretty quickly. Some of you may remember a man whom we had under care six months, a splendid specimen of the disease. He had been sent to me by Mr. Forshall of Highgate. It was a first attack, and occurred to a healthy young man. I prescribed arsenic and tar. Through Mr. Forshall's kindness, I had an opportunity of seeing this man again last week. He told me that about six weeks' use of the remedies quite cured him, and that he has, during the last four months, remained without treatment quite well. In our last case, however, we have not been so fortunate. Our patient was of very peculiar nervous system, in fact almost insane, and the influence of arsenic appeared to be to excite her. Several times we had to suspend it on account of the irritable condition which it appeared to produce, and finally she was discharged from the hospital uncured, in consequence of the trouble which she gave in the ward. As a rule, I have found lichen psoriasis more easily influenced by treatment than common psoriasis. The cure is also usually more complete. The periods of immunity are also longer, often not less than several years; whereas psoriasis, however good the cure, usually relapses, I think, within the year.

CHRONIC SYNOVITIS, ARTHRITIS, OR STRUMA: IMPORTANCE OF THE DIAGNOSIS.

We have had lately a great many cases of synovitis of the knee-joint. I think you will have observed that, roughly, we may divide all the cases of chronic synovitis into two groups, those which are connected with stroma, and those which are of an arthritic nature, in the conventional sense of that

term. This division is of considerable practical value. Under the arthritic head, I comprise all that are associated with gout, rheumatism, or rheumatic gout, and all gonorrhœal rheumatism; and of all these, we may say that we expect them to get well. Sometimes there is stiffening, sometimes effusion is very long in disappearing; but still, in nearly all cases, in the end the patient again walks on the limb. It is very different with the strumous group. Here the tendency is to pulpy thickening of the synovial membrane, and to incurable conditions. It may be that destructive changes are warded off by long rest, but the patient is disabled, and the limb useless. We have half a dozen of this kind of knee now in our hands, not bad enough for amputation or excision, but still so bad as to prevent walking. In these cases, we are obliged to forbid walking, whereas in most of the arthritic cases, unless exercise causes pain, it may be permitted with impunity. A considerable variety of conditions is presented in this group, and especially is the arthritic process modified by the age of the patient. The older the patient, the more chronic and the less painful is rheumatism. You know that I am in the habit of insisting upon the importance of the patient's diathesis, even in cases of synovitis which is called traumatic. We admit a great many cases in which free synovial effusion has followed a sprain or contusion. In these cases, if the effusion lasts long, or if it is in excess of what its supposed cause will account for, you must suspect the arthritic diathesis. The patient is rheumatic or gouty. We have had numberless illustrations of this. Sometimes it is difficult to get at the exact facts. In the case of a man who has just left us, the synovitis persisted in spite of treatment, and relapsed after an apparent cure. It appeared likely that the case might end as *hydrops articuli*. I had repeatedly taxed the man with being gouty, but we could get but little evidence. Last week, his employer called on me; I then learned that the man had been for thirty years employed as a bottler in wine vaults, and that his habits of free wine drinking had often nearly cost him his place. I was told that no objection was made to a bottler drinking as much wine as was good for him, and that complaint only resulted when so much was taken as to interfere with his efficiency as a workman. It is not easy to imagine a position more likely to produce a gouty state of system. We have since let this patient leave the hospital, supplied with a knee-cap. He still has some fluid in the joint, but he can walk without any pain. Exercise, which would of course be most injurious if the disease were strumous, will not hurt him.—*Brit. Med. Jour.*

MECHANISM OF FORCEPS LABOR AND THE PRINCIPLES OF FORCEPS CONSTRUCTION.

Dr. W. H. Studley, of New York, advances the view, in the *American Journal of the Medical Sciences* for January, 1882, that the doctrine generally taught that the foetal head enters the superior strait in a direction corresponding to a line drawn perpendicular to its plane is erroneous; and the evil influence which this view has exerted on the manipulation of the obstetric forceps has resulted often in most disastrous consequences. Dr. Studley believes that the head does not enter the superior strait in a line with its axis, but in one that cuts it at quite an angle, and that the general pelvic axis is a line departing from the axis of the superior strait in a posterior direction in-

stead of an anterior one, and that therefore the practice hitherto followed of varying the handles pubic-wards from the moment the head enters the pelvic excavation until its exit, is one which not only materially frustrates the accoucheur's efforts, but endangers the mother and child. According to Dr. Studley, traction should be made in a direction fifteen to twenty degrees posterior to the axis of the superior strait until the pelvic floor is reached, and in nowise should the tractions be varied in a direction anterior to that axis until extension of the head shows that the pelvic floor has been reached. This part of the forceps-labor, Dr. Studley thinks, is attended with as many if not more difficulties and dangers than that which brings the head from the superior strait to the bony pelvic floor; and, singular as it may seem, he regards these dangers and difficulties as lying in an exactly opposite direction to that usually urged by the books and teachers. The anxiety hitherto manifested has been in regard to the danger threatening the integrity of the perineum by making tractions in the perineal direction. To avoid this, a strenuous warning has been urged to elevate the handles too early rather than too late; and the result has been in but too many instances that the head has been turned out by a prying lever process, inflicting not only perineal laceration—just the danger sought to be avoided—but contused wounds of the pubic arcade which has served as a fulcrum for the forceps shanks, and cuts of the vagina, and in some instances of the ischio and pubio-coccygeus muscles, by the posterior end edges of the blades. If the forceps have well-fitting blades, and the head is snugly held by them, it is easy to see how, by such a manœuvre, the top of the occiput is made to hitch under and against the pubic arch as a pivotal point, and the forehead and the face to forcibly sweep out by a long radius against all of the soft parts anterior to the coccyx.

Dr. Studley also describes an obstetric forceps made after his own design, which is somewhat similar to Tarnier's in that he has borrowed from Tarnier the perineal curve and binding bar, yet their action is based on different principles.

VESICAL CALCULI WITH NUCLEI OF BONE.

In the *American Journal of the Medical Sciences* for Oct. 1880, Dr. J. M. Banister, Assistant Surgeon U. S. A., reported the successful removal of a calculus and necrosed bone by the operation of lateral lithotomy from the bladder of an Indian scout, nineteen months after the reception of a gunshot wound. In the January number for 1882 of the same Journal, Dr. Bannister describes the exceedingly interesting pathological specimens removed from the bladder after the death of the patient.

The calculi discovered in the vesical cavity proved of the greatest pathological interest. The larger of the two, evidently, from its shape and size, the one left encysted at the lithotomy in 1880, was ovoidal in shape and weighed 244 grains Troy; its surface was thickly coated with crystals of ammonio-magnesian phosphate. Upon sawing through this calculus, there was found a well-marked *splinter of bone playing the part of a nucleus*, while the mass of the stone was composed of phosphatic matter arranged in concentric layers. The smaller body, more irregular in shape, was also coated with crystals of ammonio-magnesian phosphate, and weighed 77½ grains Troy. Its mass was found to consist chiefly of necrosed bone, around which was its phosphatic envel-

ope. It is probable that the nucleus of the larger stone had the following origin. The wounded anterior wall of the bladder having, in consequence of the inflammatory process, become adherent to the injured pubic bone, a splinter, chipped or possibly exfoliated from the bone in question, remained in the wound and served as a nucleus for the phosphatic deposit. This stone had evidently been liberated from its sac by the ulcerative process, and had dropped into the bladder fundus some months before the patient's death.

In the case of the smaller formation, the origin of the nucleus cannot be so definitely traced. It could not possibly have remained in the cavity of the bladder at the conclusion of the lithotomy, *a year before*, as every precaution was then taken to avoid such an oversight, and at the time of the patient's departure from the hospital he was suffering from no symptoms referable to such a cause. It is very probable, therefore, that, like the bone fragments removed at the lithotomy, it made its way into the bladder by ulcerative absorption, having in the first instance been splintered from the sacrum and driven by the force of the ball into the bladder-wall; that it was not a *recent exfoliation* was proved by the absence of signs of present necrosis affecting the pelvic bones, as discovered at the *autopsy*, and by the non-existence of fistulous tracks.

This case is the fourth instance of calculous formation about bone fragments in cases of gunshot wound of the bladder reported in the United States; while only sixteen cases are on record in the surgical histories of all countries.

THE INFLUENCE OF METEOROLOGICAL CONDITION UPON THE CAUSATIONS OF CROUPOUS PNEUMONIA.

It is a well-established fact that the weather, or, to speak more definitely, certain states in the meteorological condition of the atmosphere, have a marked influence upon some of the organic functions of the human body. That this influence is able to cause disease is maintained by some, admitted by a few more, and denied by most authorities.

For some time past Dr. August Seibert, of New York, has been collecting records of the cases of croupous pneumonia brought to the department for diseases of children in the German Dispensary of New York City, with particular reference to the meteorological conditions under which they have developed. His results, published in the *American Journal of the Medical Sciences* for Jan. 1882, show that in 78 per cent. the origin of the disease coincided with a marked fall of the barometer; in 84 per cent. with a minimum temperature of below 50° F., in 50 per cent. with northerly winds; and in 33½ per cent. with north-westerly winds; in 67 per cent. the velocity of the wind was 15 miles per hour; and these conditions, which seem to favor the development of pneumonia, were accompanied by a condition of high humidity of the atmosphere. His studies are drawn from 600 cases, and his conclusions that the above conditions favor the causation of pneumonia are worthy of consideration.

HEART-CLOT AS A FATAL COMPLICATION IN THE ACUTE FEVERS OF CHILDHOOD.

It has been the experience of most practitioners whose practice has brought them in contact with the

acute fevers of childhood, especially scarlet fever and diphtheria, that a frequent cause of death is heart-clot, or, in other words, that such patients are prone to fibrinous coagulations, either in the form of embolism or thrombosis, which may be an immediate or remote cause of death. In the January number of the *American Journal of the Medical Sciences* Dr. John M. Keating, Lecturer on the Diseases of Children in the University of Pennsylvania, publishes a thoughtful paper on this subject, with particular reference to the diagnosis of the condition and the treatment best calculated to avert this dangerous complication. The importance of the early recognition of the symptoms cannot be overestimated, since the treatment likely to obviate this tendency to formation of heart-clot must be used at the onset of the disease; for, as far as we now know, a heart-clot once formed cannot be reabsorbed.

PULSATING TUMOR OF THE HEAD OF THE TIBIA TREATED BY COMPRESSION OF THE FEMORAL ARTERY.

In the *American Journal of the Medical Sciences* for January, 1882, Dr. J. D. Smith, of Friendship, Tenn., records the case of a pulsating tumor of the head of the tibia in a young man twenty-four years of age, which was treated by compression of the femoral artery with the result of an entire disappearance of the tumor. This success was, however, merely transitory, and eight days afterwards pulsation was again noted, and the leg was subsequently amputated at the knee. With the exception of some hemorrhage on the thirteenth day the patient made a rapid recovery without any bad symptoms.

DISPOSING OF SEWAGE.

In the current number of *The Sanitarian* Dr. H. G. Beyer, United States Navy, describes the method of treating excreta with Suvern's deodorizer in one of the Leipzig hospitals. This deodorizer is a pasty mass with the following composition: In 100 parts there were water, 61.5; lime (CaO), 30.5; chloride of magnesia (MgCl₂), 1.5; tar, 1.2; foreign matter, 5.3. In manufacturing the deodorant, crude lime and magnesia being used, it is from this source that a great deal of foreign matter is introduced into it. A certain amount of the mass is dissolved in water and poured into the closets, where it is retained until the process of disinfection is completed. The resulting mixture is then allowed to run through the closet pipes into the drain-pipes, and thence into a specially prepared reservoir where one part of it is precipitated, and the clear supernatant liquid is then run off into the sewers. How thorough the action of this deodorant is, says Dr. Beyer, was seen by a specimen of the liquid taken out of the reservoir and reserved for analysis. This liquid was almost colorless, had only a faint smell of tar, and did not seem to decompose, even after long standing. It contained 0.353 parts of solid residue in one litre, consisting, for the most part, of chloride of ammonium and lime, and having an alkaline reaction. The precipitate is finally dried and carted away.

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EDITORIAL.

ENDOWMENT OF HARVARD MEDICAL SCHOOL.

Let those far sighted workers who are laboring for educational progress and more especially for progress in the methods of medical teaching take heart and renew their attacks on public apathy, professional indifference, and the unappreciative blindness of students to their best interests. For a chord has been sounded in a sister city, which vibrates through the medical world and whose every echo should gladden the hearts of those who would solve the problem of better medical education.

We allude to the efforts in progress looking to the endowment of the Harvard Medical School; efforts which are not unlikely to be rewarded with success, and if so, will indicate to other schools the path by which the evils of superficial teaching and its sequelæ will be avoided without the sacrifice of financial independence.

In a letter published in a recent issue of the *Boston Medical and Surgical Journal* Dr. Oliver Wendell Holmes very justly says:

"A school which depends for its existence on the number of its students cannot be expected to commit suicide in order to satisfy an ideal demand for perfection. Any institution which is essentially dependent on the number of paying students it can draw must be tempted to sacrifice its higher aims to popularity. No

high standard can be reached under such circumstances, and the only way to ensure the independent action of a school which aims at teaching the whole country by example, is to endow its professorships, so that the very best and highest grade of instruction, and not that which is popular because it is easy and superficial, may always be given from its chairs, whether the classes be large or small. A small number of thoroughly accomplished medical graduates, their knowledge based on sound scientific acquirements, and made practical by assiduous clinical observation and teaching, will be worth more to the country than twice or thrice the number of half-taught, hastily-taught, practitioners. A series of such classes will, in the course of a single generation, elevate the whole professional standard, as they go forth, year after year, missionaries in the cause of health, soldiers and, if need be, martyrs, in the unending battle with disease and its causes.

"The Old World motto is *noblesse oblige*. Our generous men of wealth are changing the phrase to *richesse oblige*, and thus becoming recognized as our untitled nobility. It is only necessary to show them in what way their beneficence will do the most extended and the most lasting good. The foundation of five or six professorships will carry the names of their founders down to a remote posterity and call them to honored remembrance when the stately buildings around us are replaced by other and still nobler structures."

The aims of the Harvard Medical School, as expressed in a late editorial in the *Boston Advertiser*, are worthy of emulation by other schools. "It has established a preliminary examination for admission into the school, thus excluding the ignorant and wholly untrained young men who would begin the arduous studies of a medical course without the knowledge and mental discipline which are necessary to fit them to profit by such instruction as is given in a medical school like that of our university. It has organized a regularly systematic and progressive course of instruction, in place of the mixed courses which have long been tolerated in spite of the general conviction and confession of their unphilosophical character and unsatisfactory unpractical results. It has multiplied its courses of instruction so as to include the various important specialties which have developed of late years into separate professional branches. It has secured the co-operation of numerous clinical teachers in different public institutions, so that many of the advantages of the great foreign hospitals can be obtained without going abroad to find them; it attempts to establish a regular course of four years for all its students; it is building a new and more suitable home for the school; it hopes to retain its present home for clinical purposes; it desires to attract a larger number of students, and it wishes to reduce their expenses; it entertains the honorable and laudable ambition of being the foremost medical school of the country; and it proposes to make such further advance in the thoroughness and completeness of the instruction it can supply, that it will be no longer necessary for the medical graduate of the United States to continue and supplement his studies in foreign lands. All this can be accomplished by the endowment of professorships and by increasing the permanent fund of the school."

If a medical school can be endowed in Boston, why not in New York? Certainly the advantages of such an institution can not be questioned. Are our men of wealth less interested than those of Boston in providing her with thoroughly educated medical men, and hence in building up not only a city which shall in its sanitary

conditions be the most perfect possible, but a race of men and women of greater physical and mental and moral stamina.

We believe if the possibility, the certain practicability of accomplishing these beneficent results could be brought home to our many public-spirited men the capital to consummate the establishment of such an institution as proposed would be forthcoming and the present generation would see such improvement in the quality of our medical men as would put to shame the hosts of incompetent meddlers who now profane the name of medicine and undermine public confidence in the genuineness of its beneficent ministrations.

THE SMALL-POX SCARE.

It is no doubt wise to magnify the dangers of so dread a scourge as small-pox in order that every precaution may be taken against its spread.

It is only by exciting the fears of the masses that general vaccination and hence general protection is made possible.

Divested, however, of the veil that ignorance enshrouds it in let us enquire first as to the existence of special cause for alarm, and second as to the precautions which should be adopted to stamp out the disease, precautions which perhaps are familiar to most of our readers, but which from their importance will bear repetition.

We find then on careful inquiry, that there always exists more or less small-pox among us, that it is, in other words, endemic. As regards New York, the disease has been almost stamped out for the past three years. The cases now reported and about which public alarm has been awakened are in number very little in excess of the average yearly number of cases previous to three years ago.

This statement expresses about all that could be gleaned from a careful study of elaborately prepared statistics. We may conclude then that there is no special cause for alarm and that small-pox can scarcely as yet be called epidemic at the present time.

There are however many causes operating which tend to justify the alarm felt by those who anticipate a veritable scourge.

Among these we may mention the singular prejudices (vouched for by an eminent Health Board official) which induce the Bohemian portion of our population to refuse vaccination altogether and the German population to refuse to submit to it except in certain months of the spring.

In this connection the question arises whether compulsory vaccination would not be advisable, a system such as is in operation in England. It is believed, however, by those who have studied this question that in New York at least, the persuasive system, in connection with systematic solicitation by health officials, is the better one.

We are told by a prominent health official that concealed cases—true cases of small-pox which are wrongly diagnosed as other fevers—the laxity which prevails among physicians in regard to examining themselves, the sore following vaccination, instead of trusting to the unreliable testimony of mothers and patients (by which means many supposed to be protected contract the disease), are all prolific factors in spreading the disease, and are therefore to be carefully guarded against.

As to the precautions to be adopted to stamp out the disease other than vaccination, we quote the following from the *National Board of Health Bulletin*:

"It has been recognized as a part of the history of small-pox that it occurs at certain intervals, at periods not absolutely accurate or well defined, indeed, but sufficiently distinct to attract attention. It is probable that this periodicity is due to changes taking place in the population more than to any inherent law of the disease. During the prevalence of an epidemic of small-pox, almost every one, under the influence of fear or by force of municipal law, is sooner or later subjected to vaccination, and upon many of those previously vaccinated the operation is repeated. Only the unprotected are attacked, and the epidemic dies out at length for want of fuel. A period of rest ensues, during which a certain proportion of adults who have been vaccinated in youth acquire renewed susceptibility, and others have been gradually but continuously added to the population by birth or immigration who have never had the disease nor been vaccinated. The fertility of the soil is renewed, ready for the reception and propagation of the germs whenever accidentally introduced. It is a conceded fact in the history of vaccination that, in very many cases, the immunity it affords is only limited, or for a time. Perfect while it lasts—as perfect, it is believed, as a previous attack of small-pox itself—the duration of the insusceptibility varies with different individuals. Though in some instances it is unquestionably permanent through life, it is safe to say that revaccination should always be tried after the expiration of eight or ten years, or, otherwise, whenever during the prevalence of small-pox it is desirable to be assured of protection. By the observance of this rule, and the general adoption of primary vaccination in youth, it is equally safe to say that one of the most loathsome diseases which afflict mankind may be effectually robbed of its terrors.

PRECAUTIONS AGAINST THE SPREADING OF SMALL-POX.

1. *Perfect isolation of the sick.* In cities, or where a suitable hospital has been provided, this is best secured by removal of the sick. In country districts the end may be attained by allowing only nurses and attendants to visit the sick-room, and these to see no other persons during the continuance of their services as such, without having changed their clothes or subjecting themselves to thorough disinfection.

2. All persons exposed to the contagion should be *immediately revaccinated, even though the experiment may have been unsuccessfully tried only a short time previously.* Possibly the vaccination may have been imperfect, or the virus inert.

3. After recovery from small-pox, the patient should not be permitted to go out, or to communicate with other persons, until the crusts have fallen off, and his clothing has been renewed or disinfected.

4. After death from small-pox, the beds and bed-clothes, carpets, curtains and other articles in the room should be destroyed or disinfected by the method to be hereafter directed.

Inasmuch as the bodies of those dead by small-pox are still infectious, they should be disinfected, and public funerals should be avoided.

5. *Cleanliness in and about the dwelling,* and ventilation of the latter, afford efficient aids towards the success of other measures to prevent the spread of this and other contagious diseases.

DISINFECTION OF THE ARTICLES ABOUT THE PATIENT.

Disinfect the sheets, towels, handkerchiefs, blankets and other articles used about the patient, as soon as removed, by immersing them in a vessel or tub contain-

ing half a pound of sulphate of zinc (white vitriol), or half an ounce of chloride of zinc, or four ounces of the sulphate of zinc combined with two ounces of common salt to each gallon of boiling water. Boil for half an hour. The articles should be placed in the solution before being removed from the room. The discharges from the patient should be received in a vessel containing one of the above solutions, or a solution of half a pound of sulphate of iron (copperas) in one quart of water. The bodies of the dead may be disinfected by washing them with the solution of zinc and salt of double strength, and wrapping them in a sheet saturated with the same solution, or the zinc and carbolic acid solution mentioned above. It is advised, also, to sprinkle the floor with a solution of carbolic acid (one ounce) and sulphate of zinc (six ounces) to one gallon of water. Neither the sulphate of zinc solutions nor that of the chloride of zinc will stain or injure ordinary articles of clothing. These may, therefore, be used for

THE DISINFECTION OF THE CLOTHING.

Clothing which will not admit of being boiled, and which is too valuable to destroy, may be sprinkled with one of the last-named solutions, or the latter may be applied by means of a sponge, the articles themselves being subsequently exposed to the open air.

Other clothing, as silks, furs, woolen goods, and the like, to which the above means are not applicable, should be suspended in the room during its disinfection by the method immediately to be explained, and afterwards exposed to the open air. Furniture, pillows, mattresses, window-curtains, and carpets should at the same time be exposed to the process. It is advised that the carpets should be fumigated on the floor, and the mattresses ripped open for more thorough exposure.

DISENFECTION OF THE HOUSE OR INFECTED ROOM.

For this purpose sulphur is used. The rule is to take roll-sulphur broken into small pieces, place it on a metallic dish resting upon bricks set in a tub containing water, or upon supports laid across the tub, pour a little alcohol upon the sulphur, and ignite it. Then immediately leave the room. Let the doors and windows be tightly closed, and kept so for half a day. Then ventilate the apartment for several hours. One pound of sulphur is advised for one thousand feet of cubic air-space. The furniture and paint about the room may be subsequently washed and the walls whitened.

Other substances have been advised as disinfectants for the various purposes above alluded to, but those mentioned are cheap, effective, and within reach of all.

We learn also that the following resolutions have been adopted by the Steam Ship Companies carrying emigrants, viz.

First.—That agents throughout Europe be instructed to inform intending passengers that unless they are vaccinated before leaving home they will be subject to vaccination on the journey or to detention at Quarantine for fourteen days after arrival.

Second.—To endeavor to secure the vaccination by the authorities or by medical officers employed by the companies at the port of departure of such passengers as may have neglected previous protection.

Third.—To require the vaccination on board within twenty-four hours after leaving port of such passengers as may have escaped or refused the foregoing opportunities.

Fourth.—To provide hospital accommodation on

board, absolutely isolated from the quarters occupied by the passengers or crew.

Fifth.—To instruct the medical officer of the ship to furnish each passenger sufficiently protected by previous vaccination a card on which shall be written or printed "Protected," and signed by such medical officer; as all passengers not having such a certificate will be considered and treated as exposed or unprotected.

The Health Board have an efficient system of inspection. They are not hampered by lack of appropriation, as a special fund has been provided for an emergency like the present. Public alarm is awakened. It only remains for physicians themselves to be careful to insure thorough vaccination, to report suspected cases, and it would seem that we are in a condition to guard against any further spread of the disease.

BOOK NOTICES.

An Index of Surgery, being a concise classification of the main facts and theories of Surgery, for the use of Senior Students and others. By C. B. Keetley, F. R. C. S., Senior Assistant Surgeon to the West London Hospital, Surgeon to the Surgical Aid Society, etc. Published by Birmingham and Co. New York, 1882, 8vo pp. 208. Cloth. Price, \$1.00.

There is perhaps no more conspicuous indication of the literary necessities of the medical profession now-a-days than the attempts being made to condense medical and surgical knowledge and to present it in the briefest form consistent with clearness and accuracy.

The majority of recent medical writers claim to write for the special edification of students and busy practitioners and would have us believe that their productions furnish the medical pabulum "par excellence" for all who want to assimilate without digesting, who have neither time nor inclination to separate the wheat of practical suggestion and utilizable facts from the chaff of theoretical discussion and confusing verbosity. They prepare, as it were, artificially digested literary food.

No one but a conscientious writer who has made the attempt to do this can appreciate the difficulty of rightly performing such a task, and while many fail, but few succeed.

All honor then to those authors who have done this work well, whose literary discernment has enabled them to prepare works that are brief without being incomplete, which are terse and practical and at the same time comprehensive and readable.

Among this rare class of really valuable books we must concede "Keetley's Index of Surgery" a place.

The author very modestly states in his preface that his book "is intended to be read by the senior student shortly before he goes in for his final examination and after he has carefully studied a complete text-book of surgery. We believe, however, that it is equally well adapted for the perusal and study and reference of all who want a knowledge of the most generally accepted as well as the most novel methods of surgical treatment.

The plan of the book is, in general, to give briefly the definition, varieties, causes, symptoms, terminations, prognosis, diagnosis and treatment of surgical diseases, condensed from the views of eminent sur-

geons. It is arranged, we think wisely, in purely alphabetical form.

In reading over the text of the book one sees little to criticise, all tendency to critical discussion, so difficult to exclude by most writers, has been scrupulously avoided, and the gain thereby made in usefulness as a book of reference is apparent.

As we overheard a distinguished surgeon emphatically remark the other day, while discussing the needs of the mass of surgeons, "what they want to know is what to *do* in a surgical emergency, not how to theorize," and it is by such works as the present that students and practitioners alike are enabled to give form to knowledge which is nebulous in their minds, and to be prepared to cope with the emergencies of practice with skill and decision.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, JAN. 19TH, 1882.

The President, Dr. Fordyce Barker, presided. The minutes of the previous meeting were read and approved.

Treasurer's report was read and accepted.

The Statistical Secretary reported the death of Dr. John W. Draper and Dr. Robert A. Barry. Dr. Barker appointed Dr. Alfred C. Post to read a memoir of Dr. Draper.

A portrait of Dr. Detmold was presented to the Academy, and Drs. Willard Parker and L. A. Sayre paid a glowing tribute to Dr. Detmold, lauding his social and professional qualities.

Dr. Parker said: I take great pleasure on the occasion of the presentation of Dr. Detmold's picture, in recalling some of the events of his professional career. He came to this city in 1827, and in 1829, on my arrival here, I received from him my first lesson in orthopædic surgery. I have since been associated with him in many ways, and have always found him an able and scientific teacher, in every respect loyal to his profession and endowed with rare qualities of head and heart. He took an active part in the organization of the Academy of Medicine, and I am glad to see his portrait here, for in honoring Dr. Detmold the Academy honors itself. He has from its beginning been an active member of the Society for the Relief of Physicians' Widows and Orphans, and in the management of its affairs has demonstrated his sound sense and business ability as a financier, ability which is rare indeed among professional men. He is a man of sharp-cut convictions, who does not hesitate to express his opinions. He is a faithful devoted citizen, and my earnest hope is that he may long be spared to his friends, to society, to the profession.

Dr. Sayre said he could but re-echo what Dr. Parker had said. He was personally under great obligations to Dr. Detmold, who might be called the father of orthopædic surgery, and had always admired in Dr. Detmold his truthfulness, honor and boldness.

Dr. Fordyce Barker, in behalf of the Academy, gracefully thanked the donor of the picture, and spoke in glowing terms of Dr. Detmold.

Dr. Barker then announced that the paper to be read before the Academy at their next meeting was in relation to imperfect plumbing, and he would ask the Academy in view of the universal interest of the paper to suspend the by-law forbidding the presence of reporters of the secular press. This was accordingly done.

Dr. Barker then introduced Dr. S. W. Gross, of Philadelphia, who read the paper of the evening, entitled

"THE INFLUENCE OF OPERATIONS UPON THE PROLONGATION OF LIFE AND PERMANENT RECOVERY IN CARCINOMA OF THE BREAST."

Dr. Gross said that the conviction was rapidly gaining ground that carcinoma of the breast is curable. He cited many well-known authorities who now hold this view of the question, among others Virchow, Nussbaum, Volkmann, Gunn, Gross, Parker and Geo. A. Peters.

In view of the fatal progress of carcinoma, it was important to determine the answers to three important questions:

First—Does the resort to the knife prevent invasion of the tissues adjacent to the glandular structure?

Second—Does it prevent infection of the associated lymphatic glands?

Third—Does the knife prevent the formation of metastatic tumors?

In answering these questions Dr. Gross cited a variety of statistics gleaned from the study of many cases which pointed to only one conclusion, and that was that in a large percentage of cases these questions could be answered affirmatively, and not only could life be prolonged, but permanent recovery effected. Statistics proved that extirpation added one year to the life of the patient.

As to permanent recovery, Volkmann stated that if two years passed after extirpation without recurrence, permanent recovery was probable; if three years passed, it was almost certain.

He stated that from his experience and study of the question he believed that recurrent tumors should be freely extirpated. Glandular implication was not a bar to operation, since the gland enlargement might be due to simple hyperplasia, and not carcinomatous degeneration. Absence of glandular infection did not prove that metastatic deposits had not taken place. In carcinoma of the breast the mamma should be amputated, the skin dissected off the pectoral muscle, the tissues seared with the hot iron, the axillary space opened and enlarged glands searched for and removed; in fine, the operation should be thoroughly done.

By this means taking cases as they came for early and late operation one in fifteen had been cured, and mostly better results might be anticipated when women were brought to believe that carcinoma of the breast was curable by early operation.

As for partial operations they were worthless and should be discarded. Death frequently occurred after operation from bad management of the axillary wound. In future he believed that the mortality should not reach 10 per cent.

In conclusion he would state that he had arrived at the following conclusions:—1st Surgical interference tends to retard the progress of the disease. 2nd, Local reproduction of the disease does not militate against permanent recovery. 3rd. After three years the patient might be considered safe from general and local reproduction of the disease.

4th. The risk of life involved by the operation for extirpation is more than compensated for by the benefits resulting.

5th. Operation should be done early and thoroughly after the manner described.

In the discussion which followed Drs. Geo. A. Peters, R. F. Weir, Satterthwaite, Sayre, Barker,

Hamilton, Willard Parker, A. C. Post, Castle and Austin Flint took part.

Dr. George A. Peters said: When I commenced my surgical experience here thirty years ago we were taught that operation in these cases hastened rather than retarded death.

My experience has been in harmony with that of Prof. Gross. I agree with him entirely in all the deductions he has drawn. I recall three cases of carcinoma of the breast, in point. The first I operated upon 18 years ago, removing the mamma, the covering of the pectoral muscle, and the infected glands; there has since been no return of the disease. In the second and third cases, operated upon over ten years ago, the patients have since enjoyed good health. I have now under my care a lady of 50, who was operated upon 6 years ago. There was recurrence near the cicatrix and I operated again, and hope to add her to my successful cases. I believe with Dr. Gross in careful and thorough excision, and am careful in operating not to break up the tissues by handling them too freely.

Dr. R. F. Weir said he had been surprised at the mass of statistics presented by the author of the paper in so short a time. It was truly *multum in parvo*.

There was one point, viz., that of mortality. He had been much surprised at the great mortality attendant upon operation as stated by Prof. Gross. In his own cases, between 60 and 70, there had been only one death from operation since the practice of Listerism. In doubtful cases he was accustomed to cut down to the veins and see them before enucleating the glands.

Then as to absolute curability, even with the improvements in operating suggested, he thought, after all, the greatest hope was to prolong life, as it could not be reasonably expected to effect a cure.

He cited cases met with in his own practice where, after immunity from the disease after operation, in one case for 17 years, in another for 12 years, the trouble again recurred. While these cases did not invalidate Volkmann's rule, which Prof. Gross had also adopted, they nevertheless induced him to hesitate before pronouncing against recurrence.

Another point was as to the method of operating. He understood Dr. Gross to claim that ablation of the breast, removal of the skin and underlying tissues over the pectoral muscle, opening of the axillary space etc., should be done in every instance. He did not think this was done as a rule nor did he regard it as advisable in all cases. The paper was an admirable one and he had listened to it with great pleasure.

Dr. T. E. Satterthwaite said he wished only in this connection to present a few facts drawn from the study of 86 cases of carcinoma of the breast which had been under his observation during the last ten years. In June 1880 he had gathered a complete record of 36 cases. He thought the profession owed to Dr. Gross a debt of gratitude for his study of diseases of the breast and his efforts to inculcate right views on this subject.

There were three forms of cancer attacking the breast, scirrhus, encephaloid and colloid. Of these the first variety was most frequent and most easily recognized. (The speaker here gave the pathological distinction between these different varieties of cancer) he then continued: He recalled two cases of encephaloid in which he had removed the tumors eight years ago and the patients had since been in good health. In another case operated upon six years ago there had been no recurrence of the disease.

As to the age of patients with cancer of the breast he had met with a case in a woman of 27. He believed Prof. Gross stated 28 to be the minimum age for the appearance of the disease.

In one-third of the cases he had seen traumatism had been the exciting cause. As to the mortality of operation here in New York it was only 3 per cent.

In regard to cure in 31 cases he had observed 3 were permanently cured, or a little less than 10 per cent. In these cases there had been immunity from the disease for ten, six and seven years. He regarded the case alluded to by Dr. Weir as recurring after 17 years immunity as one of unusual retardation, the whole duration of the case had been 25 years while the average duration was 25 months. As to early operation and its influence on longevity he had not yet been able to solve this question. In the cases he had alluded to as cured two had been operated upon early, the other after five years. He believed that these cases whose duration was so long were explicable by regarding the disease as originally benign. It was desirable in his opinion to operate early and as often as recurrence took place.

Dr. Fordyce Barker said that there was one point in connection with this subject that had been suggested to him by his observation of such cases, which he had never seen any allusion to in books or otherwise, and that was as to the influence of age on the probable recurrence of the disease. He had noticed that the rule was the older the patient the longer the interval after operation before recurrence, and the converse was true.

Dr. L. A. Sayre said that he like Dr. Peters, had been taught in his early professional life that cancer of the breast was like corn, the more you hoed round it the faster it grew. For the last 20 or 30 years however he had practiced extirpation and after operation he was accustomed to do as Atlee had advised, namely, give his patient arsenic continuously. By this method he had had cases in which the disease had not recurred for twenty years. The deductions drawn by the author of the paper agreed with his own experience.

Dr. Frank H. Hamilton, in response to a call from the chair, said that the pivotal point in the paper read by Dr. Gross was in the question, *is cancer primarily a local or a constitutional malady*. If it is local, in most cases, as claimed by the essayist, then there can be no question as to the propriety of cutting it out as soon as possible, and before the constitution has become affected.

He would remind Dr. Gross that his distinguished father, in a paper read before the American Medical Association in 1855, maintained the constitutional origin of cancer in most cases; indeed, he expressed the opinion that it was constitutional in forty-nine cases out of fifty; and he ventured a prediction that the opinions then entertained by Sir Everard Home, Bennett, Lisfranc and many others that cancer was primarily local, would not be sustained by future observers. Dr. Hamilton agreed fully with the essayist as to the local character of cancer at the period of its origin; but he was surprised at his temerity in venturing to differ with his father, whose opinions in matters of surgery had properly led or greatly influenced the opinions of American Surgeons for many years. He would like to know whether his father had charged his views on the subject.

Dr. Satterthwaite's definition of cancer was rather narrow, Dr. Hamilton thought, including only scirrhus, encephaloid and colloid. He had omitted epithelioma, which had too many points in common with

the other forms named by Dr. Satterthwaite, to be properly excluded.

That cancer was in most cases primarily local there could be no doubt. When Dr. Satterthwaite admits that tumors originally benign may become malignant; he accepts of the theory of a local origin.

There are also many other proofs of the correctness of the doctrines held by the essayist. A farmer exposed to the cold of our northern winters, suffered every winter from a "crack" in the centre of his lower lip. After many recurrences of this sort he came to Dr. H. with a permanent and excavating ulceration of the lower lip, which was pronounced epithelioma, and excised. Another man rests his pipe upon his lip at one point for many years; the skin becomes thickened at this point, peels off and an epithelioma is established; or he carries a quid of tobacco in his mouth constantly for a long time, resting always at the same point, until at length a cancer is developed. Dr. H. had seen two examples of this kind. Even in the case of scirrhus of the breast or encephaloma of the uterus, the evidence is in general scarcely less conclusive that they are, in most cases, of local and not constitutional origin. The disease attacks the breast and the uterus, most often at the period of life when their functions have ceased, and they are going into decay; There is no general or constitutional decay; the patient may be in all other respects as well as usual, but these organs are in a condition to develop malignant disease, and they do so.

The results of his own experience in excisions of breasts had fully sustained this doctrine, a certain proportion having made a permanent recovery.

The entire breast should always be removed; and in case the disease has made considerable progress its atmosphere should be included; and in cases which have progressed farther the disease may be followed more or less into the neighboring structures, with the possibility of delaying at least its fatal progress.

Dr. A. C. Post said that from the time he had first begun to perform surgical operations he had been in favor of operating early and following it up by other operations in cancer of the breast. His attention had been called to a case in which recurrence after operation took place nine times in ten years, and the patient lived ten years after the last operation in good health. It was of great importance to operate before the lymphatics were involved, for partial operation after the glands were involved was useless. If the operation were to be done at all it should be thoroughly done. In regard to the question suggested by Dr. Barker, Dr. Post thought he had seen it stated in print that cancer-like tubercle is of slower growth in maturer years.

Dr. Willard Parker said that he had been greatly surprised at the vast amount of labor Professor Gross had taken in the elaboration of his work on tumors. He had listened to the paper just read, containing such a wealth of statistics, with pleasure. His own conviction was, in regard to tumors of the breast, that some cases should be let alone, while others demanded operative interference.

With respect to cure he thought it should be ascertained what the cause of cancer was. He had a record with a pretty full account of four or five hundred cases. He related a case in which cancerous degeneration had gone on for a long time until the breast was sloughing and emitted a nauseating stench, he had operated, though not expecting recovery; this however took place. He had seen several sloughing cases recover.

The great question is as to whether the disease is hereditary or not; what gives rise to it? It is never a primary disease; it never comes from a physiological state. He believed traumatism to be the exciting cause, but what cause antedated that?

Dr. Castle related a case of extirpation of the breast in which the wound healed with the exception of a spot about the size of a nutmeg. He had put the patient on arsenic, giving doses of 10 to 15 minims of Fowler's solution t. i. d., producing the characteristic poisonous effects of the drug, and in three months the entire wound had healed. He believed life was prolonged by operation and by the physiological action of arsenic.

Dr. Flint remarked that he recalled a patient he had seen 30 years ago, who had all the gross appearances of scirrhus of the breast. Operation was resorted to, and the woman lived twenty years afterward with no recurrence of the disease. He also remembered a case in which the growth returned twice after original extirpation, but being removed for the third time had remained since then, more than ten years, in good health.

Dr. Fordyce Barker said that until a few years ago the weight of classical opinion had been against operative interference in these cases. Views had now changed, and there was a possibility in a good percentage of cases to prevent recurrence by extirpation. He related a case which showed that under the most unfavorable circumstances the disease may not recur after extirpation. He recalled a case operated upon twenty-one years ago, and the patient was now in good health. He was accustomed always to use arsenic in the treatment of malignant disease.

Dr. Gross closed the discussion, after which, on motion of Dr. Austin Flint, seconded by L. A. Sayre, a vote of thanks was tendered Dr. Gross. The academy then adjourned.

LECTURES.

PULMONARY HEMORRHAGE.

A CLINICAL LECTURE.

BY

ALONZO CLARK, M. D.,

Professor Practice of Medicine College of Physicians and Surgeons.
Visiting Physician Bellevue Hospital; Consulting Physician St. Luke's and St. Mary's Hospitals, etc., etc.

History.—Male, has had hemorrhage and a very bad pain in the breast on the left side; has had cough; first raised blood about a year ago with hacking on rising in the morning. Breath is shorter than before, he had pain in the side. Appetite moderately good, has sweated at night about the head, neck and shoulders. Patient is said to have raised about a quart of blood twice a day during the first week of his cough.

This looks like pleurisy with watery effusion. On examination I do not find much change in the tone of breathing nor prolonged expiration.

The son of Dr. J. Jackson of Boston was with Mr. Louis in his wards, he had noticed this prolonged expiration and asked Mr. Louis if it was not significant. Mr. Louis had not noticed it. It was for the first time noticed then and there. Now it is a universal aid to diagnosis. I will try again. I think perhaps I do get a deep and distant expiratory sound, but it is far from being distinct.

There is not a very marked difference in the kind of resonance, but you will notice what is of some significance: there is a change of tone in going from one side to the other. The voice is muffled and louder upon the right side than upon the left. There is not much difference, however, the amount of the disease in the upper portion of the lung is not at all considerable and the amount of bleeding is altogether out of proportion to the amount of change in the lung.

The best indication of fluid in the chest is the voice; if for example beginning above where there is probably no fluid, I get the voice ringing clearly in my ear, and as I go down, still clear until I hear a change; it becoming less distinct. There is a difference in the volume of voice, above and below, but I do not find any line that marks the difference distinctly.

There is a change in the amount of sound produced by percussion. I am left a little in doubt, on account of the scantiness of these signs, whether there is any effusion or not. I will try it in a way that will settle the question. The patient lies on the table with his chest bent forward. Two inches below the angle of the scapula there is a little change in voice; the change is higher up, as he lies down. If fluid is there the change should go down. There is a diminution in the percussion as we go from above downward, the same as when he stood up. On comparing with the right side, I find that both sides correspond pretty nearly. They are both a little dull. I can only account for the dullness here by attributing it to a little congestion of the lung; there does not seem to be a pleuritic effusion; there is no pleuritic friction-sound. Then the dullness existing upon both sides at the same time could hardly be consistent with the idea of pleurisy. A double pleurisy does occur once in a while, but it is not frequent. The amount of phthisis is inconsiderable, and pleurisy does not seem to have occurred, and the main thing is the spitting of blood.

There are two or three things employed for this purpose that are mainly relied on just now for the suppression of the bleeding. First, the fluid extract of ergot; and I believe it is as efficacious as any medicine we can give internally. But there is something still more efficacious. By temporarily stopping, somewhere in the system, a certain quantity of blood, and holding it there for a few minutes, the effect of which is to relieve the lungs. When the hemorrhage is moderate, dry cups serve this purpose; a dozen of them may be applied, they hold the blood in the capillaries and keep it out of the general circulation so long as they are applied. I was attending a case of effusion at one of the hotels here, and a case of as obstinate a hemorrhage as I have ever seen. It was in a young man, a merchant's clerk, and he was running down very rapidly. The flesh was melting away from him, he would have hemorrhages every day, perhaps two, sometimes three. Though each one could be stopped, the occurrence was so frequent, that he was losing life. Dr. Detmold was called in consultation and seeing the danger of the case said, "why not resort to the same plan that is used in the army, for stopping hemorrhages in persons who have been shot through the lungs?" I said "yes, certainly." Well said he "let us tie up one of his arms as if for bleeding." A bandage was put about one of the arms and the blood accordingly accumulated in the veins so that the hands and arms were swollen, when the arm filled with blood the hemorrhage stopped. We held the blood there in the veins for perhaps four or five minutes and then tied the other arm and allowed the blood from this to flow out into the general circulation,

and in perhaps ten minutes, we left him to himself and the bleeding did not occur that day again.

The next day there was but little hemorrhage. Whenever the hemorrhage was dangerous, he was instructed to have the arm tied up in that way and he got well enough to go back to his work. While he made but slow progress, he was able to work two or three years after that, then he went to Europe and I don't know but that he died there. I have resorted to that expedient in a great many cases since and had never found it fail as a temporary relief. Do not allow the blood in the vessels long enough to coagulate there. Not knowing exactly in what time it would coagulate, I prefer to liberate the blood in one arm after the ligature has been applied for five minutes, and if necessary tie up the other arm or tie a leg; confine a portion of blood out of the circulation for a little while and the hemorrhage will almost invariably stop.

CHRONIC BRONCHITIS WITH EMPHYSEMA —ACUTE PLEURISY.

A CLINICAL LECTURE.

BY

AUSTIN FLINT, M. D.,

Professor of Practice of Medicine, Bellevue Medical College, Visiting Physician Bellevue Hospital, Consulting Physician Charity Hospital, Ruptured and Crippled, St. Mary's and St. Elizabeth's Hospitals.

CASE I.—*History*.—Male, native of England, æt. 66, occupation furrier; came to this city 24 years ago; family history negative, except that his mother had an affection of the throat and lungs similar to his own for a number of years preceding her death, which occurred at the age of 60; has had a hacking cough since 24 years of age, which gave him little trouble until ten years ago, when he had a dull choking pain in the chest, which has recurred at intervals ever since.

Also had kidney trouble some 15 years ago. Has not been able to work more than half the time since August last; has been confined to his bed 3 weeks previous to his admission to the hospital (Nov. 22), at which time he was taken with severe choking pains in the breast, also pain over the cardiac end of the stomach. Temperature normal, pulse 80, respiration 36; urine acid, sp. gr. 1021, and with trace of albumen; heart sounds normal; apex beat $1\frac{1}{2}$ " below left ensiform cartilage. Crepitant rales over the entire surface of left lung; over the right lung at the upper limit bronchial breathing with rales below.

Here is a patient, gentlemen, in whom some change in the skin has taken place; he is feeble, keeps his bed for the most part; has cough and expectoration; has had this cough for a number of years; has been subject for many years to attacks of labored breathing. Now, gentlemen, this is a good case for study. What pulmonary affection stands in relation to these facts which I have just stated? We at once suspect chronic bronchitis with emphysema. But let us examine the chest; he is not suffering from asthma at the present moment. Observe as he breathes a sinking in of the abdomen in the act of inspiration and the drawing in of the intercostal spaces at the base. There is some sinking in of the soft parts above the clavicle with inspiration. The chest remains pretty still; inspection points to emphysema; on percussion I get a tympanitic resonance on the left side;

he has a tympanitic resonance over the lobe of both lungs, more marked on the left side.

On auscultation we get prolonged expiration; inspiratory sounds not changed in character. This respiration denotes emphysema; we have some dry and moist rales, which are indicative of chronic bronchitis. With regard to the heart; we get more evidence over the superficial cardiac space than on the other side. As further evidence of emphysema we have the heart dislocated from its normal situation; it is pushed downward and inward. As for treatment, we can hardly expect to cure the bronchitis, but we can prevent a further increase of the emphysema by the administration of tonics and good hygienic surroundings. A change of occupation would also be desirable.

CASE II.—Male aet. 43, native of Germany; 16 years in this country; family history unimportant; says that he always enjoyed good health; present illness dates from the 4th of November, when while engaged in his occupation as cartman, he became thoroughly wetted in the rain storm; this was followed by languor, lassitude, general indisposition muscular soreness, especially marked in the right anterior thoracic region. These were followed by headache and loss of appetite. The symptoms gradually increased for 5 or 6 days when he gave up out-door work. Soon after he was again exposed to wet which was followed in a few days by exacerbation of all his symptoms. The pain in the right breast became so severe that a plaster had to be put on the side to restrain respiratory movement. Then a dry hacking cough made its appearance. At this time he applied to a physician for relief who informed him that he had bronchitis; was under treatment for two weeks during which time the pain disappeared. The breathing became difficult, physical exertion almost impossible. On Nov. 25th, was admitted in this condition to the hospital.

Dec. 10th; no fever, pulse 102, respiration 22, urine normal; dyspnoea had disappeared, heart of normal size; apex beat with maximum intensity at the left nipple over the sixth rib. The pulmonary second sound increased. There was unequal expansion of the two sides of the chest, and a limited amount of mobility. The lower $\frac{2}{3}$ of the right side presents a well-marked symmetrical bulging with partial obliteration of the intercostal space.

There is dullness upon percussion below the third rib over the entire lung. Absence of respiratory murmur. Tympanitic resonance above the 3d rib; vocal fremitus increased at the apex; resonance below the 3d rib very greatly diminished; bronchophony over the same surface somewhat distant and feeble; bronchial respiration over the corresponding side of the right lung; friction murmur below the clavicle on inspiration and expiration.

Physical Diagnosis.—I find on examination tympanitic resonance on the right side; the vocal fremitus is much greater on the right than on the left side. Below the level of the fluid we have a vocal resonance greater on the left than right side.

Treatment.—This, gentlemen, is a case of acute pleurisy. The patient is improving; there is no evidence of any affection of the lung. As the inheritance is good and the inflammation is probably brought on by exposure, there is every ground for a favorable prognosis. As regards treatment this patient claims no special attention with reference to local trouble; good nourishment is all that is required. Leave the rest to nature. Nature will take care of the effusions, hydragogues and diuretics are not necessary, a little of it will re-

main for some time, but no matter, it will finally be disposed of. There is lymph diffused all over the lung; the absorption of that will require a considerable time, and finally adhesions will result, which are innocuous.

TRAUMATIC INJURY OF THE KNEE JOINT.

A CLINICAL LECTURE

BY

LEWIS A. SAYRE, M. D.

Professor Surgery Bellevue Medical College, New York, Visiting Surgeon Bellevue Hospital, etc.

Dr. Sayre presented three cases. The first, a child with disease of the right hip-joint. The child being too small to apply instruments for purposes of walking, was put in a wire cuirass, so that it could be carried about. The second case was a child brought to the hospital with scrofulous disease of the ankle-joint. There was also an abscess connected with the joint. The child had recovered to such an extent that it was able to walk about with the aid of a crutch.

The third case was of special interest, and was the subject of comment. It was a little boy of Pennsylvania, who had been treated for seven years for disease of the right knee-joint, as the result of injury which he had received three or four months previous to the active stage of the disease showing itself. The child, ten years of age, was brought into the hospital last February, having been laid up for five years with this disease, which began from an acute synovitis in the joint itself. I have had my doubts, however, about this, whether it did not commence as an osteitis instead of a synovitis. At the time he came to me his leg was flexed at an angle of nearly 45°, subluxated outward and backward. There was an extensive abscess connected with the thigh, I think the largest I had ever seen. At the first aspiration I removed 5 ozs. pus, the next time 3 oz. and the next 2 oz. Then I made a permanent opening, and passed down through the joint posteriorly. The diagnosis at that time was chronic inflammation of the knee-joint and osteitis of the head of the tibia and the lower extremity of the internal condyles of the femur. An extensive abscess had opened from the joint, and had burrowed up into the thigh. Free incision was made in the knee-joint, $1\frac{1}{2}$ in. long on the inner portion. I passed below and made another opening at the head of the tibia below the knee-joint, and coming to the bone, I drilled carefully through it, brought out the tibia on the opposite side of the leg, and made another opening which connected with the upper part of the knee-joint. Through these two openings india-rubber tubes were placed. The extension splint was applied to the boy's leg, and the limb brought in as firm condition as possible, and then as firmly strapped with oakum plaster over the opening.

The diagnosis being but one, the prognosis at the time was (being probably a case for exsection), that there could be at best a recovery with ankylosis, if not amputation. There was a very soft and tender spot on the head of the tibia, which made the consulting surgeons of the opinion that amputation would probably be the only resort that would end favorably, as the disease was so far below the joint that exsection could not be justifiable. He came back to me again yesterday; he has so far recovered that he can move his leg, and I am going to see if I cannot make an improvement in him still further.

Yesterday I moved the leg for the purpose of in-

flaming the ganglia. I can now crowd it together quite firmly without pain; consequently the disease between the articular facets is now arrested and I can make a moderate movement of the leg without pain. We are therefore justified now in altering our prognosis and stating that this child can be made to recover with more or less motion and the important point now is to see if we cannot possibly improve his position. On examining his leg yesterday I found that there was a good deal of motion possible. We shall therefore dress this child's joint with the splint, not for the purpose of curing the joint, which is cured; not for the purpose of making any extension, which is not needed, but simply because we have had two cross-bars running on the side of it so that the bandage on the top part forces the femur backward and over the instrument and the bandage under the calf forces the tibia forward to bring that into a straight line. We should move the joint every day more or less for the purpose of improving motion. There is self-control of the quadriceps muscle. We shall now arrange the child for the purpose of improving his position. In all these diseased joints your business should be to make the recovery in the way which renders the joint practically useful.

FORMULÆ AND POINTS IN PRACTICE.

IN CHLOROSIS.

- R Ferri sulph. granulata.
Ext. gentianæ.....aa grs. xxx
Divide into 12 pills, and order one to be taken three times a day.

PURPURA.

- R Vini ferri..... 3 iv
Liq. arsenicalis.....min. xx
Syr zingiberis..... 3 ij
M Sig., one-sixth part, with three tablespoonfuls of water three times a day, after meals.

IN DISEASE OF THE SPLEEN.

- R Syr. ferri phosphatis..... 3 ij.
Liq. sodæ arseniat.....min. xxx.
M One teaspoonful in a wineglassful of water after dinner and supper.

IN INCIPIENT PHTHISIS.

- R Pil. ferri carbonatis.....grs. 60
Ext. conii.....grs. 36-60
Mix and divide into twenty-four pills. Two to be taken twice or thrice daily.

IN ANÆMIA WITH WEAKNESS OF THE DIGESTIVE ORGANS.

- R Ferri redacti.....grs. 12-60
Pepsinæ.....grs. 36
Zinci phosphat.....grs. 18
Glycerini sufficient to make a mass.
Divide into twenty-four pills, silver them and order two to be taken every day at dinner.

IN SOME FORMS OF CARDIAC AND RENAL DROPSY.

- R Tr. ferri per chloridi.....min. 80
Infus. digitalis..... 3 2
Aquæ camphoræ ad..... 3 8
M Sig. One eighth part with tablespoonful of water three times a day.

IN CHRONIC RHEUMATISM, TERTIARY SYPHILIS, STRUMOUS SKIN DISEASES, ETC.

- R Pot. iodidi.....grs. 3-5
Glycerini..... 3 2.
Vini ferri..... 3 4.
Olei morrhuæ..... 3 6.
Mix and make a draught to be taken twice a day.

SUBSTITUTE FOR QUININE IN NEURALGIC AFFECTIONS ASSUMING A PERIODIC CHARACTER, AS WELL AS IN INTERMITTENT AND REMITTENT FEVERS.

- R Beberia sulphat.....grs. 30.
Acid. sulph. aromati.....min. 40.
Syr. aurantii..... 1.
Aquæ aurant. flor. ad..... 3 8.
M Sig.; One-sixth part three times a day.

DURING CONVALESCENCE FROM ACUTE DISORDERS OF THE DIGESTIVE ORGANS.

- R Salicui.....grs. 60.
Ext. sarsæ..... 3 6.
Infus. gent. co. ad..... 3 8.
M Sig.; One-sixth part three times a day.

IN DEBILITY WITH CONSTIPATION.

- R Quinæ sulph.....grs. 18.
Ext. nucis vomicæ.....grs. 3-6.
Ext. gentianæ.....grs. 35.
Mix and divide into twelve pills. Sig.; take one night and morning.

IN MANY SKIN DISEASES, RHEUMATOID ARTHRITIS, CARBUNCULAR INFLAMMATION ETC.

- R Quinæ sulphat.....grs. 9.
Acid. phosphori dil.
Tinct. ferri perchlorid aa..... 3 1½.
Liq. arsen. hydrochlor.....min. 15-40.
Syr. zingiberis..... 3 6.
Aquæ cinnamomi vel.
Infus. quassia ad..... 3 8.
M Sig.; One-sixth part directly after meals.

SELECTIONS FROM JOURNALS.

CASE OF PNEUMONIA TREATED BY COLD BATH—EARLY DEFERVESCENCE.

Under the care of Dr Finlay, in the Middlesex Hospital, London.

John D., aged 17, by occupation an errand-boy, was admitted on July 22nd, 1881. His family history presented no points of importance. With regard to personal history it was noted that he had had measles at the age of three, and had been troubled with sore eyelids ever since, and that he had suffered from an abscess on the left knee when seven years old. It was stated that a fortnight before admission he complained of a slight pain in the left lumbar region, which passed up the chest to the left shoulder, but was not constant. He continued at his work up to the evening before admission. On July 22nd, about 6 a. m., he was taken with severe pain of a "catching" kind in the left side of his chest, for which he was brought to the hospital. On the way he had a severe rigor. On admission he was described as a strumous-looking lad with sallow complexion, complaining of headache, and of pain on deep inspiration in the left side of the chest. The temperature was 101°; the pulse 102, full and bound-

ing. The respirations were 28. The tongue was moist and slightly furred. The skin was hot and pungent. The thorax was well formed, and resonance and breath-sounds were normal; the hearts-sounds were also normal, as well as the abdominal organs.

At 8 P. M., his temperature was found to have reached 105° ; and, as this was the one outstanding symptom in the case calling for active treatment, he was put into a bath, at a temperature of 80° , for ten minutes. In an hour, his temperature had fallen to 103.4° ; but at 10 it had risen to 104° , and at 11 to 105° ; when the bath, at a temperature of 75° , was again used for ten minutes. In half an hour his temperature had fallen to 103° .

July 23d. At 1 A. M. his temperature was 103.4° ; pulse 120; respirations 38. He was then given ten grains of quinine, which he immediately vomited. At 5 A. M., the temperature was 104.2° ; at 8 it had fallen to 101.4° , and two hours later it stood at 105° . On examining the chest then, a patch of impaired resonance, about the size of the palm, was found about the middle of the left lung posteriorly, over which were heard tubular breathing, bronchophony, and some fine crepitation. His urine had a specific gravity of 1027, and was acid and free from albumen; the chlorides were apparently in normal quantity. He now commenced to expectorate faintly rusty sputa. At 1 P. M., the temperature being 105.2° , he was for the third time put into the bath, and allowed to remain for ten minutes. An iced-water coil was also applied to the left side of the chest, and he was ordered three ounces of brandy daily, and a mixture containing ether and carbonate of ammonia. The bath reduced his temperature by three degrees; but by 6 P. M. it had risen again to 104.4° , falling by 9 P. M. to 102.2° . In the evening, the pain in the side was much less; but the cheeks were flushed, and the tongue dry and brownish.

July 24th. The tongue was this morning moister, and the cheeks were less flushed. The temperature was 102.6° . At 8 P. M., he was sleeping comfortably; the temperature being 102.6° , and the respiration 32.

July 25th. At 10 A. M., the temperature was 102° ; pulse 100; respirations 32. The urine was found to contain a trace of albumen, and the chlorides were considerably diminished. In the evening (6 P. M.), the temperature dropped to 98.6° , and at midnight to 97.2° .

The next morning (27th) his temperature was 99° , respirations 24, pulse 88. The tongue was clean; no moist sounds were audible over the affected patch; the breath-sounds were feeble, and slightly tubular; there was less dulness on percussion; no pain was complained of now. In the evening, the pulse and temperature remained normal, the respirations being 24.

The following day's note shows that the pneumonic patch had all but cleared, there being no crepitation, and but slightly tubular breathing heard; the percussion-resonance was almost clear, and the sputa mucopurulent. On two evenings after this the temperature rose, apparently in connection with an attack of ear-ache and conjunctivitis; otherwise, it remained normal or subnormal. The trace of albumen disappeared from the urine on the 30th. Convalescence was completely established by the 10th of August; and the patient was sent to a convalescent home in the end of the month.

REMARKS BY DR. FINLAY.—The use of the cold bath in the pyrexia of pneumonia has been, so far as I am aware, but little, if at all, practised in this coun-

try; yet, if we are to believe what we are told by Juergensen, it ought to be looked upon as our sheet-anchor. In his instructive article on this disease in Ziemssen's *Cyclopædia of the Practice of Medicine*, he advances the opinion that the danger to life results from failure of the heart under the additional strain thrown upon the right ventricle, such additional strain being primarily due to the increased resistance in the pulmonary circulation caused by the exudation deposited in the lung. In addition to the increased labor on the part of the heart called forth to overcome this resistance, there is the influence of the pyrexia itself in increasing the pulse-rate and inducing degeneration of the muscular substance. The control of the fever, accordingly, becomes a matter of paramount importance; and this control, he states, may be safely and quickly secured by bathing.

The case above narrated seems one in point. Although none of the more definitive signs of pneumonia were present at first, there could be no doubt as to the pyrexia, and the desirability of reducing it. Hence the use of the bath. The pyrexia lasted exactly three days and a half, calculating from the rigor; and, while defervescence occurs occasionally as early as this in cases otherwise treated, or not treated at all, its occurrence so early here is sufficiently noteworthy to raise the question whether it might not have been due to the use of the bath. In 721 cases tabulated by Juergensen, the defervescence occurred on or before the fourth day in 12.6 per cent. only; and of 81 cases referred to by Dr. Waters of Liverpool, in a clinical lecture on pneumonia published in the *British Medical Journal* of 19th November last, no case was convalescent before the end of the sixth day of the disease. Of course, no conclusions of any value can be drawn from a single case, but even single cases may be suggestive; and, looking to the enormous benefit derived from the use of the cold bath in the hyperpyrexia of cerebral rheumatism, and in enteric fever, it seems only reasonable to expect a similar result in the high temperature of some cases of pneumonia.—*Brit. Med. Jour.*

THE TREATMENT OF PSORIASIS BY NAPHTHOL-OINTMENT.

A short time since Professor Kaposi of Vienna advocated the advantages of a new remedy in the treatment of skin diseases, namely, the so-called beta-naphthol. To quote from an abstract from his paper published in the *Medical Times and Gazette* of June 4th, he states that, "in psoriasis a ten per cent. ointment produces the same effect as a chrysarobin (chrysophanic acid) ointment without the discoloration caused by this." Desirous of testing this assertion, I procured some beta-naphthol, and began using it in an extensively spread and well marked case of psoriasis occurring in a boy aged 12, who had been affected with the disease continuously for eleven months.

On September 22d, I commenced with the use of an ointment of about the strength recommended by Dr. Kaposi, namely a 12 per cent. ointment, but finding that, by October 1st, it had by no means produced the effect that a 12 per cent. chrysophanic acid ointment would have by that time produced, I doubled the strength of the ointment over the tougher parts of the skin, using a 25 per cent. ointment to his back, and a ten per cent. ointment to the other parts. On October 7th, he had scarcely improved at all. I therefore now employed to his back a 35 per cent. ointment, and finding this tolerated, I, on October 8th,

used a 50 per cent. ointment; the 10 per cent. ointment being continued as before to the other parts. On October 15th, I found that on some patches, or rather on some parts of some of the patches, the ointment had produced vesication; the other parts of the same patches, and the other patches, exhibited a brighter red color than is natural to the disease, but were otherwise unchanged. The boy was extremely sore over the various places where the ointment had blistered him. I therefore stopped the use of naphthol-ointment, and ordered a weak acetate of lead ointment.

On October 22nd the blisters had healed, and where the blisters had been (but only there) the disease had disappeared; in some places absolutely so, in others nearly so. But as to the eruption generally it was not perceptibly better than before treatment was commenced. Now this was after a three weeks' course of beta-naphthol ointment, and a good course of it. The boy was under my care as a hospital in-patient, and I can speak securely as to the thorough application of the ointment. On October 22nd, all irritation from the use of the naphthol having subsided, I now made use of a 15 per cent. chrysophanic acid ointment. Within a week after this a large proportion of the eruption had disappeared; within another week the greater portion of the eruption had vanished, leaving only two exceptionally obstinate patches on the hips; within a further fortnight these also had completely gone away, leaving him absolutely free from eruption.

I am therefore unable to support the observations of the able Viennese professor. Not only do I find that beta-naphthol ointment is not so efficacious as chrysophanic acid in psoriasis, but it is also a more inconvenient remedy, regarding its incidental effects. Used of a moderate strength, it appears to me to exercise no appreciable effect on psoriasis; and when employed of such strength as to achieve some result it only does so at the expense of considerable pain, and then only in a very patchy and unsatisfactory manner. It is true that it does not stain the linen, but then it does worse, it blisters the skin.—BALMANNO SQUIRE in *British Medical Journal*.

FENGER AND HOLLISTER ON THE TREATMENT OF CAVITIES IN LUNGS BY INCISION AND DRAINAGE.

Dr. Fenger and Dr. Hollister of Chicago, report, in the *American Journal of Medical Sciences* for October, a successful case of drainage of a generous cavity in the lung, and refer to five previously recorded instances in which a similar treatment had been carried out. Professor Mosler of Greifswald was the first to expose and drain a pulmonary cavity; but, as the results in this case were not satisfactory, the surgical treatment of such condition was abandoned for a time. During the last three years, six other cases have been recorded, including that detailed in this paper, which case alone seems to have had a permanent and good result. The patient was a male, aged 34, who had a large fetid abscess in the middle lobe of the right lung, caused through suppuration around a large hydatid cyst of twelve years' standing. There was much fœtor of health and expectoration, and an insufficient outlet for the discharge through the bronchi. There was subsequently diffuse purulent bronchitis in the remaining parts of the right lung, and the patient suffered from high fever and became emaciated and exhausted. After exploratory aspiration, an incision

was made in the third intercostal space, in front and two inches to the right of the sternum. The cavity in the lung was then explored with the finger, and a counter-opening made in the fifth intercostal space in the anterior axillary line. The sac of the echinococcus-cyst was then removed through the first opening. A large India-rubber tube was then passed across the cavity and through both external openings, and the cavity was washed out with a solution of carbolic acid. The external openings were covered by antiseptic dressings. During the subsequent six weeks, there was decided improvement, with cessation of fœtor of the breath and expectoration. In the seventh week, after too early removal of the drainage-tube, there was a severe attack of diffuse purulent bronchitis of the whole of the right lung and the lower lobe of the left lung. The patient ultimately made a perfect recovery. The intrapulmonary character of this cavity was proved by the fact that soft lung-tissue could be felt at its lower, inner, and outer walls.

The authors of this paper hold that cavities, arising from acute pathological processes in lung-tissue (suppuration and gangrene), naturally present themselves as objects for surgical treatment when the anatomical conditions render such treatment possible. There is nothing absolutely fatal or necessarily progressive in the nature of these pathological processes, as is proved by a number of cases of this kind, in which spontaneous recovery has taken place by evacuation of the contents of the cavity through the bronchial tubes. In spite, however, of the possibility of spontaneous recovery, which seldom occurs in pulmonary gangrene, but is more common in cases of abscess, a number of cases remain in which the extent and increase of the cavity, and the gradual exhaustion of the patient, enable us to determine, long before death, that a fatal result is inevitable. In such cases, with the view of preventing further destruction of the lung-tissue, of arresting the exhaustion, and of guarding the patient from purulent bronchitis, broncho-pneumonia, and pleurisy, the surgeon, it is stated, is justified in any desire and attempt to evacuate the contents of the pulmonary cavity.

The operation is considered as indicated in any case where, the presence of a gangrenous or purulent cavity having been ascertained, it is found that, notwithstanding the existence of an outlet through the bronchi for a portion of the contents of this cavity, it steadily fills again without the patient gaining any relief from the partial evacuation. With regard to the seat of operation, any part of the chest, on either side, is accessible below the mammary and axillary regions. Pleural adhesions are to be expected in cases in which the superficial area of the purulent cavity is large, or, more frequently, in which several attacks of disease have occurred in that portion of the lung occupied by the cavity. When the cavity is extensive, and has reached the surface of the chest at different and distant places, the abscess should be opened at its lowest point, and at the place most favorable for the escape of its contents through the drainage-tube. The authors recommend that two openings be made, the first in the most superficial and, in other respects, most easily accessible place in the cavity; and the second, after digital exploration of the cavity, at the deepest portion which will admit of a counter opening, and at a favorable and safe place for as nearly as possible complete evacuation of the purulent contents. In previous cases, but one opening had been made, and the authors think it

probable that to the thorough drainage in their case permitted by the double opening, its permanently good result may be attributed. The cavity in this case was washed out at first by a weak solution of carbolic acid ($2\frac{1}{2}$ per cent.), and subsequently by a solution of thymol. It is regarded as an important point that the drainage-tube should not be removed too early, lest purulent bronchitis and broncho-pneumonia be set up through aspiration of pus from the still incompletely closed pulmonary cavity.

MEDICAL NOTES AND NEWS.

Drawing-Room Malaria.—We live in an age in which health seems to be assailed by more subtle enemies than our ancestors had to fear, and thus to need more and more cunning disciples of Æsculapius to keep pace with the growing numbers of our foes. Medical science has done much to protect us, and cleanliness still more. We no longer have much cause to fear the "black deaths" and "sweating sicknesses" which decimated whole towns or provinces in the Middle Ages, but then, on the other hand, we have surrounded ourselves with dangers unknown in a less civilized community. One of these is an insidious disease lately made known to physicians, and best described as drawing-room malaria. The atmosphere of a hot room in which many living plants are kept has quite recently been found to be impregnated with a moist vapor arising from the earth in which those plants are rooted. The soil from which they derive their sustenance is generally rich in organic matter, which is drawn out of it by the heat and diffuses itself into the close air imprisoned in the apartment. That a sort of low fever might be generated in this way, is a theory which was enunciated in 1879 by the learned Professors Kiebs and Crudeli, but it is only more lately that their view has been confirmed by positive experience.

The required proof has come from that part of the world which might be expected to furnish it: that is to say, from Russia, where the sitting-rooms in winter are kept habitually at a very high temperature with little ventilation. Professor von Eichwald was consulted as to the health of a lady, who, though living in a healthy spot, exhibited all the symptoms observable in those who inhabit marshy places. The usual remedies, consisting chiefly of quinine, were applied with success; but as often as the lady, after recovering from an attack, ventured into her drawing-room the same symptoms persistently reappeared. It was then that the doctor, remembering the new theory, ordered the removal of the numerous ferns and plants which filled the drawing-room, and the complaint which had been so obstinate was found to disappear at once. It is possible that a good many headaches and indispositions in London might be traced to a similar cause, operating with more or less violence in proportion to the number of the flowers or plants kept and the heat of the room in which they grow.—*The London Globe.*

Joan Harvey's Epitaph.—We have read a good many epitaphs, which have been quoted more for their oddity than anything else. Here is a genuine one, which for beauty of sentiment and expression we have never seen surpassed. It is that of the mother of William Harvey, the discoverer of the circulation of the blood, and is to be seen on a monu-

mental tablet in the church at Folkestone, England. It is supposed to have been written by her distinguished son:

"A. D. 1605, Nov. 8. Dyed in ye 50th yeere of her age, Joan, wife of Tho. Harvey, Mother of seven sones and two daughters; a Godly harmless woman, a chaste loving wife, a charitable quiet neighbor, a comfortable friendly matron, a provident diligent hyswfe, a carefyl tender-hearted mother, decree to her hysband, revered of her children, beloved of her neighbors, elected of God; whose soule rests in Heaven, her body in this grave: To her a happy advantage; to hers an unhappy loss."

The house of Bailliere & Sons, Paris, are about to publish Dr. Hamilton's Treatise on Fractures and Dislocations, from a revised copy of the Sixth American Edition. The German edition, published at Gottingen in 1877, with this French edition, will constitute the first and only American work of any importance upon Surgery, which has received the compliment of a republication in Europe. Application has been made to Mr. Lea for its republication in London; but the English sales of the American edition have been so remunerative to the publishers, that they have not thought it advisable to give this permission. They have, therefore, declined, as they did some years since, when requested to allow its publication by the Sydenham Society.

Extirpation of the Uterus.—The removal of the entire uterus, when cancerous, either by the vagina or through an abdominal incision, and the removal of a pregnant uterus entire, excepting the cervical portion, constitute what are respectively known to specialists as Freund's and Porro's operations. During the last three months, both operations have been repeatedly performed in England. The success of Sir William MacCormac and Mr. Spencer Wells, in two cases recently under their care, are already well known to the profession, and are chronicled in our pages. We understand that at least five similar operations have recently been performed in London, all by well known and experienced operators, but all with fatal results. In two cases of Freund's operation it appears that, in spite of every precaution, one or both ureters were cut or tied; another proved fatal, after it had been performed from the vagina, on account of the impossibility of perfect drainage. It is most desirable, for the purposes of sound scientific progress, that the greatest publicity be freely given to untoward as well as to successful results of these operations. They must be established, if practical experience shows that a fair proportion of favorable results justifies their establishment, in the same manner as ovariectomy was proved to be legitimate. If, in spite of all the improvements of modern surgery, the mortality in the hands of experienced operators remains as high as it seems to be at present, and if, in cases of Freund's operation, temporary recovery be frequent, but rapid recurrence of cancer be in such cases the rule, extirpation of the uterus will need to be the subject of further debate, study, and improvement, before it can be accepted as an established operation. Considering the advantages under which modern surgeons work, the outlook remains hopeful.—*Brit. Med. Jour.*

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BOOK NOTICES.

The Puerperal State—By W. S. Playfair, M. D., F. R. C. P., Physician Accoucheur to H. I. and R. H., the Duchess of Edinburgh; Prof. of Obstetric Medicine in King's College; Physician for the Diseases of Women and Children in King's College Hospital, Etc., Etc. Published by Birmingham & Co., New York, 1881, Price 25cts.

This work of Playfair's is already too well and favorably known to our readers to call forth either blame or praise at the present time.

An enumeration of its contents will suffice to recall its merits. The author discusses in turn, "The Puerperal State and Its Management," "Management of the Infant, Lactation, etc.," "Puerperal Eclampsia," "Puerperal Insanity," "Puerperal Septicæmia," "Puerperal Venous Thrombosis and Embolism," "Puerperal Arterial Thrombosis and Embolism," "Other Causes of Sudden Death During Labor and the Puerperal State," "Peripheral Venous Thrombosis (Syn. Crural Plebetis, Phlegmasia Dolens, Anasarca Serosa, Oedema Lactæum, White Leg, Etc.," and "Pelvic Cellulitis and Pelvic Peritonitis."

As a guide to the proper management of that much mismanaged, often misery-entailing condition, the puerperal state we know of nothing of this compass that is better adapted in a simple yet complete way to

enlighten the student and practitioner. It can not but be a valuable addition to the "Library of Medical Classics" and offered as it is in complete form for 25 cts. it should be read by every physician who aspires to obstetric practice, and few there are who from choice or necessity are not at some time called upon to solve the difficult problems attending the management of the puerperal state.

Clinical Studies of Diseases of the Lungs in Children. By Eustace Smith, M. D., Fellow of the Royal College of Physicians; Physician to his Majesty the King of the Belgians; Physician to the East London Children's Hospital; Senior Assistant Physician to the Victoria Park Hospital for Diseases of the Chest, etc., etc. Published by Birmingham & Co., New York, 1881. Price, 35 cents.

The author's choice of a title has, we think, been an unfortunate one, inasmuch as it fails to do the book and himself justice. It is true his admirably written chapters are clinical studies, but they are more than this, as will be readily perceived by the mere mention of the style in which the book is written. After an elaborate introduction, in which the author gives an epitome of the characteristic nature of children's diseases, their modification by age as distinguished from similar diseases in adult life, the proper method of examination, the indications for treatment, children's peculiar susceptibility to the influence of some drugs and peculiar tolerance for others, and many other practical points in connection with the diagnosis, prognosis, and treatment of children's diseases, he discusses Collapse of the Lung, Croupous Pneumonia, Pleurisy, Acute Catarrhal Pneumonia, Chronic Catarrhal Pneumonia, and Unabsorbed Pneumonic Deposits, Pneumonic Phthisis, and Fibroid Induration of the Lung. Considering each in the following manner, viz.: Giving a resume of the etiology, symptomatology, diagnosis and prognosis, illustrating his views by a citation of typical cases, with comments on the same, and concluding with practical remarks on treatment.

We must regret that the author has confined himself to diseases of the lungs, instead of presenting a complete treatise on diseases of children written in this very felicitous manner.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK COUNTY MEDICAL SOCIETY JAN. 23rd, 1881.

The meeting was called to order by the President Dr. F. R. Sturgis. The minutes of the previous meeting were read and approved. The Secretary announced that the delegates to the State Medical Society had organized with Dr. Daniel Lewis chairman. The report of the comitia minora recommending candidates for admission to membership was read and accepted.

The paper of the evening entitled

"ELASTIC TENSION AND ARTICULAR MOTION AS THERAPEUTIC AGENTS IN CHRONIC JOINT DISEASE."

was read by its author Dr. Josiah M. Roberts and discussed by Drs. L. A. Sayre, L. H. Sayre, C. Fayette Taylor, A. B. Judson, C. F. Stillman and others.

Dr. Roberts stated that he had been ill for some

time past and therefore was prevented from presenting his paper in the form he had proposed, and accordingly after defining his subject and explaining the limits of the meaning of words such as elasticity, solids, elastic tension, articular motion, etc., as used by him in reference to his subject, he devoted the balance of the time to an extemporaneous description of the apparatus he had devised, the principles upon which its application depended, and illustrated his remarks by diagrams, photographs and drawings.

Dr. Roberts said that the treatment of chronic inflammations of joints was an unexplored field, and compared with what might be expected there was an insignificant showing of good results obtained by experimenters.

He had given careful attention to this subject, and after a careful, conscientious study of cases and eliminating sources of error, he believed he had devised an apparatus which better than any other met the indications, and it was his duty now to give it to the profession, that they might judge of its worth.

Although much had been said about the necessity for fixation in joint disease, he believed that it was necessary in order to preserve the integrity of the joint and the part below it to keep up a certain amount of motion in cases of chronic inflammation. When the joint became inflamed flexion took place, and as a result of this a certain amount of fixation.

If it were possible to secure the joint in such a position that articular pressure was avoided and yet approximately the normal amount of motion attained, the circulation could be raised from below par to the normal, and absorption and repair hastened. So far all were agreed, but up to the present day no effectual appliance to secure these results had been afforded.

The difficulty was that instruments constructed to admit of a certain amount of motion were provided only with a simple hinge-joint, and although the movements of the joint were regular, they did not correspond accurately to this rigid motion, since there was always a certain amount of lateral deviation which, with the simple hinge-joint apparatus, led to friction, which was just what was to be avoided. If motion without friction was to be obtained, the splint must keep up extension with no articular pressure, and allow for the lateral deviation. What was wanted was an instrument that would automatically lengthen as the limb shortened in flexion. Such an instrument he had devised, and also one by which the exact amount of shortening in each individual case could be determined. In the past the joint had been made to conform to the instrument; now it was possible to make the instrument conform to the joint. The instrument presented worked with the precision of the joint itself.

Another condition hitherto unprovided for by instruments was the eversion of the foot and the rotation of the foot on its own axis. To overcome this deformity it is necessary to draw the head of the tibia forward and to rotate it upon its axis; in fine to reverse the movement causing the deformity.

The duration of treatment which by the method of fixation failed to meet the demands of the injured joint for better circulation had been reduced one-half by the apparatus described. It should not be applied by one ignorant of the nature of joint diseases but by an expert if the best results were to be attained.

Dr. Roberts also exhibited an apparatus devised by him for permitting of elastic tension, flexion, rotary and lateral motion in the wrist joint and illustrated its application and the results obtained by it by showing to

the society a patient with the apparatus applied and a plaster cast of the condition of the joint when first seen.

In conclusion, he claimed for his apparatus that it reduced the duration of joint disease one-half, excluded the possibility of ankylosis and rendered the resort to exsection less necessary.

Dr. A. B. Judson said that he with others interested in the subject of joint diseases must feel pleasure in listening to the presentation of Dr. Roberts' paper which evinced so much earnest study.

He had been asked last week by an eminent medical gentleman when we were to see the end of the intricacies attending the treatment of chronic joint diseases, he would like to have seen the gentleman present that he might have learned that at least honest work was being done to clear up the subject. He saw dimly some objections to the theories advanced by Dr. Roberts, but would not throw discredit upon them by hasty criticisms.

Dr. C. Fayette Taylor thought the subject too important to be discussed in this off hand manner. If the discussion were adjourned the subject might be considered more intelligently.

As to the apparatus described by Dr. Roberts he would say that similar apparatus embodying the same principles had been devised as long ago as 1855. He had himself applied extension to the wrist joint. He differed with Dr. Roberts as to the lateral motion of the knee joint. The more perfect the joint the less the lateral motion. He was accustomed to apply apparatus to prevent lateral motion.

Dr. L. H. Sayre complimented Dr. Roberts on his ingenuity. The paper was difficult to discuss since it had been presented in so fragmentary a manner.

Dr. L. A. Sayre expressed to Dr. Roberts his gratitude for having so clearly stated what he (Sayre) had himself so long claimed and taught. Dr. Roberts doubtless had no idea of moving inflamed joints as had been suggested by some speakers, the apparatus was devised for chronic inflammation. The principles explained he knew to be correct and the apparatus was better than any that had yet been devised. He wished to indorse it and testify to the truth of the principles. Movement of the joint was better than absolute rest and by the means devised thousands of patients now confined to bed might enjoy the benefits of fresh air and exercise. He felt under personal obligations to Dr. Roberts. Especially in view of the fact that our ablest and most experienced surgical teachers were preaching false doctrine. One of the most eminent had within three months published a book which would be the authority for thousands in which he stated that the ingenuity of man had never devised an instrument which would insure motion without articular friction. The paper presented was a step forward advancing science and truth.

Dr. Charles F. Stillman called attention to two points; namely the shortening of the leg when flexed and rest in diseased joints. He claimed and illustrated his claims by diagrams that the shortening as shown by Dr. Roberts did not take place as described.

He also believed in rest for diseased joints the more nearly approaching the absolute the better.

Dr. Roberts closed the discussion, after which Dr. W. Gill Wylie read a letter from a lady eminent in her connection with public charities, which asked that the sanction of the society be given to a charitable project which had for its object the instruction of the laity in the methods of caring for the sick and injured in case of accident and in sudden emergencies. The

matter was referred to the comitia minora. The Society then adjourned.

LECTURES.

CLINICAL REMARKS ON THE DIAGNOSIS OF FIBROUS TUMOR OF THE NOSE AND MALIGNANT TUMOR OF THE NECK.

BY

HENRY B. SANDS, M. D.

Professor of Surgery, College of Physicians and Surgeons; Attending Surgeon New York and Roosevelt Hospitals; Consulting Surgeon St. Luke's Hospital, etc.

CASE I.—Male, æt. 51; has a peculiar excrescence attached to the skin of his right cheek, on a level with the ala nasi. This tumor has existed for twenty years; its growth has been gradual and unattended with pain.

No cause is assigned for the growth, and I am unable to express a decided opinion in regard to its character. I notice that the swelling is about an inch long, three-fourths of an inch wide and is pyriform in shape, the stem being attached to the integument of the face. It is covered by integument, which is thin and marked by a number of blood vessels, chiefly veins. It is smooth; except that here and there it presents minute elevations above the general level of the surface. On making pressure I get the idea that it is a solid tumor. Examination by palpation also goes to prove its solidity. We may exclude carcinoma proper and epithelial cancer, for in neither case would the growth have been so slow. We can also exclude sarcoma. It is most likely to be a solid growth of connective tissue, a fibrous or fibro-cellular tumor, as it is called. Paget speaks of certain "pendulous cutaneous tumors." Such tumors are found to consist of connective tissue, more or less dense. Now, I suppose when we remove this tumor we shall find it to be solid and to be composed of connective tissue in some form. It may possibly be a cyst, which on the scalp would be called a wen, *i. e.*, a sebaceous cyst with cheesy, atheromatous or epithelial contents. The diagnosis lies between fibro-cellular and cystic tumor, the chances being in favor of the former. [This diagnosis was subsequently confirmed by microscopic examination by Dr. Heitzman, who reported as follows: "A benign tumor, formerly termed fibro-cellular, recently myxo-fibroma, with the tendency to change into lipoma."] It is very plain what should be done with it. On examination of this tumor I find that it does not extend beneath the integument; there is, therefore, no need of sacrificing the skin. I shall remove all that is absolutely necessary for the removal of the morbid growth with the scissors, which will quickly divide the pedicle. [The tumor was then removed.]

Dr. Sands then continued:

While the bleeding is being checked by pressure we will open the tumor and see if it is really solid, or whether it is a cyst, as was thought possible. Examination shows it to be a solid tumor. It is very slightly vascular and not very firm; I have little doubt that it is one of the more succulent varieties of fibrous tumors. We will have it carefully examined and then report to you the result. Several

vessels of some size are bleeding here. These will be stopped by the ligature. This wound will require some dressing which will form a scab, leaving a slight scar.

I will not bring the edges together, because this cannot be done unless the parts are subjected to great traction, in which case union would not occur unless the skin were dissected up. In this region of the body the skin is very firmly adherent to the subjacent parts. In certain regions muscles act upon the skin, as the platysma myoides and the muscles of the face; hence the integument of the face is very closely united to the subjacent parts. This wound is not more than one-third of an inch in breadth, yet it cannot be brought together without detaching the skin from the adjacent parts. We will apply a simple dressing, and I think the wound will heal under a scab.

CASE II.—*Malignant Tumor of Neck.*—History, Male, æt. 46; occupation, bricklayer; has a swelling of the neck of 10 weeks' duration; began to be ill 7 months ago with some trouble of the stomach attended with vomiting, the vomited matter having a coffee-ground color; patient denies its containing blood. He is getting better of the stomach trouble.

I saw this man in the ante-room and examined him in a very superficial way. I was unable to arrive at a conclusion respecting the nature of the swelling in his neck. I suspect that this swelling is a malignant tumor, and, of course, some light would be thrown upon this question by the discovery of a tumor in the abdomen. We will, therefore, first examine his abdomen; if we find the physical signs of cancer of the stomach, we should also regard the swelling in the neck as malignant. In examining the abdomen for the discovery of tumors, it is necessary to observe certain rules. First of all, it is quite desirable, if you examine by palpation for the discovery of tumors, to cause the patient to relax the abdominal muscles. This is sometimes quite easy to do when the muscles are weak or when they have been much distended by the presence of a large tumor. Sometimes it is very difficult, especially in male subjects who are muscular and strong. The recti muscles should be relaxed by putting the patient in the recumbent position and by causing him to flex the legs upon the thighs and the thighs upon the abdomen. Sometimes it is desirable to flex the spine by placing a pillow under the shoulders. Many persons will involuntarily cause the muscles to be rigid. Sometimes you can relax the recti muscles by making the patient respire with his mouth open. Then the hand can be used with success in detecting a tumor, which at other times would escape attention. Occasionally it may be necessary to relax the abdominal wall by the administration of an anæsthetic. If this man has any morbid growth in the stomach we should look for it in the epigastrium. A negative result of the examination however does not prove that no malignant disease of the stomach exists. This disease is most frequently seen at the pyloric end. It can then often be detected by palpation over the epigastrium, sometimes it sinks down and has been known to descend as low as to the crest of the ilium. If the disease is towards the cardiac end of the stomach or towards the great cul de sac you may be unable to detect it. The cervical tumor is situated in the upper clavicular region and is of considerable extent. It is of rapid growth and is a somewhat even tumor presenting very few inequalities of surface, not at all such as to make us sure that the tumor is developed from a number of distinct parts. I do not feel sure that we have not here a number of

lymphatic glands that cannot be isolated; but such elevations as are seen on the surface are quite consistent with the presence of a single tumor grooved by the presence of bands of fibrous tissue. Then the question arises whether this tumor is not an aneurism. The subclavian artery or aorta may be the seat of aneurismal swelling. A little examination shows this not to be such; first it is devoid of pulsation, either in the tumor itself or imparted to it by vessels near which it lies. I am unable to detect any change in its volume by pressure. I place my ear over this tumor, and find no murmur. The absence, therefore, of murmur, pulsation and diminution of the tumor exclude aneurism as a possible explanation of its origin. The exploring needle might be used to ascertain if the tumor has fluid contents or not. If it had fluid contents, the question would arise whether a cyst could reach this size in the course of 10 weeks. It is conceivable that a cyst might enlarge rapidly by the occurrence of extravasation or hemorrhage. I think it in all probability to be malignant disease; either *carcinoma* or *sarcoma*. I suspect this is a rapidly growing malignant tumor, which although it fluctuates, is yet solid. As I feel it now carefully, I am still more in doubt as to whether fluid exists in it. His physician is satisfied that this tumor is secondary to a formation in the stomach. Observe his appearance; he is pale and anæmic and has a cachectic appearance. He has lost 28 lbs. of flesh within past few months.

OLD PLEURITIC EFFUSION—FACIAL PARALYSIS—SCLEROSIS OF POSTERIOR COLUMN—GRAVES' DISEASE.

CLINICAL REMARKS

BY

ALONZO CLARK, M. D.,

Prof. Practice of Medicine College Physicians and Surgeons, New York; Visiting Phys. Bellevue Hosp.; Consulting Phys. St. Luke's and St. Mary's Hospital etc., etc.

CASE I.—History. Male; basket maker; complains of general debility, lass of strength; has been confined to the house for the last four months; left leg swollen; urine does not contain albumen. Patient prefers to lie on the left side; pain and tenderness in the lower limbs; is unable to walk any distance; feeling of faintness on least exertion.

From the swelling of the leg we at once suspect kidney disease. Renal disease is associated often with cardiac complications; persons who have cardiac disease are apt to lie on the right side or on the back. On examining the heart I find no murmur; there is a little hypertrophy, however. On percussion I find fluid in each side of the chest, the external evidences of which are not apparent.

Treatment.—Keep the circulation in the skin active. The patient should keep himself warm, protect himself with abundance of clothing; should be kept in the house at the temperature of 72° F.; should take a steam-bath twice a day. The effusions are easily carried off by the kidneys. The sal diureticus (acetate of potash), 20 grs. every two hours, should be prescribed in a wine-glass of water, and the infusion of digitalis, a dessert spoonful three times a day.

CASE II.—Male; complains of swollen face. Deformity and paralysis often come from an inflammation of the portio dura or seventh nerve; there is no ten-

derness; it is not very uncommon for a patient to have a swelling on one side of the face. It generally comes in the night; more likely to occur if there is a draught of air on the side of the face on which the paralysis occurs. Many cases will be relieved without any remedy in four to six weeks; in some it is not relieved at all. Medicine has no power over it whatever. Dr. Detmold invented a little electrical apparatus which acts efficiently in cases of this sort. It consists of a metallic wire containing two metals which produce electricity. At one end he makes a hook to go into the mouth, and at the other end a hook to go over the ear, and the patient wears that continually except when eating.

This patient has a marked deformity and general paralysis of the left side of the face. The muscles of the paralysed side are not entirely passive.

When the paralysis comes from an inflammation of the seventh nerve, the best remedy is to apply leeches upon the affected side.

CASE III.—Male; æt. 65; unable to walk for the past 6 months; has cramps for four or five hours at a time; there is muscular paralysis but no sensory paralysis.

This patient has an affection of the posterior column of the spinal cord. This is not a very common form of sclerosis because the patient has not the walk of locomotor ataxia; he has had locomotive ataxia which has been converted into paralysis. The fl. extr. of ergot was given for locomotor ataxia to a patient who took gradually increasing doses until finally he received a drachm three times a day which was continued for an entire year. Every month the patient showed improvement and at the end of the year he was so far restored that he could be useful in the ward to take the place of the orderly and he has now been five years in the hospital. The same medicine would be of some relief to this man, dry cups may also be applied.

CASE IV.—Female, has a swelling in the neck, and prominence of the eyes, with a high pulse. I examine the pulse and count 120 beats. This is a case of Grave's disease also called Basedow's disease in Germany. In France, known by the name of Trousseau's disease. This disease is not primarily one of the thyroid body. There are several mild conditions co-existing; it is believed to be dependent on a condition of the nervous system; it is regarded as affecting the sympathetic nerve in the neck. The disease is called vascular because of the great development of blood vessels. Tumors as a rule contain a great number of blood vessels. In this case there are so many that the tumor behaves almost like an aneurism. The pulsation is such as an aneurism gives when the ear is applied over the swelling. Operations have been performed such as would be suitable in the case of aneurism. The concomitant symptoms are a marked disturbance, an irritability of the nervous system. The patients are almost always very emotional and excitable. The excitability affects the vascular system including the heart. The arteries beat violently, the pulse is quick very rapid, and patients almost invariably suffer from very severe palpitation and sometimes from intermittent action of the heart.

The pulse beat runs frequently up to 120 or 130; sometimes 140 and 150. There is also usually a protrusion of the eye-balls. This protrusion varies in different instances; sometimes it causes horrible disfigurement; the eyelids can no longer close upon the cornea; the whole circumference of the cornea is seen, and perhaps a line or two of the sclerotic; this because the eyes are so deeply sunken.

SELECTIONS FROM JOURNALS.

HUSEMANN ON ANTIDOTISM.

Dr. Kobert (Schmidt's *Jahrb.*, Jan., 1881) gives a review of three memoirs of Husemann and others on this subject (*Arch. fur Exper. Pathol. et Pharmacol.*, Band vi., p. 335; Band ix., p. 414; Band x., p. 101). The first of these, by Husemann in collaboration with Kruger, treats of the antagonism of chloral and strychnia. The following are the conclusions arrived at: 1. There is no reciprocal antagonism between strychnia and chloral (in the sense that the action of either poison is annihilated by the other). 2. When toxic doses of strychnia and chloral are given simultaneously, the action of the latter predominates, and the symptoms of depression are observed. 3. There is, however, an unilateral antagonism in this sense, that the animals (rabbits) poisoned with strychnia may be saved by a non-toxic quantity of chloral, but yet sufficient to induce profound sleep. A cure may be effected, even when five or six times the fatal dose of strychnia is given; but beyond this, death supervenes, though this is retarded. 4. Small hypnotic doses of chloral are insufficient to save an animal poisoned by a quantity of strychnia appreciably greater than the fatal dose. 5. Chloral, when employed in sufficient doses, has proved efficacious in the case of men poisoned by strychnia. It is preferable to other counter-poisons, as morphine, Indian hemp, and chloroform, some of which exert their action too tardily; and others, such as curare and potassium bromide, have the defect of leaving the patient conscious, and thus exposed to the moral tortures which assail him. 6. The favorable influence of chloral in acute strychninism cannot be explained by a direct action upon the parts of the central nervous system which the strychnia has placed in a state of exaggerated excitability. It may be attributed in great part to the lowering by the chloral of the activity of the parts which conduct the excitation to the spinal cord. It thus prevents the too frequent repetition of tetanic spasms, and diminishes the danger of death which they involve. In nearly every case, the duration and intensity of the attacks have been notably diminished. 7. In the treatment of strychnia poisoning by large doses of chloral, a considerable diminution of the frequency of the respiratory movements is constantly observed; on the cessation of such attack, nevertheless the respiration is accelerated. There is thus a diminution of the normal temperature. 8. Death from chloral, either taken internally or subcutaneously injected, is almost always due to arrest of respiration. It is only when the chloral reaches the heart-muscle in sufficiently large quantities, that death results from cardiac paralysis. 9. In acute chloralism, asphyxia supervenes in part from the progressive diminution of the energy of the respiratory centre, partly from œdematous infiltration of the pulmonary parenchyma; and these lesions are always found more or less pronounced at the necropsy of rabbits poisoned by chloral. The slowing and feebleness of the cardiac contractions have only a secondary influence. 10. Strychnia cannot be employed as an antidote for chloral. It neither hinders the progressive paralysis of the respiratory centres, nor the production of pulmonary œdema. Rabbits poisoned with chloral, and to which strychnia was afterwards given in fatal or even in simply toxic quantity, died from diminution of the frequency of respiration, and the period was not abridged.

The lesions found on *post mortem* examination were those produced by chloral. 11. In cold-blooded animals which have been chloralized, strychnia does not prevent enfeeblement of the heart, nor death from paralysis of that organ. 12. Strychnia does not modify the lowering of temperature constantly observed in acute chloralism. 13. Strychnia does not prevent the hæmaturia and albuminuria observed after subcutaneous injections of chloral. 14. Increase of temperature, and of the frequency of the respiratory movements, are favorable prognostics in chloral-poisoning. 15. The causticity of strong solutions of chloral, and the tolerance of some animals for the drug, have led experimenters into error in regarding strychnia as exercising a favorable influence in chloralism. 16. When in chloral poisoning reflex excitability is abolished, strychnia, even when employed in much larger than a fatal dose, cannot restore this excitability. 17. When strychnia and chloral are simultaneously administered, the heart always stops in diastole. In another research, Husemann has demonstrated the inefficaciousness of camphor, oil of cajeput, ammoniacum, and the principal excitants in poisoning by chloral. Atropine gives the best results, but it must be given in repeated doses. In another research, in collaboration with Fliescher and Wehr, the author has shown that chloral is as efficacious in poisoning by brucine and thebaine as in strychninism. He remarks that thebaine, not only convulses, but also greatly diminishes sensibility. Chloral acts counter to codeine and calabarine only when given in quantity one and a half times greater than the fatal dose. In poisoning by sal ammoniac, chloral is useful in moderating the convulsions, but it does not prevent death. The salts of barium and strontium, according to present observations, act as convulsant cerebral poisons. Bohm has observed in frogs a great analogy between the symptoms of intoxication by the salts of barium and those of poisoning by picrotoxine and conicine; but rabbits killed by barium chloride have no convulsions till shortly before death, and these are explicable by paralysis of the heart. Chloral, as might be expected, is powerless against barium and strontium; and the same applies to carbolic acid. Besides, it is known that the convulsions produced by this last agent are not of central origin. Husemann has sought to render chloral more efficacious in strychnia intoxication by combining it with some other antitetanic medicament. In conjunction with Hessling, he has employed first a mixture of chloral and potassium bromide, which has been vaunted by Bivine. This mixture is less efficacious than chloral alone. The bromide alone does not prevent, but only retards the convulsions. Alcohol is not so efficacious as chloral. Since physostigmine is now met with in commerce in a state of purity, and free from convulsant calabarine, it has been demonstrated that it is eminently paralyzing. Rabbits to which an otherwise fatal dose of strychnia is given do not succumb, if they be previously brought well under the influence of physostigmine. Husemann's researches may thus be summarized from a practical point of view. In strychnia-poisoning neither potassium bromide, nor physostigmine, nor alcohol, should be employed: chloral should be given unmixed with other medicaments.—*Lond. Med. Rec.*

ROSSBACH ON ANTAGONISM.

Roszbach (*Arch. fur die Ges. Physiol.*, Band xxi, p. 1) replies to the attack made upon his conclusion by

Heidenhain and Luchsinger, that there is no reciprocal antagonism of poisons, a conclusion which has received confirmation at the hands of Husemann, Marine, and Nawroki. Rossbach, working in conjunction with Anrep, arrives at the following conclusions. 1. in the sudoriparous and salivary apparatus of animals (dogs) two parts are to be taken into account in considering the actions of poisons, such as atropine, pilocarpine, and physostigmine—the nervous apparatus and the cellulo-glandular portion; and these are in the same relation as the terminal motor apparatus and the contractile cells. 2. The nervous part of these glands is influenced by very small doses of the poisons paralyzed by atropine, excited by pilocarpine and digitaline; the cellulo-glandular portion remaining insensible to the same doses. Hence small doses of atropine diminish the salivary and sudoriparous secretions only by paralysis of the nervous apparatus, and it is by exciting this apparatus that pilocarpine and physostigmine increase those secretions. 3. In relatively larger doses, the cellulo-glandular, as well as the nervous, portion of the apparatus is affected by the poisons. Large quantities of atropine check the secretion of sweat and saliva by paralyzing both those portions of the glands, whilst large quantities of pilocarpine and of physostigmine exaggerate it by simultaneous excitation of those same parts of the glands. 4. Atropine acts in the above-mentioned manner in much smaller doses than pilocarpine and physostigmine. In other words, the glandular portions are much more sensitive to atropine than to the two latter alkaloids. 5. Atropine surpasses in its action pilocarpine and physostigmine when given in corresponding doses. 6. If atropine be given on the one hand and pilocarpine on the other, either simultaneously or successively, the action of atropine always preponderates for corresponding doses of the other poison. 7. If atropine be given in small doses, so as to paralyze the nervous and leave intact the cellulo-glandular portions of the glands, the latter may be excited by large doses of pilocarpine or of physostigmine. The exaggerated secretion which results simulates a double physiological antagonism. 3. In no case does pilocarpine annihilate the action of atropine upon the pupil.—*Lond. Med. Rec.*

CAMPBELL ON THE VALUE OF QUININE IN OBSTETRICS AND GYNÆCOLOGY.

Dr. Campbell concludes an exhaustive paper with the following remarks. An exalted reflex excitability of the cerebro-spinal centres, as well as general plethora, may be recognized as a characteristic condition of the pregnant woman from the date of conception to the completion of involution. This provisionally increased development and polarity, intended for foetal and uterine growth, renders the woman during its continuance eminently liable to become the subject of various morbid reflex actions, more or less peculiar to her condition. These reflexes are of two perfectly distinct and dissimilar kinds, differing widely, as they may happen to occur, before or after parturition. During the entire period of pregnancy, and until after labor, the reflexes are of an excito-motory character, restricted to the muscular apparatus of the uterus and of general volition. They are apyrexia and non-inflammatory. Their paroxysms threaten premature expulsion of the foetus in pregnancy, and eclamptic convulsions in labor. After parturition, the reflexes

are of an excito-secretory character. They are propagated through the ganglionic or vaso-motor nerves, to the blood-vessels and capillaries of the pelvic organs and tissues of the general system. They are marked by fever, congestion, and inflammation, with their products and consequences. Septic fever and peritonitis, with arrest of involution and mammary abscess, are their not uncommon results. Quinine, by its contractile action on the capillaries of the cerebro-spinal centres, exsanguinates their nervous structure, and more than any known agent depresses the reflex excitability from which the varied morbid phenomena of pregnancy and child-bed originate. Quinine, except in cases of idiosyncrasy, or from an injudicious administration of the agent, exercises no influence whatever to superinduce premature expulsion of the foetus. Moderate cinchonism, adjusted to the type and approach of the paroxysmal neuroses which endanger the welfare of the foetus during pregnancy, is one of our most efficient resources in many cases of threatened abortion and of premature labor. During parturition, it may give steadiness to irregular uterine contractions; and, continued during labor, cinchonism is in a most valuable degree prophylactic against threatened eclampsia. The reflexes of child-bed, pertaining as they do, primarily and principally, to the recently evacuated uterus—well likened to an organ in a traumatic condition—opportune and ready for the awakening of fever and inflammation, are of the gravest character, frequently tending to disorganization and death, or else to permanent and irreparable injury. These reflexes constitute a dreaded class of diseases, most commonly called "puerperal," which, by universal consent, must be prevented rather than trusted to efforts, often unavailing, for their cure. To this end, the most valuable and reliable prophylactic method will be found to consist in the daily administration of quinine, to the degree of moderate cinchonism, from the day of parturition, to be continued daily until normal involution is safely secured. By the observance of this routine, as a rule, it is believed that the occurrence of puerperal diseases will be largely prevented, and that the rate of child-bed mortality will be greatly diminished. Cinchonism, in its quality of preventing and controlling inflammation, whether traumatic or idiopathic, and of suppressing suppuration, all of which is due to its power over reflex excitability of the cord, and its action on the capillaries, has a claim to antiseptic value superior to Listerism, and is less to be dispensed with than carbolic acid, or any of the means and appliances of the antiseptic method. In general surgery, and especially in uterine surgery, as well as after parturition, the combination of carbolized irrigations and applications to diminish peripheral excitability, with persistent cinchonism to depress centric excitability, should constitute hereafter an antiseptic method more trustworthy, generally practicable, and less to be dispensed with than the most faithful observance of the complex Listerian process. [While bearing willing testimony to the value of quinine in lessening the mortality, and more especially the morbidity during the lying-in state, the reporter regards Listerian precautions as being at least equal in prophylactic and therapeutic power to cinchonism. In the British Lying-in Hospital the two, Listerism and cinchonism, go together, and are regarded as twin sisters, the one being the complement of the other. In fact, the reporter looks upon cinchonism, by its power of contracting the uterus, as an integral part of the true antiseptic method.—*Rep.*]—*Lond. Med. Rec.*

THE RISKS OF INTRA-PLEURAL INJECTIONS.

A few years ago we heard far more frequently of accidents occurring during the operation of washing out an empyema than we have of late; but we are reminded of these risks in a note from Professor Billroth's clinic in the *Allgemeine Wiener Med. Zeitung* for Dec. 20th. The writers says that Professor Billroth has become convinced of the inutility of injections for the purpose of washing out the empyemic cavity, except in the case of blood-clots and decomposing secretion; and in the latter case it suffices to perform a single but thorough injection. Thus in one case of a shot-wound in the left thorax, leading to putrid empyema, Professor Billroth made a counter-opening, and for four days allowed thymol to flow through. In ordinary empyema the chances are favorable when the operation is done at the right time, for the longer pus remains in the thorax the longer the lung keeps atelectatic, and thus does not approach the wall of the thorax. A rib is resected, a drainage tube introduced, and pus allowed free escape—a method of treatment much like that practised by Hippocrates, who bored through the rib and introduced a short smooth metal tube into the opening. To diminish pus formation a rod of iodoform can be placed in the pus cavity. Injections of cold disinfecting fluids often lead to ill consequences. Professor Billroth relates one—a female, twenty years old, with empyema, who was treated by means of injections. One day, when a cure was nearly accomplished, she became unconscious during the injection, and could not be restored. Dr. Wolfner also had an older patient who became unconscious during the injection, but who recovered. Billroth explains these remarkable phenomena, that a shock is received by the organism, excited through the peripheral nerves by means of cold water, and under ever so slight conditions, it may be the cause of death; just as a mere blow on the testicle or stomach region can be fatal. Therefore it is important to employ injections, when they appear necessary, of warm fluid.—*London Lancet*.

THE RAPIDITY OF ABSORPTION FROM WOUNDS.

Some observations on the rapidity of absorption from wounds have been communicated by M. Davaine to the Academie des Sciences. The question is one of great practical importance, since a virus so often enters the system by this means. That absorption from a subcutaneous wound is extremely rapid has been demonstrated, the *Gazette Medicale* reminds us, by the experiments of Renault on the poison of glanders, and by those of Colin on that of anthrax. A few minutes were found to be sufficient, so that cauterization was useless if it was performed more than ten or fifteen minutes after the inoculation. The investigation of Davaine related to the important question whether absorption is equally rapid from the surface of all wounds, and he concludes that it is not. Having placed material from a case of anthrax on the surface of wounds produced in rabbits by vesicants, friction with rough surfaces, or the removal of a small piece of skin, he found that many animals survived when the wound was cauterized with potassa fusa one, two, or three hours afterwards. He suggests an anatomical explanation of the difference in the experimental results. In a sub-epidermic wound a number of small vessels are divided, and the circulation is maintained by the collateral branches which

are given off immediately below the divided vessel, and by this the poison, which has penetrated into the interior of a divided vessel, is carried into the general circulation. The same effect is not produced in a more extensive wound, probably because most of the vascular trunks are divided. Whatever be the explanation, it is clear that punctured wounds are by far the most dangerous, and that cauterization to be effective should be very prompt.—*London Lancet*.

HECKER ON SYPHILIS IN PREGNANCY AND ITS EFFECTS ON THE OFFSPRING.

In this paper, Professor von Hecker of Munich gives an account of 173 cases of childbirth in connection with syphilis (*Wiener Medizin Blatter*, 1881, No. 37). The cases are divided into four groups. The first includes cases, 81 in number, in which the mother at the time of her confinement was suffering from active syphilis which had not been treated. Broad condylomata about the anus and on the labia, or ulcers of the fossa navicularis, were usually present, but general signs of syphilis were very rarely found. Of these children, 46 were born at term; 35 were premature or still-born; 46 children were free from signs of syphilis at birth, and remained so during their stay in the lying-in hospital. On the other hand, 25 children were born in a macerated condition, without any syphilitic lesions of the internal organs. The placenta, however, was frequently increased in weight. In seven cases the children showed specific lesions, such as pemphigus, or syphiloma of the internal organs; while in three, death was ascribed to non-syphilitic causes. Group 2 comprises cases in which the mother's syphilis had been treated, usually in hospital, for a shorter or longer period. In the 32 cases of this kind a similar effect was produced on the offspring as in group 1; 14 children were born at term, and 18 prematurely; 11 were quite healthy; 9 dead and rotten; 4 bore signs of syphilis; and 8 were weakly, but not specifically diseased. Group 3 contains 7 cases of old syphilis; 2 of the children were born healthy; 4 with signs of syphilis; and 1 was in a weakly condition. Group 4 consists of 53 cases in which, in spite of the most careful examination, no trace of syphilis was discovered in the mother. Consequently, in the opinion of the author, the children derived syphilis from the fathers. The 53 births produced 55 children (two being cases of twins). The foetuses only reached maturity in very rare instances, and the majority were much below the normal weight. Thus, 23 weighed between 4 and 5 pounds, and 48 between 3 and 6 pounds. Only two were born in a state of maceration. But 18 were born dead; 12 died within twelve hours after birth; and 16 during the eleven following days, leaving only 9 who survived. Pemphigus was noticed 41 times, and in most cases was present at birth. Affections of the lungs were observed in 31 cases, under the form of white lobular pneumonia in 18, and of syphiloma in 14. Abscess of the thymus was noted 16 times; and syphilitic disease of the liver 14 times, always in the form described by von Baresprung. In 12 cases there was induration of the pancreas, which was considerably enlarged, and of cartilaginous hardness. Section of the organ was difficult, and was attended by a grating sound, similar to that produced in cutting through scirrhus. The spleen was enlarged in 10 cases; the suprarenal bodies were indurated in 8; the brain was affected in 3; and peritonitis was found in 3 cases. These facts support the author's opinion that, in most

cases of inherited syphilis of the internal organs, the father is the source of the disease.—*Lond. Med. Rec.*

DEBEL ON THE COMMUNICATION OF SYPHILIS BY SKIN-GRAFTING.

The following case was reported to the Societe Medicale des Hopitaux by M. Fereol for M. Debel of Montbeliard, (*Progres Med.*, 1881, No. 46, and *Gaz. des Hop.*, No. 127). A man, aged 49, had an attack of gangrenous erysipelas, which left a large ulcerated surface on the thigh. In order to hasten cicatrization, M. Debel applied forty-five skin-grafts, taken from several different persons, to the outer portion of the ulcer. Some days later, other portions of the skin were grafted on the inner half of the ulcer. Cicatrization was proceeding when, twenty-nine days after the first, and sixteen after the second grafting, an ulcer of the size of a franc piece, with a greyish-white surface, appeared on the outer part of the surface; other ulcers followed, and soon extended over the whole of the cicatrix. Ten weeks after the first grafts had been applied, roseola appeared, and was followed by mucous patches in the mouth, and other signs of syphilis. M. Debel then ascertained that the patient's son, from whom some of the grafts were taken on both occasions, was suffering from syphilis. Cicatrization of the ulcerated surface took place eventually under specific treatment.—*Lond. Med. Rec.*

MACKENZIE ON THE USE OF THE ŒSOPHAGOSCOPE.

The author's œsophagoscope (*Med. Times and Gaz.*, July 16, 1881) is a skeleton speculum, which only assumes a tubular shape after introduction, by flexion of the instrument on the handle. To the upper end of the speculum is attached a laryngeal mirror. In fifty cases in which it was tried, the author succeeded in using it thirty-seven times. He relates three cases in which the instrument was of service in treatment. In the first, the author saw a ragged projecting growth in the gullet, about three inches below the cricoid cartilage, and removed a piece about the size of a cherry, which, on examination, was found to be of epitheliomatous character. The patient lived six months after the operation, which the author considers to have prolonged life for four or five months. Case 2 presented an oval semi-transparent polypus, about the size of a white currant, on the right side of the gullet, one inch below the cricoid cartilage. Complete recovery from the dysphagia ensued on removal of the growth. In Case 3 a flat lamella of bone, about four millimetres square, was seen about two inches below the cricoid cartilage, on the anterior wall of the œsophagus. It was removed with forceps, and complete recovery resulted.—*Lond. Med. Rec.*

THE SURGICAL ASPECTS OF GYNÆCOLOGY.

In the *New York Medical Journal and Obstetrical Review* for February, 1882, Dr. James B. Hunter, Surgeon to the Woman's Hospital, New York, warns the profession against underrating the importance of operative and mechanical measures in gynæcological practice. It is possible, he remarks, that the youthful or inexperienced practitioner may be tempted to resort

too early or too often to the knife, but this danger pertains to general surgery as well. Operations have undoubtedly a fascination for the average student; but neither students nor the youngest members of the profession have many opportunities for the exercise of practical surgery, however zealous they may be. Nearly all who practice gynæcology have had years of experience, either in private or in hospital practice. The wider their experience the more competent they are to practice the specialty in question. Some eminent gynæcologists never abandon general practice; and many who are best known to the profession have worked their way laboriously through all the older and more conventional methods of treating the diseases of women, and feel that they stand at last on higher and better ground. Men who have thus gained their experience are not apt to be rash or careless in resorting to surgery, and he thinks it a safe assumption that there is no more malpractice in gynæcology than in any other department of medicine. It is difficult in this department, as it is in obstetrics, to ascertain facts and observe results even in hospital cases; but those of us who see much of diseases of women, either in private or in hospital practice, are only too familiar with cases that have been subjected in vain to years of treatment—not always very mild, either—intended to accomplish gradually what might have been the work of a few weeks or months had the necessity for surgical treatment been recognized at the beginning. That many such cases are permanently cured by a resort to surgery, even at the eleventh hour, is matter of record and beyond question. It is equally true that many patients who might be cured delay too long, and must suffer the consequences for the rest of their lives, while a certain number actually perish for want of timely help. The results of neglect and delay are more palpable in cases involving the graver operations, but in the aggregate he believes there is more harm done by procrastination in the less urgent class of cases. Cases of neglected epithelioma of the cervix uteri are not at all rare. Cases of fibroid or other growths causing an exhausting hemorrhage, prolonged perhaps through years, are met with very frequently, and cured by surgical means; in his experience he has seldom seen women who had suffered at the hands of surgeons, though some errors must occur in every branch of practice. On the other hand, the spectacle of women who have suffered for want of judicious surgical treatment has been very common.

When we remember, he adds, how much has been accomplished by surgery in diseases of women, and how little by means strictly medical, it would seem impossible to overestimate the importance of surgery in this department, and superfluous to offer any plea or argument in its behalf. Hardly anything new has been developed in gynæcology that has not to do with surgery. The medical and expectant methods of treatment have been tried for centuries past in very much the same way as they are employed to-day. The surgical methods are of recent origin. Untold thousands of women perished from ovarian tumors until it was demonstrated, after bitter opposition, that a very large majority of such sufferers could be saved by a surgical operation. Yet the aggregate suffering and loss of life from less formidable diseases than ovarian tumors must have been infinitely greater, because of their greater frequency. By mechanical interference he means in general the correction of the various displacements of the uterus and the use of pessaries as a means of curing and relieving such dislocations. Those who disapprove of surgery generally condemn also all mechani-

cal devices for managing the displacements. Nothing is more evident to the gynecologist, however, than the good which is accomplished by the careful use of pessaries. The proper adjustment of a pessary in a suitable case enables the patient to do her daily work with comfort, and practically makes all the difference between health and sickness. Among women of the working classes, who earn their living by hard work, the beneficial effects of mechanical support are strikingly apparent. No one can practice gynecology successfully who is not a thorough master of the art of correcting displacements and applying artificial support for their relief or cure. This branch of practice affords scope for the exercise of much ingenuity, and demands the possession of a fair amount of mechanical skill. Much of the prejudice that exists against the use of pessaries arises from the harm which is done when they are clumsily employed, or employed in cases where they ought to be carefully avoided. In conclusion, he thinks it may fairly be claimed that modern gynecology owes its brilliant success almost entirely to the fact that it has been brought within the domain of surgery. To essay to practice this branch of medicine independently of surgical and mechanical resources is to do the patient a gross injustice. To advise in such matters without a knowledge of what can be done by surgery is also unfair to the patient. Not by any means that *all* cases come within the limits of surgery, or that all that do so can be cured, but that surgery holds out a prospect of relief to so many, that to withhold or discountenance its aid is to fall far short of the duty of a wise and conscientious physician. On the younger members of the profession it is especially incumbent to inform themselves without prejudice of what has been done in this department of surgery within the past twenty-five years, so that, when called upon for an opinion, they may be able to advise intelligently, and to give their patients the utmost benefit of every means which experience has proved to be of value.

THE BONE-CONDUCTION OF SOUND.

In the *New York Medical Journal and Obstetrical Review*, for February, 1882, Dr. J. A. Andrews, Assistant Surgeon to the Manhattan Eye and Ear Hospital, gives an account of his investigations in regard to the intermittent perception of sound, as conveyed through the cranial bones—the observations having been mostly clinical, largely with the use of the tuning-fork. In order that an explanation for the phenomenon of intermittent bone conduction may be understood, he thus formulates the points in differential diagnosis between an affection of the middle ear and one of the labyrinth, as evidenced by examination with the tuning-fork: 1. If a vibrating tuning-fork, *c*, be placed between the teeth, the hearing power being normal on one side and diminished on the other, and its tone be intensified in the ear of which the hearing power is diminished, the cause is seated in the external or middle ear, and the labyrinth is unaffected. 2. If the hearing power be impaired in both ears, and the sound of the tuning-fork be heard better in the worse ear, and intensified on closure of the ear of which the hearing power is most impaired, the cause is still located in the middle ear. 3. If under either of the above-mentioned conditions the vibrations of the tuning-fork be not heard better in that ear of which the hearing power is most impaired, even if its meatus be closed with the finger, the middle-ear disease as a cause can be excluded, there is an affection

of the central apparatus of hearing. If the tone of the tuning-fork be still intensified by closure of the ear of which the hearing power is least impaired, these are disease of the central apparatus on one side only. Should the sound of the tuning-fork not be intensified by closure of either ear, than the disease is on both sides, and has its seat in the labyrinth or in the brain. In the first and second propositions the increased resonance results from the reflection of the vibration from the cranial bones upon the nerve. In the third proposition the reflection or condensation of the vibrations of the tuning-fork upon the nerve when the meatus is closed does not intensify their perception, because the function of the auditory nerve itself and not that of the conducting apparatus is impaired. The peculiarity that in some cases of middle-ear disease the watch is not heard by bone conduction, and in other cases examination with the tuning-fork gives the signs of labyrinth disease—i. e., the tuning-fork being heard by bone conduction better in the ear which is normal as to hearing power, therefore diminished instead of increased in the ear of which the hearing capacity is impaired—can not, it seems to him, be explained by assuming an interference with the conduction through the chain of ossicles. He inclines to the belief, based upon experiments, that this phenomenon is due to increased intra-labyrinthine pressure, brought about in those cases of middle-ear disease in which there is an accumulation of fluid in the tympanum, or the membrana tympani is much depressed, in the former instance by the fluid in the cavity acting upon the oval or round window, or both, and in the latter instance by the plate of the stapes being forced against the membrane in the oval window. In both cases the terminations of the acoustic nerve suffer a mechanical irritation which gives rise on the one hand to subjective noises in the ear, and on the other hand annuls the perception of certain tones. Extreme pressure upon these parts may so interfere with intra-labyrinthine vibrations as to completely obliterate bone conduction for the tuning-fork.

FORMULÆ AND POINTS IN PRACTICE.

AN ALTERNATIVE AND APERIENT FOR CHILDREN, WHEN THE STOOLS ARE PALE, OR DURING THE FEVERISHNESS ATTENDING DENTITION.

℞ Hydrarg. cum creta.....grs. 1-2.
Pulv. rhei.....
Sodæ bicarbonatis.....aa grs. 2-4.
Mix and make a powder to be taken every night or every other night.

APERIENT FOR CHILDREN WHERE THERE IS GREAT ACIDITY OF THE SECRETION.

℞ Sodæ bicarbonatis.....
Hydrarg. cum creta.....aa grs. 2.
Magnes. carbonat.....grs. 5.
Mix and make a powder to be taken every other night.

IN CHRONIC INFLAMMATION OF THE BLADDER, WITH ALKALINE URINE, AND IN CASES ATTENDED WITH COPIOUS EXCRETION OF PHOSPHATES.

℞ Ammon. benzoatis.....grs. 10-20.
Liq. aurant. floris.....3 i.
Aquæ.....ad 3 12.
Mix for a draught to be taken three times a day.

IN PAROXYSMAL VERTIGO AND HEADACHE AND INSOMNIA WITHOUT APPARENT CAUSE.

R Potass. bromidi.....grs. 20-40.
 Aquæ camphoræ..... 5 3.

Mix for a draught to be taken every night at bedtime.

ANAPHRODISIAC.

R Pulv. guaiaci.....grs. 40.
 Potass. bromidi.....grs. 30.
 Magnes carbonat.....grs. 60.

M. Divide into six powders and order one to be taken three times a day in a little mucilage, cream or honey.

VALUABLE ABSORBENT IN GLANDULAR ENLARGEMENTS AND IN EXCESSIVE CORPULENCY.

R Ammon. bromidi.....grs. 12-60.
 Infus. aurantii..... 5 8.

Mix. One-sixth part three times a day, an hour before meals.

PURITIS VULVÆ.

R Quiniæ sulphat.....grs. 2.
 Ext. belladonnæ.....grs. ʒ3.
 Ext. opii.....grs. 12-1.
 Ext. hyoscyami.....grs. 2.

Make a pill, to be taken every six or eight hours.

MEDICAL NOTES AND NEWS.

Paul Bert on Anæsthetics.—In an important paper relating to the use of anæsthetics communicated to the Paris Academy of Sciences by M. Paul Bert, the new French Minister of Public Instruction, experiments are described in which dogs, mice, and sparrows were kept in chambers containing air along with various proportions of some anæsthetic. In a graduated series of such mixtures of increasing strength one is found just sufficient to cause insensibility, and proceeding higher a dose is reached which kills. The interval between these points (the anæsthetic dose and the fatal dose) M. Bert calls the working zone (*zone maniable*). He has sought to determine it for various agents—chloroform, ether, amylene, bromide of ethyl, chloride of ethyl—for the animals named, and has reached the singular result that in all these cases the fatal dose is precisely double the anæsthetic dose. Thus, e.g., in the case of mice submitted to chloroform, 6 grammes of chloroform vapor in 100 litres of air cause insensibility and 12 grammes are fatal. When an animal is made to breathe, in the way indicated, a mixture about the middle of the working zone, it is very quickly anæsthetized and remains perfectly quiet during the whole experiment (two hours in some cases), not requiring any attention or concern; and the contrast in this respect to the ordinary methods by compress, sponge, etc., is striking. In the latter case, indeed (M. Bert points out), a patient alternately breathes, according to the quantity of chloroform in the compress, or its distance from mouth and nose, a mixture of air and chloroform either below the active dose, or within the working zone, or at or beyond the limit of safety; and a fatal result in the last instance is not always ward off by prompt removal of the compress. The working zone is often

very narrow; in the case of chloroform, while 8 grammes in 100 litres does not suffice to render a dog insensible, 20 grammes kills it. Ether is much less dangerous, for between the active and the fatal doses of it there is an interval of 40 grammes. An anæsthetic acts, not by the quantity respired, but according to its proportion in the inspired air; hence, the statements of surgeons as to how much chloroform they put on the compress have little value. M. Bert recommends the use of a mask, communicating by a tube with a zinc reservoir holding 200 or 300 litres of the anæsthetic mixture. The pulse and the respiration need no attention. The most delicate matter would be the determination of the lower limiting dose. The author's experiments here give no guidance. The doses varied greatly for dog, mouse, and sparrow, always less for the mouse than for the dog. They were always greater for the sparrow than for the mouse; and in the case of chloroform and amylene they were about equal for the sparrow and the dog. Among other facts, it is stated that the mixture alters very little in strength, except in the first instance. Experimenters have sometimes been mistaken as to the fatal proportion of chloroform in air, though using potash to absorb carbonic acid; this substance rapidly decomposes chloroform. Once more, the working zone for protoxide of nitrogen is more extensive than for the substances specified; the ratio between the limiting doses being one to three.

Heads and Hats.—The subject of the alleged diminution in the size of men's heads during the past generation is one that has been attracting some attention recently, and the whole question is very fully discussed in *Nature* by several correspondents. Mr. F. F. Tuckett adduces the statements and figures of a number of well-known hatters to prove that within the last twenty-five years the average size of hats has decreased by one size; i.e., by about $\frac{3}{8}$ inch in circumference. That this is the case with regard to hats there can be no doubt, but that the decrease is owing to a diminution in the size of the average head, it would be very difficult to prove. If we remember that men now cut their hair quite close to the head, and wear their hats on the top of their heads instead of down on their ears, the $\frac{3}{8}$ inch may easily be accounted for. Indeed, the weight of evidence is entirely against any such explanation as the hatters would like to make out, and Mr. Charles Roberts puts the case very clearly. Mr. Roberts, moreover, refers to several other points of serious interest to all civilized communities. "The chief reason for the falling off in the dimensions of hats in the present day," Mr. Roberts states, "is the accession to the hat-wearing community of a very large number of small-headed persons, such as clerks and shopmen, who formerly did not wear hats at all; and, on the other hand, the defection of a large-headed class, the clergy, who have given up tall hats and taken to the use of soft felt ones. The only way hatters' measurements could be made available for anthropological purposes would be to examine the statistics of one class, say the professional, who have always worn hats, and then allow for the change of fashion in the hair and the position of the hat in the present day. If it be really the case that the heads of the present generation are smaller than those of the last, we must look for the cause, not in tight lacing, but in the diminished size or the deformity of the female pelvis, for it is this which is the gauge of the heads of the people. Male infants are longer, heavier, and have longer heads than females,

and at the time of birth a greater destruction of males takes place in consequence. In Europe, the proportion of infants born alive is 105 males to 100 females; but if we include the still births, the proportion of the sexes is 150 males to 100 females, showing that there is a sad loss of some of the finest physical and probably mental products of our race by the mere mechanical difficulties at the time of birth. There can be no doubt that rickety conditions of town children and the sedentary or persistent standing occupations of young girls in shops, etc., will tend to distort the pelvis and thus act injuriously on the race by reducing both the physical and mental standard of their children. There can be no doubt that our large towns are, as it were, the graves of the physique of our race; but it is not because town life is so very injurious, but because the feeble, the halt, and the blind gravitate towards them in search of work suitable to their capacities. So far from admitting the degeneracy of our population as a whole, I am satisfied that it is improving in physique, and is better now than at any former period of our history. The skill and care which save the weak child to the community, give health and strength to the strong, and the physique of the whole is raised to a higher level. It is difficult to find direct evidence of this improvement, but some statistics of the stature and weight of factory children (where we might expect degeneracy, if anywhere) recorded in 1833 and 1873 show that the children of the latter period were a whole year in advance of the former—children of 10 or 11 years of age in 1873 being as tall and heavy as those of 11 and 12 forty years previously." Mr. Tuckett gives some figures with regard to the sizes of hats worn by several eminent men which may interest the curious in these matters. Lord Chelmsford, $6\frac{1}{2}$ full; Dean Stanley, $6\frac{3}{4}$; Lord Beaconsfield, 7; the Prince of Wales, 7 full; Charles Dickens, $7\frac{1}{8}$; Lord Selborne, $7\frac{1}{8}$; John Bright, $7\frac{1}{8}$; Earl Russell, $7\frac{1}{4}$; Lord Macaulay, $7\frac{3}{8}$; Mr. Gladstone, $7\frac{3}{8}$; Mr. Thackeray, $7\frac{5}{8}$; Louis Philippe, $7\frac{3}{4}$; M. Julien, $7\frac{3}{4}$; Archbishop of York, 8 full. Whatever may be the case with regard to brains, it would scarcely seem from these figures that hats are a criterion of brain-power.

Very Peculiar People.—The sect of persons known as "Peculiar" People has suffered a blow by the committal on Friday last of one of their body on a charge of manslaughter. This victim of barbarian zeal is the father of a family, one of the members of which, a boy aged eight years, died of confluent small-pox, without any attempt having been made by the parents to procure medical aid on his behalf. At the inquest necessitated by the refusal of the authorities to grant a certificate of burial in the absence of medical testimony as to the cause of death, certain curious and instructive evidence was tendered by the witnesses called. Occasionally in the past the public conscience has been scandalized by outrageous contraventions of all ordinary sanitary regulations by individuals claiming to belong to the "elect," who in their supreme contempt for ordinary customs for civilized life have actively endeavored to inflict disease and death on their surroundings. Thus, too, in the present instance, the wife of the accused man declared to the coroner that while her son was lying ill of confluent small-pox her husband and nephew were "out and about as usual," and in reply to the inquiry whether her creed authorized the murdering of a whole street full of people, she confidently replied, "there is no fear of that." In this

simple confession there is surely enough to convince any unprejudiced observer that the miserable wretches who style themselves "Peculiar" deserve more justly to be entitled imbecile. Much as we may respect the trust and resignation that so distinctly mark the character of the truly devout and religious, there is something widely different from this in the behavior of the ignorant fanatics who are now brought into conflict with "the world." Arrogance, ignorance, and idiocy are manifestly exhibited in the performances of the "Peculiars;" and with this the certainty that they are permitted to persist in their special observances at the critical expense of ordinary citizens, is the best proof of a necessity for their being compelled to conform, at least outwardly, to the usual rules of civilized existence. It is gratifying, therefore, to find that the unhappy child-victim's father is charged with the manslaughter of his son; and we may hope that ere long the Peculiar People will arrive at the conclusion that it is wiser and better to trust in medical skill to cure their sick and maimed than in the superstitious ceremony of "laying on of hands," however that may be associated with unlimited faith in extraneous powers.—*Med. Press.*

A Code of Ethics reported to the Medical Society of the State of New York, February, 1882, by a committee appointed February 3d, 1881, to revise the Code of Ethics. Wm. C. Wey, M.D., Chairman; C. R. Agnew, M.D., S. Oakley Vanderpoel, M.D., Wm. S. Ely, M.D., Henry G. Piffard, M.D., Secretary.

I. THE RELATIONS OF PHYSICIANS TO THE PUBLIC.

It is derogatory to the dignity and interests of the profession for physicians to resort to public advertisements, private cards, or handbills, inviting the attention of individuals affected with particular diseases, publicly offering advice and medicine to the poor without charge, or promising radical cures; or to publish cases or operations in the daily prints, or to suffer such publications to be made; or through the medium of reporters or interviewers, or otherwise to permit their opinions on medical and surgical questions to appear in the newspapers; to invite laymen to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to perform other similar acts.

It is equally derogatory to professional character, and opposed to the interests of the profession for a physician to hold a patent for any surgical instrument or medicine, or to prescribe a secret nostrum, whether the invention or discovery or exclusive property of himself or of others.

It is also reprehensible for physicians to give certificates attesting the efficacy of patented medical or surgical appliances, or of patented, copyrighted or secret medicines, or of proprietary drugs, medicines, wines, mineral waters, health resorts, etc.

RULES GOVERNING CONSULTATIONS.

Members of the Medical Society of the State of New York, and of the medical societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine. Emergencies may occur in which all restrictions should, in the judgment of the practitioner, yield to the demands of humanity.

To promote the interests of the medical profession and of the sick, the following rules should be observed in conducting consultations:

The examination of the patient by the consulting physician should be made in the presence of the attending physician, and during such examination no

discussion should take place, nor any remarks as to diagnosis or treatment be made. When the examination is completed, the physicians should retire to a room by themselves, and after a statement by the attending physician of the history of the case and of his views of its diagnosis and treatment, each of the consulting physicians, beginning with the youngest, should deliver his opinion. If they arrive at an agreement, it will be the duty of the attending physician to announce the result to the patient, or to some responsible member of the family, and to carry out the plan of treatment agreed upon.

If in the consultation there is found to be an essential difference of opinion as to diagnosis or treatment, the case should be presented to the patient, or some responsible member of the family, as plainly and intelligently as possible, to make such choice or pursue such course as may be thought best.

In case of acute, dangerous or obscure illness, the consulting physician should continue his visits at such intervals as may be deemed necessary by the patient or his friends, by him, or by the attending physician.

The utmost punctuality should be observed in the visits of physicians when they are to hold consultations, but as professional engagements may interfere or delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe, but if it be the consulting physician he should retire, except in an emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient, and give his opinion in writing, and under seal, to be delivered to his associate.

III.—THE RELATIONS OF PHYSICIANS TO EACH OTHER.

All practitioners of medicine, their wives, and their children while under paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired.

Gratuitous attendance cannot however be expected from physicians called from a distance, nor need it be deemed obligatory when opposed by both the circumstances and the preferences of the patient.

The affairs of life, the pursuit of health and the various accidents and contingencies to which a medical man is peculiarly exposed may require him temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy which should always be performed with the utmost consideration for the interests and character of the family physician, and when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglect his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long-continued exercise of this fraternal courtesy without awarding to the physician who officiates the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

Diversity of opinion and opposition of interest may, in the medical as in other professions, occasion controversy and even contention. Whenever such cases

unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians before appealing to a medical society or the law, for settlement.

If medical controversies are brought before the public in newspapers or pamphlets, by contending medical writers, and give rise to, or contain assertions or insinuations injurious to the personal character or professional qualifications of the parties, the effect is to lower in the estimation of the public, not only the parties directly involved, but also the medical profession as a whole. Such publications should, therefore, be brought to the notice of the County societies having jurisdiction, and discipline inflicted, as the case may seem to require.

False Pregnancy at Term.—Dr. Rendu (*Le Concours Medical*, November 19 1881,) reports the case of a well built, hitherto healthy girl of seventeen, whose menses ceased on the fifteenth of February, and during the succeeding four months the usual symptoms of pregnancy, extending even to apparent movements of the child, made their appearance. The patient being apparently in labor about the nineteenth of November, sent for a midwife. The midwife obtained assistance from the midwifery clinic of Lyons, whereupon it was found that the case was one of spurious pregnancy. Upon this state of things being communicated to the patient, the symptoms of pregnancy disappeared and she immediately began to recover. Cases of this kind are not rare, but are sufficiently uncommon to be of interest.

A Chair of Nervous Diseases has been erected at the Faculty of medicine of Paris, to which M. Charcot has been transferred, at his own wish, from the Chair of Pathological Anatomy, which he has filled up to this time.

Sir Erasmus Wilson, at a cost of nearly £30,000, has erected a new wing and chapel to the Margate Sea Bathing Infirmary, and the building will shortly be opened by the Prince and Princess of Wales.

An English physician with whom Sydney Smith was always in a controversial state, accepted a professional call to Australia in its early savage days. When taking leave of him the wit said, "Good bye, Doctor; you have never failed to disagree with me, and I believe you will disagree with the savage who eats you."

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BOOK NOTICES.

Syphilis and Marriage. By Alfred Fournier, *Professeur a la Faculte de Medecine de Paris; Medecin de l'Hopital, St. Louis; Membre de l'Academie de Medecine, etc.* Translated by Alfred Lingard, M. R. C. S., with prefatory remarks by Jonathan Hutchinson, F. R. C. S., Senior Surgeon to the London Hospital; Professor of Surgery and Pathology in the Royal College of Surgeons; President of the Pathological Society of London, etc. Published by Birmingham & Co., New York. 1882. Price 30 cts.

We have in a former issue in commenting on Morrow's translation of Fournier, noted the excellence of this work, the importance of the subject, the fact that it has heretofore failed to receive proper recognition by the profession, and that on account of lack of exact knowledge on the subject, physicians have through ignorance failed to advise intelligently, and as a consequence much avoidable evil has been entailed on humanity.

Fournier's book is by far the most satisfactory consideration of the subject it has yet received, and no medical man should leave it unread.

The form in which it is now published renders its well-defined theories, its golden maxims, its common

sense inevitable deductions from facts, accessible to all.

We cannot speak too highly of the directness and clearness and yet withal the delicacy with which Fournier has presented the subject.

Of Lingard's translation, suffice it to say that it has succeeded in reproducing the language and spirit of the original work.

The Student's Guide to Surgical Diagnosis. By Christopher Heath, F. R. C. S., Holme Professor of Clinical Surgery in University College, London, and Surgeon to University College Hospital; Honorary Fellow King's College, London. Published by Birmingham and Co., New York, 1881. Price 20 cents.

Only those who have been brought face to face with the perplexities of diagnosis in surgical emergencies can appreciate at its true value an attempt made to guide to a clearer understanding of the differential diagnosis of surgical injuries and diseases.

The attempt is made in this book to afford this assistance by grouping surgical affections anatomically and by arranging the symptoms of each in the order in which they would strike a painstaking observer. No attempt is made to discuss the pathology or treatment of any of the disorders described and the description itself is purposely limited to the most salient points.

The usefulness of a work such as this is at once apparent. Impressed with the value of the method of systematic note taking in observing the progress or decadence of disease the author has endeavored to inculcate the advantages of such a method in private practice and introduced a series of questions the answers to which will not fail to aid in correct diagnosis. In arranging these questions he has first stated the general questions applicable to all cases and then detailed those to be asked when the suspicions are directed to some particular part of the body.

We believe the book cannot fail, if properly studied to be of great service to students and to those practitioners as well who are accustomed to observe disease in a desultory manner and those whose experience in actual observation of surgical injuries has been limited and whose theoretical knowledge needs correcting.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE Feb. 2nd, 1881.

The President Dr. Fordyce Barker presided. The minutes of the previous meeting were read and approved. Dr. Adams read the necrological report of foreign members. The Librarian's report was read and accepted. After introductory remarks by the President the paper of the evening entitled

"PRACTICAL POINTS IN PLUMBING. KNOWLEDGE NECESSARY FOR PHYSICIANS FOR THE PROTECTION OF THEIR PATIENTS"

was read by its author Charles Wingate.

Dr. Barker spoke as follows:

FELLOWS OF THE ACADEMY: One of the avowed objects of this Academy, as expressed in its constitution, is the promotion of the public health. Strictly speaking, all of our scientific work is in this direction, but this meeting is in a larger sense devoted specifically to this object. There is not a physician in this city engaged in active practice who is not frequently

called upon to see disease of various degrees of severity often resulting in death, which has been caused by a poison. If we can see our patients early enough, we can successfully meet such poisons as arsenic, as corrosive sublimate, as aconite, and all of this class, because we have antidotes which will prevent their effect. But where the poison is introduced into the system so insidiously that the subject is unconscious of its absorption until its effects are produced, then it is not a question of antidotes: but the problem is, How shall we counteract its consequences, and how shall we keep our patients alive until the life-destroying agents have ceased to put in jeopardy the vital powers?

The special poisons to which I now refer are the gases resulting from defective plumbing, to which all classes—the poor occupants of tenement houses, those who are able to command the necessities and many of the luxuries of life, and those who live in the most expensive houses and whose riches can buy everything but health—are alike exposed. None but physicians can know how general this poison is, and how positively it explains much of the disease that they are called upon to treat, and of the many sad deaths which follow.

When I assert that it is a daily experience with me to see persons whose general health is suffering from this poison, as manifested by malaise, loss of appetite and strength, slight febrile symptoms, diarrhœa, physical and mental depression; and that I have seen infants, children and adults suffering from diphtheria, scarlet fever of a mild type complicated with this disease and destroying life; those in vigorous health, students in colleges, ambitious and active young men in the professions or in the commercial or financial world, stricken down by typhoid fever, some struggling through the disease and others dying; and that the cause has been demonstrated to be this poison, I only state facts which are common in the experience of all physicians in this city. In some cases this has been the result of ignorance of the very unsanitary conditions which environed them. For example, two young men were stricken down with typhoid fever, one of whom died. They were not acquaintances, but occupied offices in the same building, in the vicinity of Wall Street. On investigation it was found that there was not a trap in the whole building. In a house, in which but a few months before several hundred dollars had been expended to put the building in perfect condition, a young man died of typhoid fever and others of the family became ill, when it was found that a defective waste pipe was saturating the house with poisonous gas. But such facts as these are so common and so well known to the profession that I need not dwell upon them.

It is the custom of many in this city, whose means will permit them to do so, to take their families for health and pleasure to various summer resorts, at the seaside, the mountains and other attractive country hotels; but every year for some time past some of these places have proved fatal to health and often to life by typhoid fever; so that now it seems to be the plain duty of every physician to warn such families as hold him responsible for their health, of the danger of every resort that does not give them the evidence of a competent sanitary expert that their house is safe from all such dangers. None but physicians are alive to the fact that many of those living in beautiful and expensive houses in this city are like the inhabitants who dwell at the base of Mount Vesuvius, in a soft, balmy, voluptuous atmosphere, surrounded by vine-

yards and gardens luxuriant with the olive and the fig and the orange trees, which mask and hide the danger and desolation of the lava and ashes of disease. It is absurd to suppose that those who find pleasure in expending many thousands in luxury and art to embellish their homes will not gladly expend the insignificant sum necessary to make their homes healthy for their families and themselves.

The physician should never be an alarmist—he never can hoist the signal of danger, except when he sees the forewarning signs of an impending storm. Unfortunately he never can see the danger from this position, until its effects are already beginning to develop as shown by disease. Then again he labors under the difficulty of being unable to demonstrate or even suggest where the poison originates. He can only say that science has established the fact that certain symptoms are due to certain causes. It seems to me that it is the duty of the profession to educate itself up to the point of being able to demonstrate intelligently to their patients how the danger from these poisons may originate. I now have the pleasure of introducing Mr. Charles F. Wingate, who will read the paper of the evening.

The address of Mr. Wingate was substantially as follows:

For a layman to venture to address such an audience as that before me upon a sanitary subject seems the height of presumption, when one reflects how vast a debt sanitary science owes to the medical profession. Founded by physicians, its growth has been mainly due to their voluntary and disinterested labors, often at great personal and pecuniary sacrifice.

It therefore seems like carrying coals to Newcastle to offer advice to medical men regarding sanitation. Yet as the old derisive proverb has been set at naught by "the whirligig of time," so it has strangely come to pass that the sanitary engineer can now assume to instruct his betters and even show physicians their omissions in matters properly within their province.

I shall not, however, discuss general sanitation, but limit my remarks to the practical points relating to plumbing and kindred subjects which have a direct relation to the physicians' efforts to overcome disease. When so much sickness can be traced to unsanitary conditions due in the main to preventable causes, it is desirable that the family physician should be able to point out such conditions, and in a general way suggest the proper remedies for them. When, also, so much foolish fear prevails regarding the risks to health from so-called modern improvements, the physician should be able not only to assure but to convince his patients that plumbing properly executed with good materials, and upon scientific principles, is absolutely safe and is decidedly to be approved rather than abolished. It is idle to talk of returning to the primitive discomforts and abominations of our forefathers in this line. Modern improvements are improvements. The world does not move backward nor readily abandon anything which conduces to comfort and health. Plumbing appliances are hence no more deserving to be done away with than are gas or electricity, the railway or the newspaper, each of which is also open to serious objections.

ADDITIONAL DUTIES FOR DOCTORS.

Of course the physician cannot perform the sanitary engineer's work in detail, but he can at least point out the necessity of watching house plumbing, and indicate,

in a general way, what steps are necessary to correct defects when they are discovered. Successful practice of medicine depends upon relieving pain and checking or eradicating disease. This, I presume, no one will deny as a general proposition. How, then, can the physician gain these practical ends unless he can point out the causes of disease and how to remove them? The greatest skill in diagnosis or mastery of therapeutics will be vain, so long as the patient's surroundings are lowering his vitality or poisoning his blood. If the physician can detect these ill conditions, and promptly correct them, will not he receive due credit from his patients and their friends? If the conditions are beyond immediate correction, and the patient is ordered to leave the house, the physician is entitled to just as much credit as he justly claims when an invalid returns from a sea voyage or sojourn in Florida or Colorado, at his instigation, with health restored.

The true function of the physician is being understood. Intelligent patients recognize that there is no magic about medicine, and that disease is not removed by incantation or sleight of hand. Every high-minded physician also scorns to rely upon mystery, delusion or pretense. Whenever sickness, such as is usually traceable to defective plumbing or drainage, prevails in a house, and no sufficient cause for its existence is apparent, the physician should not be content until an examination has been made by a health officer or other competent person, to make sure that the house is free from sanitary defects. Nothing should be taken for granted in such matters, and no evidence accepted regarding the safety of hidden plumbing work, as under-ground drains, cesspool traps, etc., except to have them opened to view and their real condition proved beyond a doubt. Every physician should warn his patients not to lease or buy any dwelling, whether old or new, without having the premises thoroughly examined, and obtaining a certificate of their healthfulness; not the ordinary landlord's or agent's verbal statement that everything is lovely, etc., but a legal document that will hold good in the courts, and be a ground for obtaining damages in case the house should prove to be unsanitary, and sickness result in consequence. This wise precaution is now being taken by many persons. The examination, however, must be thorough, or it will be useless, as a false sense of security, based upon an incomplete examination, is worse than absolute ignorance.

A NEW LITERATURE NEEDED.

There is another circumstance which has made it necessary for specialists to take up household sanitation, viz., that much of the literature of the subject has been written by European authors, and is adapted for climatic conditions and social habits and customs differing from our own. Hence an original science of domestic sanitary engineering has had to be developed within a very short time to meet American needs. It is a significant fact that many of the worst hygienic conditions are found in doctors' dwellings. This is especially so in the case of those who have only a smattering of information on sanitary subjects. In plumbing, as in medicine, a little knowledge is a dangerous thing. Hence, most plumbers complain that physicians are over confident and among the most wrong-headed customers. I may commend to the profession the frank confession and counsel of Dr. Pridgen Teale, in his illustrated book on dangerous houses.

Any one having opportunities for seeing sanitary

defects in the vast majority of city houses, whether occupied by millionaires or mechanics, and whether situated on Murray Hill or Avenue B, can feel little surprise at the statistics of increasing mortality in New York. The constant demand for the doctor's services in so many houses in their normally bad state, and the fact that the doctor's services are no longer in demand when they have been put in sanitary condition, tells its own lesson.

I will devote the rest of my time to the details of what I find in New York, Brooklyn and Boston and smaller cities in New England and in New Jersey. We build houses involving the labor of scores of mechanics, and leave them, with no one to take care of them, to go to rack and ruin. Some one must supplement the work of the builder, and so the sanitary engineer has often to do much inconsistent work beside correcting sanitary details.

HOW TO EXAMINE A HOUSE.

The first point is how to examine a house. Every part of the plumbing must be exposed to view or tested, and things are usually found different from what they have been represented. The peppermint test is one of the first. An ounce of oil of peppermint in a pail of water is poured into the openings of the plumbing fixtures at the upper part of the house. If the smell of peppermint escapes by a leak this shows that sewer gas would also escape. A second point is the quality of the details of the plumbing work. A single portion of the work, one joint of a pipe, will tell a practised plumber the capacity of the workman. If a house is deficient in its minor details, it will be found generally bad. A direct leak from a pipe will be shown by holding a candle near it. The practised nose can tell a leak in a short time, and by the density of the smell from a roof pipe it can be learned whether there is a trap in the pipe to the sewer. The sanitary engineer goes first to the cellar and looks at the sources of damp. These are manifold both in the city and country; rain and snow blow in; there is leakage from the water pipes and areas, and there is the refrigerator waste. I visited a house in Boston where all the rain water and refrigerator waste were soaking into the soil, and the house, in addition, was on low made ground on the Back Bay. I saw here a novel phenomenon; the ground was so damp that the whole of the yard was covered with a fine moss. Dangerous as the dampness was, it was hard to convince the occupant, because there had been no sickness in the house, and the owner considered me an impostor.

Another source of danger is from broken or leaky underground drains. Most houses have underground drains which are made of tiles laid by ignorant workmen, and I have seldom or never found a drain which was not in a defective condition. Even in Memphis the new drains were not absolutely tight, on account of the extra pitch in some cases, and of breaks. Then the soil becomes saturated with the worst kind of sewerage. In Boston I have found many drain-pipes without the proper pitch or flush. Some pitched toward the houses instead of the sewers; others were choked with grease or there was no sewer connections at all. The plumber sometimes ran the drain over a rock, up and down, or ended it on one side, continuing on the other, or connected two sections of six-inch pipe by a four-inch pipe. A break or stoppage means such a deadly deposit of sewerage as accumulated under a house I examined near Murray Hill. It was taken by a family last spring who in a few months

nearly all fell sick. The gentleman said that on opening the register in his bedroom he was almost choked by a peculiar ammoniacal smell. He obtained a certificate from Dr. Loomis of the presence of malarial fever, and from the Board of Health of the bad sanitary condition of the house, as well as one from myself. I found one drain for two houses which was open at every joint and ran near the furnace, so that all the air in the house was poisoned with sewer gas, and in addition the refrigerators communicated with the sewer. A legal question arose when the gentleman refused to live longer in the house under any circumstances. The agent claimed \$3,000 as damages, but the matter was finally compromised and the occupant paid \$1,000. This introduces an important question as to claims for damages from sickness, and the courts have lately decided that if the landlord is cognizant of sanitary defects he is liable for resulting injuries. Nothing but iron pipes with lead joints properly coupled, and carried along the cellars in sight, or in trenches easily accessible should be used.

Another source of danger is from the enormous quantity of made land, especially near Central Park. [Here the lecturer referred to General Viele's sanitary map of the city.] Much of this is filled with broken rocks, which give an area for foul air, leakage and soakage. There are houses on marshes where water can be found by digging a few inches. The Board of Health states that ten years are necessary to thoroughly purify made land. Many downtown buildings, especially the new Fulton Market, are erected fairly in the water. Old plumbers used to say that the cellars were made like the bottoms of ships and the houses might be said to float.

DEVELOPMENT OF PLUMBING.

It is constantly asked, Why is it that we have only lately heard of the serious consequences of bad plumbing and why is it that sewer gas was so little known in the past? To answer this it is necessary to sketch briefly the historical development of plumbing. One hundred years ago there was little, if any, plumbing in ordinary American dwellings. The usual sanitary arrangement consisted of a well, a cesspool and a cistern for holding rain water. Later on kitchen sinks and old-fashioned boilers were introduced and finally baths and water closets came into vogue. It was not until the introduction of Croton water in New York in 1842 that even this state of development was reached. Prior to that date plumbing was confined mainly to ships. It was often elaborate, the plumbing bill for the ill-fated steamer Arctic amounting to \$1,200. The work however was simple in houses, as in ships, and traps, vent pipes, siphonage and sewer gas were unknown and unmeaning terms. As population increased and dwellings thickened the effect of massing people in close quarters made itself felt. The old cesspools, which were roomy and had ample ventilation, were replaced by smaller receptacles, which in time were tightly sealed up, with the ostrich-like idea that if hidden below the ground their contents could not do harm. It was also found less convenient to empty and clean these receptacles, and so they were frequently neglected.

Public sewers were slowly introduced. In 1849 there were only seventy-two miles laid in New York against 341 miles now. Many of the first sewers were only sewers in name, having been laid to carry off kitchen waste alone. They were merely rough stone drains uncemented and open, so that when used to receive sewage they rapidly polluted the soil and be-

came simple storehouses of sewerage. Down to a very late date many of the sewers of New York were constructed of inferior material and imperfectly laid. Badly burned bricks, bogus cement and sand that was half loam were used in making them, while, especially under Ring rule, the contractors who laid them executed their work in the cheapest and most culpable manner. Few of the best sewers are really tight, while the majority leak at every joint, and thus the whole system is an enormous source of soil pollution. From the lack of a comprehensive plan in the beginning and of competent supervision during their construction many of the sewers have little or not enough grade, and are not easily flushed. Hence, they become, especially when tide-locked, elongated cesspools and mere gasometers for creating evil.

Their lack of ventilation leaves small chance for the sewer gases to find vent, excepting through the house drains, and the average plumbing affords no barrier against their free diffusion throughout living and sleeping rooms. And here it should be remarked that sewer gas is created not only in the sewers alone, but every inch of waste pipe in a house, even though used to convey nothing but soapy water or the waste of melted ice from a refrigerator, can and commonly does produce foul gases. The worst odors are from just such sources, and they are certainly unwholesome. There are many broken gas-mains. The soil can hardly be dug up without encountering the smell of gas. The gas companies are aware of this loss and make it up in their bills. Professor Chandler says that ninety per cent. of the cellars in New York are bad, and I should say ninety-five per cent. are either originally dangerous or made so by neglect. The relations of soil moisture to disease have been shown by Dr. Griscom in the statistics of sickness among the colored population living in cellars in the time of cholera.

SOURCES OF FOUL AIR.

There are several sources of foul air in houses. The air supplied to the furnace is often taken from the cellar, or the cold-air boxes are made of unseasoned wood, and in them rats, cats and chickens seek shelter. In one house two chickens and a cat were found roasted in the brick work near the furnace, and in another the cold air-box had settled to admit the air near the servants' closets, a foul refrigerator and a receptacle for soap-fat. The refrigerator should have no connection with the drains as they are built in most houses, nor should the refrigerator waste run into the soil. Garbage and dust from wet and coal in cellars cause foul air, which is drawn up into the living rooms by the suction of hot air if not through the dumb-waiters. It is desirable to have the kitchens and laundry separate from the house, as was the case with the cottage at Elberon occupied by President Garfield. The gas lights should be ventilated, and the servants' accommodations carefully looked to; for if they have poor rooms and no bathing accommodations they are naturally careless in their household duties. It would be desirable to have all boxing around kitchen plumbing, sinks, etc., removed. Servants should not sleep on the ground floor, especially near closets. Hard floors are an improvement, but there is too much upholstery in houses and there should be fewer curtains, which retain the dust. The plumbing ought to be isolated as far as possible, and the Board of Health recommends a shaft for the purpose running through the house. It is bad to have inside bath rooms opening into sleeping rooms.

There must be an ample water supply, and I am glad that Ericsson's caloric engine is being used to pump water. There is especial danger in sleeping in rooms opening into closets.

Most soil pipes are too large, as the one in the Rockwell house in Brooklyn, which was filled only one-fifth by water. Dangers from sewer gas are largely due to job-building, the employment of poor, cheap plumbers, and the ignorance of architects. There is probably only one in the city competent to execute the specifications for the plumbing of large houses.

Dr. Wingate deprecated the cheapening of plumbers' work, as they could not always tell its cost any more than a physician could tell the cost of taking a patient through typhoid fever. He referred to the follies of amateur sanitarians, approved the recommendation of the board of health of a trap between the house and the sewer, and closed by expressing a hope for the enforcement of sanitary laws by public opinion, the increase of the water supply, and education in plumbing, architecture and hygiene. He also approved the movement of co-operative building, saying that people joined together in this way would see that their houses were well built.

THE EXPERIMENTS.

Professor Doremus was then called upon, and he spoke about as follows:

MR. PRESIDENT AND GENTLEMEN: At the request of your illustrious president, whose suggestion is always a mandate to me, and with whom I have been associated in medical colleges for a third of a century, I have the honor of appearing before you to-night to exhibit a few experiments, which will demonstrate how readily gas passes through porous media. I had the honor to be instructed in this by that distinguished man, the late Professor John W. Draper, about forty years ago. In 1867, at my last interview with Professor Liebig, he said to me, "Don't leave Munich without visiting Voigt and Pettenkoffer's laboratory," and I saw there what I shall now present to you.

On the table in front of the president was a block of brown sandstone, twelve inches by fifteen inches long and four and three-fourths in thickness. On each side of this a depression a quarter of an inch in depth had been made. Iron plates had been inserted in them and attached by clamps. To each iron plate an iron tube was fixed. The whole surface of the stone, except that covered by the iron, had been coated with many layers of varnish. Professor Doremus fastened a flexible tube to a gas jet at one end, and, at the other, to one of the iron tubes, the other extremity of which, as has been explained, rested against the sandstone. After waiting a minute or two he applied a lighted taper to the end of the other iron tube connecting with the sandstone, and a small flame sprang up, showing that the gas had passed through the solid stone. Professor Doremus then took a block of brickwork eight inches in thickness, made of Philadelphia brick, with plates and tubes attached in the same manner as to the sandstone. By blowing through one of the tubes, a candle-light placed at the end of the other was deflected. And this deflection lasted for some time after the blowing had ceased, showing that it took some time for the air to go through the brick. Professor Doremus said that he told Judge Brady how this experiment was performed. The Judge listened to him attentively, and then remarked, "Tell us the trick, Doctor."

Professor Doremus added that hydrogen or street gas could be passed through stone in the same way,

and that the pressure necessary to accomplish it was very small. He then made one or two more experiments to show how readily some gases passed through water, and continued as follows:

What must we do, if we have the gases in our sewers: If these are cut off from our houses by water-traps, it does no good; the gases will pass through the water. We must have chemicals in the trap that will decompose the gases. Chlorine is the great agent, the "ring breaker," that will decompose hydrogen gas and every form of poison. Suppose there is a case of scarlet fever in a house, and the walls become impregnated with the poison. Chlorine or some other gas should be generated that will decompose the poison in the wall. In 1865, the ship *Atlanta* arrived at this port with a number of cholera patients. Sixty of her passengers had already died. At the request of the Health Physician of the city, and by the authority of Mayor Gunther and Dr. Swinburne the Health Officer, the *Atlanta* and all other vessels entering the Narrows were treated with chlorine, bromine and other active agents. This was so effective that not a single case of cholera occurred in New-York or its vicinity.

Dr. Agnew has informed me that about thirty years ago the north wing of the old New York Hospital became unfit for use, in consequence of its walls having become saturated with disease through the reception of a large number of ship fever patients. Ventilation was tried, but in vain. The walls were scraped but many of the workmen sickened, and one at least died. At the Lincoln County Hospital in England, the walls became magazines of disease in the same way. They were gutted and replastered, but it did no good. They then were treated according to the Hebraic system, and torn down to the very foundation. A few years ago, certain wards in Bellevue Hospital were found impure, causing pyæmia. At the request of the Commissioners of Charity and Correction, I attempted to purify them by the use of chlorine gas. I generated nearly three tons of this in these wards during many weeks. Every few months now the chlorine treatment, in a less vigorous form, is employed.

Dr. James R. Wood stated, three years after the commencement of this treatment, that no case of pyæmia had originated in the wards since it had been adopted. I think that we are warranted in saying that owing to the porous character of all walls and the decomposing power of certain gases, we can purify not only the walls but the very stones of any edifice, if only the treatment is heroic. I speak on this subject with a good deal of feeling. On December 1, last, I was to deliver a lecture, illustrated by experiments, in which my son, fourteen years old, was to assist. The day before, he died from the evil effects of sewer gas. Another son is just now recovering from the effects of an illness due to the same cause. As I said to the President here to-night, I would rather have given my son the deadliest poison in my laboratory, and have trusted to the antidotes, than to have had him inhale this sewer gas, for the deadly effects of which we have no remedy.

President Barker called next upon Dr. Willard Parker, who spoke briefly as follows:

I think this is a subject of the greatest importance, and one which it is our duty to be interested in. In 1846, perhaps some of you remember, the ship fever which was so dreadful. I never really dreaded any disease, I think, but that. There were many cases of this disease then at Bellevue Hospital, which was crowded to its utmost, patients being stretched everywhere on the floor. In the morning they used to go

through the wards and pick up a dozen or more dead persons. Yet these had all been cared for as well as it was possible. The patients finally came in such numbers that tents had to be erected in the yard under the trees. And nearly all those who were thus exposed to the air recovered. I suppose that many of you know the history of the *Phœbe*, which was driven upon the shore at Perth Amboy. She had had many cases of ship fever on board, and while these patients were confined to the ship they nearly all died. When the ship went ashore the patients were taken out and placed under hastily improvised canvas covers; and not one of them died. These cases only show the great importance of air.

We are living in the wrong kind of buildings, and everything is wrong. Previous to the introduction of Croton water in this city, I don't remember a single case of diphtheria. There were numerous cases of croup, and some which resembled diphtheria, now and then. It is a disease which depends on malaria, or bad air. It attacks families and goes through all the members. I had a friend, a physician, who depended on his cellar for all the air for his furnace. His six children were all stricken with this disease, and all of them died. And there are cases of that description everywhere. I say that if we have diphtheria, there is something wrong about our sewers. If I were to build a house, I would not have it connected in any way with a sewer. I should construct a sort of annex, where I should have all the sewers, closets, and all the pipes of the houses. I suppose most of you would object to having a vault filled with dead bodies a few yards from your house, and connected with it by a pipe. Yet this is practically what we do with our sewers. Water is no protection from them—from the germs of poison which generate and live in the foul air. This matter demands our most earnest attention, for we are in a very critical and unhealthy condition.

Dr. Barker then referred to the presence of two physicians who had been members of the Board of Health, and said he would call upon them in the order of their seniority. In response, Dr. Vanderpoel said:

It is time for physicians to know not only the elements of their profession and two or three natural sciences; but they must know the principles of plumbing and the sanitary construction of houses, so as to point out their defects, as it is impossible to trust mere mechanics. One defect not pointed out is that there is no soil drainage proper in New York, and although there are sewers connecting with every house, there is no chance for the moisture of the soil to escape. Phthisis has been shown here and in England to be induced by this character of the soil, although in England the use of proper drains has diminished disease. There is much filled soil here and no provision has been made for the release of the water contained in it.

While it is advisable to have soil pipes exposed to view it is practically impossible, as they would disfigure elegant dwellings, and in small houses space is too valuable. At the joints of the pipes there should be careful caulking with tow, lead and sulphur. But when the pipe is set in a slit in the wall only half can be reached, and the caulking is consequently often done only half way around, the remainder of the joint being left untouched. The sanitary engineer is assuming an important place in the professions and every house should be inspected.

Dr. Janeway then spoke as follows:

It is hard to distinguish between sickness from sewer gas and sickness caused by various disease germs con-

veyed in the sewers. Small-pox may come from germs in the sewers, but no one would attribute it to sewer gas. In regard to diphtheria, however, it is less plain. The portability of diphtheritic poison is greater than is supposed. In my own practice a case occurred where it was carried from Brooklyn to Florida in a trunk. A child had died from diphtheria in a fine house in Brooklyn, and the parents with two others went south. At Pilatka the trunks were unpacked, and a toy rabbit was taken out for a child which the dead child had used for a plaything. In three days the child was taken with diphtheria, of which there were no other cases there, and in five was dead; and the other child a few weeks later succumbed to the disease at a place in the interior of Florida where diphtheria had been unknown. The germs were conveyed by the rabbit and in clothing. We should be careful in always attributing diseases to sewer gas.

Another point is the possibility that much of the typhoid fever does not come from breathing sewer gas, but from drinking water containing the germs of disease, which have been drawn up into the water pipes and are taken into the alimentary canal. In a case under my observation several children were sick in a large house. I turned the water on below, and then, turning it on above, the air was sucked into the pipes below. These faucets were over some drain pipes connecting with closets where diphtheritic stools had been deposited, and the water above, which was subsequently drank, was thus tainted. This occurs also where there is no trap, or where there is no direct communication with the sewer. In one institution over seventy children were taken with typhoid fever from this cause.

Dr. Janeway closed by explaining some tests of tainted water with chlorate of lithium.

The Academy passed a vote of thanks to Mr. Wingate. Dr. Wylie then read the prospectus of a charitable organization which proposed to establish systematic instruction to the laity in the proper method of handling the injured in emergencies, nursing the sick in disease, etc., etc. He alluded to a similar organization which was in operation abroad and was doing a good work. He read also a letter from one of the members asking for the indorsement of the Academy of Medicine.

Dr. Austin Flint offered a series of resolutions heartily indorsing the proposed project, which were approved by the Academy.

The Society then adjourned.

LECTURES.

CHRONIC MILIARY TUBERCULOSIS.—CHRONIC BRONCHITIS WITH BRIGHT'S DISEASE.

A CLINICAL LECTURE.

BY

FRANCIS DELAFIELD, M. D.,

Professor of Practice of Medicine, College of Physicians and Surgeons, Visiting Physician Bellevue Hospital, Attending Physician Roosevelt Hospital, etc., etc.

CASE I.—CHRONIC MILIARY TUBERCULOSIS.—*History*.—Male, æt. 24. Was in good health up to three months ago, when he was suddenly taken sick with spitting of blood. This continued for several days, during which time he raised altogether about a pint of blood. He had no fever, but a constant cough, and

was very much prostrated. From this condition he recovered sufficiently to go to work again. He continued work up to three weeks ago, when he suddenly became a great deal worse. Had a severe pain in the right side, in the region between the free border of the ribs and the crest of the ileum. Beside this pain on the right side, patient has become much weaker. During the last three weeks has had hectic fever, night sweats and cough. At present is considerably emaciated.

Physical Examination.—The heart is normal. Right apex is a little duller than left. Low down in front, over the left lung, I get subcrepitant rales. In the chest behind there is a little dullness on the right side, just as in front. A friction sound is heard below in the axillary region of right lung.

Two or three weeks ago this patient was attacked with acute pleurisy on the right side. This gave rise to his pain. Besides this he gives a history of phthisis. When profuse hemorrhage is followed by a cough lasting for several months (and that condition has kept up to the present time), and the patient is emaciated and run down, we suspect chronic phthisis. The phthisis began in the left lung and has been extending down since last summer. Three weeks ago there was probably a development of the same process in the lower part of the right lung. This, however, is not at all certain. His left lung is studded with small foci. He has chronic miliary tuberculosis. The prognosis is not very good. The disease may extend and involve the right lung.

CASE II.—CHRONIC BRONCHITIS WITH BRIGHT'S DISEASE.—*History.*—Boy 16 years old. When five years of age had measles. Has had bronchitis for eleven years.

Physical Examination.—Heart beats more forcibly than normal. Apex is a little further to the left. Heart is a little enlarged toward left. There is no murmur. Resonance dull on both sides. The boy exercises with dumb bells and Indian clubs to improve his strength. Subcrepitant rales are heard over the whole of both lungs behind. Lately the boy has been troubled with spasmodic attacks of short breathing coming on at night. You observe, gentlemen, the boy is rather small for 16 years. His color is not good. The lips are pale. He is not emaciated, and his muscles are well developed. His feet have never been swollen. His stomach has been disturbed. He is troubled with vomiting from time to time. There is no well marked pulmonary resonance over the whole of both lungs. The heart is a little enlarged in the left ventricle. There is no murmur, however. There is a higher pitch than normal in front, and a certain degree of dullness behind both lungs. *Diagnosis.*—The patient began with bronchitis. He has suffered from chronic bronchitis for the last 11 years, with periods of exacerbation. Besides the chronic bronchitis he has emphysema as a sequence of the bronchitis. As a result of both combined, he has had dyspnoea on exertion. There is enlargement of the heart without valvular lesion. We get enlargement of the right side of the heart with certain cases of emphysema, apparently as the result of the emphysema. The enlargement here is on the left side. Now how do we explain this hypertrophy of the left ventricle without valvular lesion? One possibility is that the boy when he had the measles might have had associated with it a pericarditis which left œdema behind. The more probable supposition is that the boy is developing chronic diffuse nephritis. The only symptom referable to Bright's disease is the vomiting. When you

have an old history of chronic bronchitis, emphysema and hypertrophy of the left ventricle of the heart without valvular lesion, the chances are that the patient has chronic diffuse nephritis, even if there are no changes in the urine and no renal symptoms. There are no changes in this boy's urine. Sp. gr. 1025 contains no albumen, and yet it is exceedingly probable that he is suffering from chronic diffuse nephritis.

The prognosis is bad. If he simply had chronic bronchitis and emphysema, he could live till 50 or 60 years. With the hypertrophy of the left ventricle of the heart, and with the probable existence of Bright's disease, the prognosis is quite unfavorable. He will continue to get worse, and dropsy will make its appearance within a moderate length of time. He should pass the Winter in a warm climate, or else go into the hospital. As regards medication, at first he should use iron and oxygen to improve the condition of the blood. There is already probably some œdema of the lungs. Then he should have the combined use of the iodide of iron and the iodide of potassium for a month, and then sulphuric acid for another month; then go back to the potash and iron, and alternate month by month. Within a month or six weeks from now he will probably have general anasarca.

SELECTIONS FROM JOURNALS.

THE PROSPECTS OF CASES OF VALVULAR DISEASE OF THE HEART.* BY J. MILNER FOTHERGILL, M. D., Senior Assistant-Physician to the City of London Hospital for Diseases of the Chest, Victoria Park.

Our views as to the prognosis or prospects of the future of cases of valvular disease of the heart are undergoing very considerable changes, and that, too, in a direction opposite to the hopelessness with which they have been so universally credited in the past. In the title of the present paper I deliberately prefer the word "prospects" to "prognosis." The prognosis is "the art of foretelling the course and event of a disease;" and as we all know the course of valvular diseases of the heart is downwards, and the event death, the word does not convey precisely the impression I desire to make upon your minds. The subject is not a new one to this Society. On Dec. 17th, 1877, Dr. Andrew Clark read before it a paper entitled "On the Prognosis of Mitral Insufficiency," marked by his peculiar power of acute observation and accurate reasoning thereupon. The tone of his paper was hopeful. The prognosis of forty years ago was most unfavorable; the prognosis of the present he thought "on the whole had become more favorable, and that the grounds for forming a favorable prognosis were being brought steadily to light." Such, then, is the deliberate utterance of a physician whose acumen is generally recognized; and it is well worth our most serious attention. It is quite right that we recognize clearly, and without disguise, the terrible seriousness of a leak or an obstruction in the valves of the heart. An eddy in the blood-current is a very grave matter, and has far reaching consequences. Its influence reaches backwards to the furthest and remotest capillaries. In making this statement, of course, I do not forget that so long as the mitral valve does not leak this "Rückwirkung," or "back-working" is not found. But in the present paper I do not propose to cite a series of quotations from various authorities more or

* Read before the Medical Society of London, Feb. 1, 1881.

less generally known, nor to pursue the morbid consequences of a defect in the cardiac valves, as seen in the dead-house. We have had enough and to spare of this aspect of diseases of the heart. The Pathological Institute of Vienna, will, in itself, be amply sufficient to tell us all how grave are the sequels of cardiac valvulitis. We at present labor under a depressing conviction of the myriad troubles which follow in the wake of a mitral lesion. There exists no necessity for us to pursue further the tremendous seriousness of extensive mitral mischief; there are plenty of young aspirants to fame who view and study disease in the dead-house, and who pursue its ravages with the microscope, to see that we make no mistake in estimating the grim import of these changes. We are in no danger in that direction; but what I venture to say, having thought it for some time, is that we apply this grim aspect too exclusively to all our cases—and of this, I think, there can be no doubt.

Early observers found in certain grave cases a murmur heard over a certain area of the heart, and when the post-mortem examination came, sure enough there was a lesion in the valve indicated thereby. Further, the sequelæ of that lesion undoubtedly brought the patient to the grave, having slowly wrought his ruin. The next step from this was to assume that when a murmur was heard in the heart, the person in whom it was heard was assumed to be tottering over his grave. "I have just heard your death-knell," one of the self-satisfied physicians would exclaim; and the misery such thoughtless speeches wrought has been pointed out by many reflecting writers. It was injudicious on their part; it is now more blame-worthy, when we know that a murmur is not always—

"The rift within the lute,
Which soon shall make the music mute."

It was foolish in them, it is dishonest in us; for we know, or ought to know, better than found a gloomy prognosis merely on the presence of a murmur. Understand me fairly; I have no desire to tilt against the teachings of our hand-books in this article. It is very necessary, very desirable indeed, that the student be taught, and carefully taught, the seriousness of a valvular leak in the heart, and also the import of a murmur when heard. He must certainly start off from this; but what I wish to say is, that in practice he must not stay there. If he does he will drift into much trouble. Unquestionably by so doing he will never fall into error when a case draws to its final stages. He will never err by underestimating the gravity of any case. He is safe on that side of the question. But he must remember Scylla and Charybdis. The too studious avoidance of the one entails the danger of running on to the other. While guarding against taking too light a view of the case, he runs the risk of looking at some cases far too gravely.

As my expressions may seem to some as heterodox, and too individual, I will quote from others some passages with which I thoroughly agree, and which express my meaning more clearly and eloquently than I can pretend to do. In 1854 Stokes, of Dublin, whose every word will be listened to with the attention it merits, wrote: "So general is the belief that sudden death is the inevitable termination of disease of the heart that the very suspicion of the existence of such an affection leads to great and injurious mental depression on the part of the patient, and corresponding anxiety among his friends. It will therefore be right that the physician, by appealing to the real facts of the

case, should do his best to diminish these apprehensions." But it is just the "real facts" that have to be ascertained now, as then, at which it is so desirable we should arrive. This great authority goes on to say: "It is generally believed that organic disease being once established, there is a progressive disorganizing process set up, which must end in death, either by rupture of the valves, organic disease of the remaining portions of the heart, or obstruction to the current of blood. And this is true in the great majority of cases. But, as we have already seen, there is reason to believe either that this disorganizing process may be occasionally of singular slowness, so that the patient may live for many years in the enjoyment of good, or at least tolerable health, or that the diseased action is really arrested and the lesion becomes stationary. I have seen several cases which admit of no other explanation." This is no doubtful utterance, and Dr. Andrew Clark says our present prognosis has become "more favorable." But where certain views are antagonistic to what is generally taught in medical schools, their growth is slow and their progress is impeded at every turn. Students must be taught the gravity of valvular diseases of the heart; about that there can be no diversity of opinion. Whether, when they become practitioners, it does not behoove them to instruct themselves as to the other, if rarer, aspect of valve lesions of the heart, or not, is their business, not mine. But I venture to think that patients with injured cardiac valves take such a natural interest in the matter that the members of the profession will have before long to rouse themselves on the subject. Diseases of the nervous system, and the various aspects of the germ theory, have largely absorbed the professional attention of recent years. But the public, who suffer from a variety of maladies, irrespective of whether they are the special subjects of medical study at the time or not, cannot be expected to be so completely carried away by the current of medical thought which happens to be prevalent or uppermost at the time. And this I say as one having some experience, at least in diseases of the heart. I have no wish to disparage the knowledge of the general practitioner, or in any way to undermine the confidence the public repose in him, nor do I forget for one moment the wide range over which his information must necessarily extend. I merely wish to take this opportunity in the well-known Medical Society of London to utter a word of warning as to the necessity for greater intimacy with the diseases of the heart than at present obtains. If I may be permitted to speak from my personal experience, I can say that in the serious, grave, well marked cases of valvular disease corresponding to what they read as described in their text-books, and which they have seen in the cases shown to them in their student career in the hospital, and in their clinical lectures, they gauge the cases quite correctly and accurately. But when the features are not so well marked, then their want of thorough familiarity with the subject reveals itself, and they regard many cases as graver than they really are. This must be mainly attributed not to want of acumen in the medical men, but rather to the teaching adopted to fit them for their examinations. The detection of a murmur, and the correct appreciation of its precise locality and maximum intensity, of its time in the cardiac cycle, is what is impressed upon them so earnestly that the importance of regarding the heart as a muscle, governed by the laws which affect muscles generally, is largely lost sight of.

Consequently the presence of an undoubted mur-

mur at one of the orifices of the heart carries them away at once to the valvular defect of which the murmur is the indication; and not only that, but to the series of morbid sequences which follow that lesion when well established, and passing on to its later and final stages. Now, it is in this inference that their error in the main lies. Amidst the many demands of general practice they cannot read up treatises upon the diseases of the heart; they have not the time, to say the least of it; and therefore when cases not accurately corresponding to those they are really familiar with present themselves they are apt to lend to them a gravity not quite justified by the facts, but borrowed from more serious cases. It is against this I wish to warn them.

To illustrate that I hold no isolated or singular views let me note what that accomplished physician Professor Austin Flint, of New York, said in 1879: "The author has known repeated instances of wretchedness for years caused by the belief that apoplexy might be expected at any time, and that death might occur at any moment, in cases of purely functional disorder of the heart. Even in cases where a liability can be recognized, as in cases of angina pectoris, fatty heart, and certain aortic lesions, the event may not occur for a long period, if the patient do not die of some intercurrent affection." Now, you see even in some of the gravest forms of diseases of the heart, death does not occur so quickly as is anticipated; in less grave cases the termination is often far distant. A number of cases are present in my mind's eye which cause me to quote another sentence from Flint. "It does not confer credit on the profession for healthy persons to be able to say that in years past they were pronounced incurable, and the time of death specified." Nor does it make one feel altogether comfortable when a patient tells one that in the teens of years ago he was pronounced to have a "fatty heart," and that he might die suddenly at any moment, and to have to tell him that he possesses a feeble heart truly, but that there are no evidences of organic disease present in it. Nor will I say more about the patient's feelings than that the sensation of relief at hearing this is poisoned by the memory of the long years of anxiety, misapprehension and misery he has lived through from the rashly expressed opinion, based on a false apprehension, a misinterpretation of the case, given by his whilom medical adviser. Every error of this kind carries with it a far-radiating influence of scepticism as to the accuracy of medical information as regards disease of the heart. For the sake of the profession, for the sake of the public who trust in us, it is desirable that such mistakes occur as rarely as may be. Nor do I wish to have it understood that such errors are confined to that section of the profession known as "the general practitioner." The most serious errors have been made and to a less extent are still being made by those who are regarded as more specially informed, namely, the consultants. It is not many years since I was consulted by a north-country gentleman of twenty-four, a man of magnificent physique, in the bloom of early manhood, who had been condemned by two of the most eminent of the untitled members of the profession to a life of inactivity, and all his future clouded, by their misrepresentation of a cardiac murmur, discovered by his family physician by an accident. The murmur was a pulmonary murmur, disappearing when a full inspiration drove a piece of lung down betwixt the chest wall and the pulmonary artery. Feeling that my opinion, as opposed to such

eminent authorities, ought not to stand alone, I took the patient to Dr. Broadbent, merely saying there was a dispute about the case; but not even telling him that the case was cardiac. It was a pleasure to see the light that broke over the patient's face as the examination progressed. My opinion was corroborated in almost the exact words I had used, and the subsequent history of the case has fully borne out the view we took.

Again, some years ago a lady well known in literary circles, consulted me for a mitral affection of some nine years' standing. There was a regurgitant murmur with dyspnoea on exertion, and unquestionable deformity of the mitral valves. She had some time before consulted a well-known physician, lately deceased, whose knowledge no one would for a moment think of calling in question. Himself the subject of the gravest valvular disease, yet one of the hardest working members of the profession, he forbade her to work at her desk. Deprived of her favorite occupation, her general health suffered very seriously. The case, as I interpreted it was one of long-past non-progressive valvulitis, leaving behind a certain amount of deformity, which only became really operative on physical exertion. At her desk the defect was not felt. My counsel was to avoid exertion in all forms; but there seemed to me no reason why her literary work should be suspended. She returned to her desk, with the result that there is no falling off in her work, except such as may be fairly expected when the cares and the demands upon her time as a wife and mother are allowed for.

Now, to the more practical part of my paper—namely, how are such errors to be avoided? The first thing to insist upon is this: a murmur is not always produced by deformity in the cardiac valves. Anæmic aortic, and, still more, pulmonary murmurs, are now generally recognized. Dr. George Balfour, in his work on "Diseases of the Heart," has followed Naunyn in describing what he designates as "curable mitral regurgitation;" and certainly all mitral murmurs are not organic in origin. A form of mitral regurgitation was described by the late Dr. Peason Irvine (whose premature death we all so deeply regret) as the result of the weakening of the walls of the heart due to anæmia. Nor is it a mitral regurgitant murmur alone which is not due to preceding valvulitis; an obstructive murmur is often heard, unaccompanied by any evidence of structural change. One of the loudest mitral obstructive murmurs I ever listened to was heard some half-dozen years ago in the person of a clergyman from Quebec, who for years had several times a day mounted the heights of Abraham without discomfort. He did not consult me about his heart, but the conversation ran on that topic. The murmur was heard first when he was a boy of fourteen at Eton. Its discovery caused the greatest consternation, and his alarmed parents took him to the late Dr. Latham, who calmed them by saying that his later and more extensive experience had taught him that such murmurs were not always pathognomonic of structural change, and said that he did not regard it as of any significance. That wise physician has left on record his views as to disease of the heart in a work all too small. He first carefully discriminated between grave and comparatively trivial injuries to mitral valve curtains by endocarditis. In "consequences to life and health from the permanent unsoundness of the heart remaining after endocarditis," he held that there were three divisions—(1) Cases in which, besides the permanent endocardial murmur, there is no other symp-

tom referable to the heart; (2) cases in which, besides the murmur, there is occasional palpitation; and (3) cases in which, besides the murmur, there is constant palpitation." Now, it is this last division only which comprises the typical cases of our text-books, where there is a series of morbid sequelæ gradually descending more or less swiftly. The case of the lady just given belonged to the second series. It is by no means rare to find instances of the first.

In calculating the prospects of cases of mitral murmurs of organic origin it is well to remember that the series 1 and 2 are not uncommonly met with in early life as the result of a bypast inflammation which leaves behind it a certain deformity of the nature of a scar, without the faintest tendency to take on any further change. Mitral disease associated with the gouty heart in elderly persons is usually progressive, and goes on steadily from bad to worse, though at times so slowly that the progress is imperceptible. Such a case is given in the second edition of my work, "The Heart and its Diseases, with their Treatment, including the Gouty Heart," p. 334, in an ex-brewery man, aged sixty-nine who came under my care at the West London Hospital in January, 1877, with extensive dropsy. On the 17th of the next month he was discharged feeling quite well, and with the dropsy entirely gone. Since then he has attended as an out-patient, a hale, hearty old man, who is short of breath only when walking fast, with a faint mitral murmur audible occasionally. The last time he presented himself was in October, 1879. So that after two years and a half the valvular disease had made no noticeable progress, though the case is one where mitral valvulitis is usually steadily, oftentimes swiftly progressive.

To illustrate what I have to say about the progress and the prospects of mitral valvulitis, I will relate the present position of some cases known to me when in practice in Westmoreland. Now, I left there, for a wider sphere of observation—viz., the Senior Resident Medical Officership of the Leeds Public Dispensary, in December, 1869, so that at least eleven years have elapsed, during which time I have had the cases under intermittent observation; last seen in June this year.

CASE 1.—A girl, who, in 1865, had a distinct musical mitral regurgitant murmur. She was then eight years old. During the period she has required the digitalis and iron at intervals. She is a village school-mistress, in good health generally, quite equal to her duties, but suffering from palpitation and shortness of breath on exertion.

CASE 2.—A man who had a loud marked presystolic mitral murmur, heard first in 1867. He is out of health at times; but it is not quite possible to say that his troubles are due to his heart, or that there is any deformity in the valves. Probably nothing more than a rough auricular surface to the valve curtains. He is an active blacksmith; only troubled when shoeing very heavy horses.

CASE 3.—His sister, an old servant of my own, who had rheumatic fever just after I left the county, has had a mitral murmur, with other indications at times as œdema or the legs, pallor, and debility. She is married and has had three children, and when in her ordinary health does her housework herself. A year ago she had considerable œdema and anæmia after labor, but under a course of treatment directed by me, she is apparently quite well again.

CASE 4.—A man who has had severe mitral regurgitation for twenty-seven years, with recurrent severe hæmoptysis at times, is still well. He was ill under

my father first, and subsequently under my care. He is now sixty-eight years of age, and is fairly active, being engaged in work until a few years ago, when a legacy allowed him to live quietly. His health last year was the best he has had for years; but a sharp illness this winter has resulted in some swelling of the feet and ankles for the first time. Considering the amount of mitral injury he has worn, and is wearing famously.

Another case died after the severe weather last spring, which gave her bronchitis. She had rheumatic fever in 1843 for the first time, which left with severe mitral injury. In 1866 I attended her for a second attack. In 1878 she was in fair health, leading an active life as a village shopkeeper, very seldom being troubled with palpitation. Here was a course of thirty-eight years cut short by intercurrent disease.

Such, then, are some of the facts about cases of mitral disease, showing that it would be an error to transfer to all cases the gloomy prognosis of our text-books.

Now, a few words about the diseases of the aortic valves. I have under care at the present time several aortic regurgitant cases which have not perceptibly advanced, though under observation for four or five years. One indeed, dates back some twenty-five years, during which time a very active life has been led, and the individual has often been at death's door from overwork. (He has died since this paper was written.) Certainly, aortic regurgitation, as a rule, is a disease which proves rapidly fatal; but, nevertheless, there are cases "where acute mischief is followed by quiescence, and a static condition remains for years—until, indeed, the muscular compensation fails." Of aortic obstruction the prognosis is generally better. I can call to mind three cases: (1) where the mischief lasted, to my knowledge, for fourteen years, when the patient died of apoplexy, probably embolic; (2) the case was alive last year, though it is sixteen years since it came under notice for long syncopal attacks (often found with aortic stenosis); and (3) where it has existed to my cognizance eleven years without perceptible advance, yet the gentleman leads an active life.

The above are some of the cases which I have met with in practice, and they are sufficient to inculcate caution in giving a prognosis in many cases of valvular disease of the heart. With care, in many cases, a life of activity is practicable, provided bodily exertion be avoided, or exercised moderately. Finally, remember the prospects are often profoundly affected by the treatment; and I conclude with a quotation from Latham, "The treatment of diseases rightly considered is, in fact, a part of their pathology," to which I will add, The prospects of cases of valvular disease of the heart depend largely on the treatment employed.—*London Lancet*.

FORMULÆ AND POINTS IN PRACTICE.

IN SOME FORMS OF GOUT WHERE THERE IS GREAT RESTLESSNESS WITH BUT LITTLE CONSTITUTIONAL DISTURBANCE.

R Spts. Ammon. aromatici..... 3vj
Vini colchici..... 3ij-iv
Tinct. aurantii..... ad. 3jj

M. Sig. One teaspoonfull in half a bottle of soda water three times a day.

IN SOME FORMS OF HÆMATEMESIS, HÆMOPTYSIS, EPISTAXIS, PURPURA HÆMORRHAGICA, ETC.

R	Olei terebinthinæ.....	3 i½-3
	Syrupi limonis.....	3 6
	Mucilaginis tragacanthæ.....	3
	Aquæ.....	ad 3 6

M. Sig. One-sixth part every four or six hours. Its effects must be watched, so that it may be discontinued directly strangury or severe vomiting arise. In some cases the turpentine may be advantageously given with gallic acid, or the tincture of the perchloride of iron or with dilute nitric acid.

DONOVAN'S TRIPLE SOLUTION. USEFUL IN SECONDARY SYPHILIS, PSORIASIS, ETC.

R	Liq. hydriodatis arsenici et hydrarg. min.	20
	Tinct. zingiberis.....	3 i
	Aquæ.....	ad 1

M. Make a draught to be taken twice a day directly after meals.

IN HAY FEVER AND INTERMITTENT FEVER.

R	Quiniæ sulphat.....	grs. 20
	Liq. arsenici hydrochlorici.....	min. 90-130
	Acid. sulphuric. aromatici.....	3 2
	Syr. zingiberis.....	ad 3 3

M. Sig. One teaspoonful in two tablespoonfuls of water after each meal.

IN INVETERATE CUTANEOUS DISEASES, AS LUPUS, ECZEMA, PSORIASIS.

R	Liquor arsenicalis.....	min. 30
	Tinct. cantharidis.....	3 i
	Tinct. aurantii.....	3 6
	Potass. iodidi.....	grs. 18-30
	Infus. aurantii.....	ad 3 6

M. Sig. One-sixth part directly after the two chief meals.

IN THE PARALYTIC CONDITION OF THE STOMACH IN PHTHISIS TO INCREASE THE TONE AND ASSIMILATIVE POWER.

R	Bismuth subnit.....	3 iss.
	Pepsinæ.....	3 iss.
	Strychniæ sulph.....	gr j.
	Tr. cardamom co.....	3 iv.

M. Sig—Teaspoonful t. i. d. in water.

STOMACHIC TONICS.

R	Acid. muriat dil.....	3 v.
	Tinct. nuc.vomic.....	3 ss.
	Infus. gentian. co. ad.....	3 iv.

M. Sig—Teaspoonful in water after meals.

OR

R	Pepsini.....	3 iij.
	Glycerini puri.....	3 j.
	Acid. muriat. dil.....	3 iss.
	Aquæ.....	3 v.

M. Sig—Tablespoonful in water every three or four hours.

EXPECTORANT IN PHTHISIS.

R	Sodæ benzoat.....	℥iv.
	Aquæ destillat.....	
	Aquæ menth. pip. aa.....	3 iss.
	Syr. cort. aurant.....	3 iijss.

M. Sig—Tablespoonful every hour for adults.

MEDICAL NOTES AND NEWS.

Report of the New York Diet Kitchen Association—Nutriment rather than Medicine required for the Sick.—

The New York Diet Kitchen Association have just issued their ninth annual report. The object of the organization, as defined in its by-laws, is to furnish to the destitute sick such articles of nourishment as shall be necessary for their restoration. The food is to be issued upon the written requisitions of house and visiting physicians of the city dispensaries. In special cases the gratuitous services of physicians other than these may be procured and blank orders are furnished them, or in cases of great urgency a visiting committee may make requisitions on the kitchen till such medical aid is obtained. The society is composed of both men and women, an annual contribution of \$3 or upward being the desideratum for membership. There is a Board of Managers numbering thirty, and it is their function to purchase or hire places in the various dispensary districts, appoint and fix the compensation of attendants and purchase all stores and supplies necessary for carrying out the purposes of the society.

The total number of the sick poor who have received diets from the three kitchens of the society during the year 1881 is 5,754, and the number of requisitions filed is 40,278. The large excess of requisitions over the number of patients is explained as follows: "The food cannot be received in any case except by a requisition given by a physician—usually by one of the dispensary physicians. To avoid the labor of filling out these blanks daily, each of these requisitions entitles the recipient to food for seven days, after which time it is renewed if necessary. As the patient receives the prescribed diet from the kitchen on each of the seven days, there are in reality seven requisitions for one patient. By the simple multiplication of the number of patients by seven the result given is the number of requisitions supplied."

Lecture on Plumbing.—At the New York Trade Schools, between Sixty-seventh and Sixty-eighth sts., on First avenue, Mr. James Pearson delivered recently the second of a course of four lectures upon practical plumbing. The schools, which owe their existence in a great measure to the liberality of Colonel Richard T. Auchmuty, have been opened only since last November. Classes are at present being practically instructed on Mondays, Wednesdays, Thursdays and Fridays in plumbing, bricklaying and fresco painting. Already quite a number of young men are attending in each department, and all the learners are making gratifying progress. Mr. Crawford Pyne is the instructor in fresco painting, Mr. W. Reeves and Mr. Frank Lyons are the teachers of the practical mysteries of the bricklayers' art, and Mr. Andrew Thompson instructs the learners of plumbing, while Mr. Pearson lectures on the theories of the work. In his lecture the last-named gentleman dwelt very fully upon the best mode of treatment of sewage, soil and waste pipes and their connections, traps, &c. He showed how connections from the sewer in the street could be made with earthenware pipe if properly laid, but advocated the use of heavy iron pipe in preference. Inside houses, he maintained no material but iron should be used for waste piping, and that nothing larger than four-inch pipes should be laid down in an ordinary sized dwelling. A trap should be put at the front

wall, as ordered by the Board of Health. The proper method of connecting ice-boxes and refrigerators with sewers was practically illustrated, and many other matters of interest to the trade were fully explained. Mr. James De Kay is the manager of the schools, to whom application for admission to the classes should be made.

Sanitary Reform Association.—A meeting at which a paper was read showing how Paris was properly cleaned. In response to an invitation issued by the Sanitary Reform Association, a private meeting for the discussion of different modes of street-cleaning was held on Friday evening at the residence of Mr. D. Willis James, No. 40 East Thirty-ninth street, the following gentlemen being present: Mayor Grace, Commissioner Stephen Smith, of the State Board of Charities; Commissioner H. H. Porter, Charities and Correction; Dr. I. T. Metcalfe, Dr. J. C. Peters, Mr. John Jay, Mr. L. Tuckerman, Mr. J. Hamilton Robb, Mr. S. H. Olin, Rev. Arthur Brooks, Mr. A. E. Dodge, Jr., Mr. Loyall Farragut, Dr. R. H. Derby, Mr. Robert Hoe, Jr., Mr. Charles E. Tracy, Mr. C. E. Wingate, Mr. Henry E. Pellew, Mr. Jesse Seligman, Mr. W. T. Bridge, Mr. Walter H. Lewis, Dr. T. S. Curtis, Mr. Ernest A. Crosby, Mr. George H. Folsom, Mr. Arther G. Sedgwick, and others to the number of about fifty in all.

Mr. J. Talmadge Van Rensselaer, late Secretary of the United States Commission at the International Monetary Conference held in Paris last year, read an exceedingly interesting and carefully prepared paper on the system of cleaning the streets of Paris, giving the particulars of that department of the city municipality up to last year.

The Night Medical Service.—Brooklyn is just about to put into effect within her limits the statute in regard to the organization of a night medical service, such as has now been in operation in this city for one year. This service is in every respect a good thing—an important and almost indispensable contribution to the organization of the night life of a city. As the official report for the year recently made here showed, it has kept, as to expenditure, well within the limits of the very reasonable appropriation made; it has enabled a number of persons taken suddenly ill with distressing maladies to obtain immediately skillful medical attendance, and it has proved a welcome provision to the doctors who were called as well as to those who through this law were freed from the common importunity to which doctors in cities are nearly always exposed, to go out at night and attend persons whom they do not know and who cannot pay a fee. In every city, things would be better for the organization of such a service.

The East River Medical Association.—It is matter for congratulation to them embers of this organization that they have infused so much of the social element into its management. The regular annual dinner, and the social reunions not down on the programme, but which are the outcome of the desire of individual members to cultivate the amenities of social life and show their kindly feelings toward fellow members, are features of the association which are worthy of imitation by similar organizations.

The presence of the wives and lady friends of the members at the dinner at Delmonico's on February 14th is to be noted. Also the reception tendered to the members and their ladies by Dr. and Mrs. James R. Taylor at their residence, 234 East 12th st. on the evening of January 31st, and at which many distinguished members of the profession were present.

There is altogether too much of the selfish, clannish spirit among the families of our medical men, too little of that genial hospitality and fraternal feeling which would contribute much toward rendering their lives more joyful.

We trust the attitude of the East River Medical Association in this respect may be auspicious of a new era in the relations of medical men, in which the social element shall have its proper share.

Rope Ladders as Fire Escapes.—The Boston Fire Commissioners have ordered owners or occupants of buildings to provide rope ladders wherever five or more operatives are employed above the second story. There can be no doubt that good rope ladders, with proper arrangements for attachment to a building, are the cheapest and most effective of simple fire escapes, for they can be kept under cover until needed for use, they can be quickly dropped, their lower ends can be steadied from the ground or drawn from the wall of a building, as no fixed iron ladder can; being movable they can also be shifted from window to window as the exigencies of the occupants may demand. They can also be so saturated with certain chemicals so as to resist any flame through which a human being could pass. Cannot New York's Fire Commissioners follow the example of the Boston Board, and have not employers enough regard for their operatives to afford such facilities for escape if owners of buildings refuse them?

A Victory of Science.—A child nine years of age suddenly disappeared at Alexandria during May last. A short time afterwards his body was found drowned, and the Greeks accused the Jews of having killed Evangelis Fornaraki, after they had taken his blood for their religious rites. It was asserted that the supposed victim had incisions on his tongue and his wrists. An international medical commission was appointed to perform the *post mortem* examination, and this body decided that Evangelis Fornaraki's death was from drowning; that there were no wounds nor trace of wounds on his body. A Greek doctor, M. Counomopoulos, questioned the decision of the commission, refused to accept it, and affirmed that the child's death was not owing to submersion, but to an act of violence, probably strangulation. The Israelite community was in a perilous condition, and appealed to the arbitration of M. Brouardel, the well-known professor of medical jurisprudence, who testified to the absence of the slightest trace of violence, and endorsed the opinion of the commission. He pointed out that, the body having remained fifty hours under water, and having been subsequently exposed to the air during twenty-four hours, there was considerable putrefaction, which modified the symptoms of asphyxia due to submersion, and evident shortly after death; but those that were still present sufficed to show that death resulted from drowning.

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EDITORIAL.

SHALL THE POWER TO LICENSE PHYSICIANS AND SURGEONS BE VESTED IN A STATE BOARD OF EXAMINERS?

Dr. Jacobi, in his closing address to the State Medical Society, has again called attention, among other things, to the subject of Medical Education and licensing to practice. This has been the favorite theme of discussion in medical associations for the last forty years or more, and especially from the time of the organization of the American Medical Association in 1848.

The existence of a great and growing evil is universally recognized and deplored, and many remedies have been suggested. The colleges have it in their power to remedy the evil at once and completely; but appeals to them have been hitherto almost wholly without result. They have, it is true, in many instances, greatly improved their means of instruction, but they have not altered one whit their standard of graduation or of qualification to entitle the candidate to a license to practice. It is as easy for a candidate to obtain a license whose knowledge

of medicine and surgery is little more than that of educated nurses as for the most accomplished scholars. The same college that sends out our thoroughly educated doctor, whose education has cost him much time and money and hard work, sends out on the same day and with the same honors fifty unqualified men to enter into competition with him. Harvard is the only college that has made a serious attempt to do its full duty in this matter. Situated in the heart of the most highly educated portion of the United States, with 50 per cent. of its candidates holding the degrees of A. B. or A. M., it still rejects a larger proportion at its final examination than any other college in the United States. No doubt she is trying honestly to do her duty; but so far she stands alone, and will for a long time to come.

The American Academy of Medicine, organized solely for the purpose of remedying this evil, has thus far inclined to *permanent college endowments* as the most likely to accomplish the end in view.

Latterly some gentlemen, including Dr. Jacobi, have believed that all might be accomplished which is desired by separating the power to grant licenses from the business of teaching, that is, by the establishment of a State Board of examiners, upon whom alone the power of conferring licenses shall rest. This is the European plan, and this is not the first time it has been suggested by American writers, as the only alternative remaining to us.

In 1878, Dr. B. L. Hovey, of Rochester, in an address delivered before the Alumni Association of the Medical Department of the University of Syracuse recommended that a central or State Board, shall alone exercise the privilege of examining and licensing for practice in this State.

The difficulties are: Will the Colleges relinquish their chartive rights in this respect? Can they be compelled to? If such a Board is organized, who shall appoint? If the Government, why will it not become a political appointment? What guarantee that proper men will be appointed?

In our highly democratic government, it is likely to prove a failure and we shall have to go back to the idea of the American Academy of medicine: *Endowed colleges* or trust alone, as heretofore, to the consciences of those who manage our colleges.

A State Board of examination will have to admit representatives from the Homeopaths and Eclectics: both of whom have medical colleges, and under the late laws, are "regular" physicians. Much better have it as it is.

BOOK NOTICES.

Aid to the Study of Skin Disease—The Skin in Health and Disease, with Treatment, Classification and Notes on Diet and Hygiene. By L. Duncan Bulkley, M.D., Attending Physician for Skin and Venereal Diseases at the New York Hospital, Out-Patient Department, with Illustrations. Published by Presley Blakiston, Philadelphia, 1881.

The author states that the object of the present little book is four-fold: first, to correct certain popular prejudices in regard to the subject of diseases of the skin; second, to give directions in regard to the care of the skin in health and for the prevention of disease; third, to afford a certain amount of popular information as to the principal diseases which affect the skin, their recognition and home management; and lastly, to give directions whereby the patient may

assist the practitioner in the cure of this class of diseases by his diet, hygiene and mode of life, together with the manner he should himself treat the diseased portions.

It is evident that the author has set himself no easy task—one which cannot be properly accomplished without devoting more space and care to the work than has been bestowed upon it.

As tending to correct many popular errors in regard to the care of the skin in health and disease, it may serve a useful purpose (if, indeed, it reaches the class for whom it is evidently intended, viz., the laity).

By the student or practitioner it must be regarded as too elementary for study. Its brief descriptions may, perhaps, awaken a desire to learn more of the subject. We fear, however, that too many, if they read the book at all, will to their detriment regard it as all-sufficient, and thus be led by a superficial treatise to neglect that careful study and observation which alone will avail them in practice.

The illustrations are too meagre to be of any real service or to be worthy of further criticism.

Home and Climatic Treatment of Pulmonary Consumption; on the basis of modern doctrines. By J. Hilgard Tyndale, M.D., author of "The Present Status of the Pathology of Consumption and Tuberculosis, and of "Influence of Altitude on Consumptives, etc., etc. Published by Bermingham & Co., New York. 1882. Price 50 cents.

The gist of this interesting little treatise is expressed briefly in the following excerpt from the author's statement of his aim in writing the book.

He maintains that the path to be pursued in the treatment of consumption is "to endeavor to bring nutrition to the highest point attainable, and retain it there long enough to enable us to pursue a systematic course of antiseptic treatment of the general condition, laboring under chronic septicæmia, as well as of the local lesion."

The author, after sketching the present status of the treatment of pulmonary consumption, indicates how the objects alluded to above are to be attained. Thus he has detailed the diet, the medicines, the hygienic and climatic conditions favorable to the cure of consumption, and this portion of the book is so rich in practical suggestions and the minutiae of the every day management of the consumptive patient as to form a most useful acquisition to the literature of this subject.

In the chapter devoted to a discussion of the pathology of the disease, he states that the term "consumption" is not a morbid unity, but comprises all progressively destructive processes of the respiratory organs which do not occur successively and rapidly, in the train of acute inflammations of the lung; "it stands as the collective expression, the highest potency of a number of more or less chronic inflammatory processes of the lung, etc."

The book abounds in interesting and instructive facts in connection with the history, nature and proper treatment of consumption, and is interspersed with formulæ.

It is tastefully bound in cloth, and will unquestionably be read with pleasure and profit by the profession.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, FEB. 8, 1882.

In the absence of the President, the Vice-president Dr. Peabody called the meeting to order.

Dr. Tauszky presented a specimen for a candidate. Dr. Wyeth presented a patient who had had

EXCISION OF THE ANKLE JOINT DONE FOR NECROSIS.

The operation was done last spring and the patient is now able to walk very well—Two parallel incisions were made, the necrosed bone removed, a drainage tube run through the joint and the wound sewed with silver wire sutures. The whole upper arch of the astragalus and the articular surface of the tibia were taken off. About an inch being removed altogether. There was about half an inch shortening which was overcome by wearing a shoe with elevated sole. The patient also showed a pathological peculiarity which according to Dr. Janeway was a communication between the aorta and heart by the ductus arteriosus.

Dr. Shrady exhibited a specimen of

OSTEOMA OF THE UPPER JAW.

The patient was 39 yrs. old; the tumor had grown for three years previous to operation, and involved the entire alveolar space on one side, extending to the median line of the roof of the mouth. It was very extensive and caused marked deformity of the face. The contraction of the masseter muscle were painful. The growth was removed through the mouth, 15 minims of Majendie's solution having first been administered, this was deemed preferable to anæsthesia at this stage of the operation as the patient could second the efforts of the operator and could spit out the blood instead of swallowing it. The hemorrhage was profound but was controlled by pressure. The patient's head was held in such a position as to prevent the blood flowing into the trachea. The wound healed by first intention. In one week the patient left the hospital. In three months it was so completely healed as to enable the patient to wear a set of teeth with comfort.

The features of the case were:

- 1st. The size of the tumor.
- 2d. The possibility of removal of such tumors, through the mouth and without tracheotomy.
- 3rd. The rapidity with which the bone was reproduced.
- 4th. The utility of Goodwillie's saw in operations of this kind.

Dr. Wm. H. Draper presented a specimen of

"INTESTINAL OBSTRUCTION FROM GALL STONE."

The patient was 68 years old, of very temperate habits, and had enjoyed excellent health. During the six months preceding his illness he had not, however, felt as vigorous as usual. Dr. Draper was called to see him Jan. 21st, and found him suffering from general malarial and abdominal discomfort without fever. He had taken two compound cathartic pills with little or no effect. Had never had attacks of hepatic colic or jaundice. On careful palpation, and percussion, Dr. Draper had found what he supposed to be an enlargement of the left lobe of the liver, and had prescribed 10 grs. of calomel with bromide of potassium. On the following morning the patient suf-

ferred from vomiting and singultus; he had had only a slight movement from the bowels. An enema was administered, but with no effect, except to increase the amount of urine passed, which before had been very small. Dr. Draper stated his fears of intestinal obstruction, and Dr. Sands was called in to see the patient. He thought the obstruction was in the small intestine. There was still no pain and no considerable tympanitis. On the third day the patient's condition was practically unchanged. The singultus was restrained to some extent by morphia. There was no increase of temperature; pulse was 80. It was decided to pursue the opium treatment, operation not being deemed justifiable. On the third day a five-pint injection was given in the knee and elbow position, and this was repeated on the fifth day. On the sixth day there was manifest failing; singultus disappeared, but vomiting continued. On the seventh day the patient was able to sit up in a chair. On the eighth day the pulse was 120, the vomited matter was more offensive, the distension of the bowels was markedly increased. Dr. Sands, on examination, was satisfied that the obstruction was not in the rectum, and probably not in the descending colon. On the ninth day the patient was apparently no worse. Six minims of croton oil in six pills, three to be taken at once and one for three successive hours after, were ordered. There was, however, no relief from the obstruction, and the patient died on the morning of the tenth day.

The autopsy was made by Dr. Peabody. The body was well nourished; rigor mortis well marked; ecchymotic spots were seen, due to hypodermic injection. The stomach was pushed up out of place; the coils of the small intestine were dark and congested. In the ileum, an inch below the umbilicus, in the median line, was a hard ovoid mass the size of an egg. All that part of the intestine above this mass was greatly distended. The mass was freely movable. Both abdominal rings were closed and normal. The thoracic cavity showed old adhesions on the left side. The heart was hypertrophied; there was atheroma of the mitral valve. The lungs were congested and œdematous. The mucous membrane of the stomach was congested. The gall bladder was fast to the omentum. One inch below the pylorus there was an opening into the duodenum. The gut was not inflamed. The ovoid mass was found to be a gall stone $1\frac{1}{2} \times 1\frac{1}{8}$ inches, and weighing 19 grammes. Microscopic examination showed fatty heart and liver. The specimen showed a portion of the ileum laid open, exhibiting the site of the gall stone.

The interesting features of the case were: 1st. The clinical history. The patient had pursued his ordinary avocations till three days before his illness. There was no complaint of illness except that the patient had felt less vigorous than usual. 2d. The fact that the illness had begun without acute symptoms, there being no pain or tenderness. 3d. The paucity of urine, which led to the inference that the obstruction was high up, and which corroborated the views of English authors. Dr. Draper said in conclusion that had the case occurred in a younger subject, laparotomy would probably have been performed, but in the case described the age, the manifest degeneration of tissue, and the obscurity of the symptoms forbade operation. It had been suspected ante-mortem that the obstruction might be a gall stone, but the majority inclined to the opinion that it was a malignant growth.

Dr. Wyeth remarked that a question of interest suggested by the case was as to the time operation was

justifiable in intestinal obstruction. He narrated a case of his own in which obstruction had existed for four days without movement from the bowels before he had been called in. The patient was 69 or 70, the obstruction was in the right iliac fossa. Drs. Sands and Janeway were called in consultation. Dr. Sands had accepted operation, but it was deemed advisable to wait until the following day. On the night before the day decided on, the patient was given 15 minims of Majendie's solution, tilted down on his right side, and five pints of water injected into the colon and held there for 24 minutes. Four pints came away at the expiration of this time, the other pint remaining in for some hours, when it came away, and the obstruction was relieved. The patient had fully recovered.

Dr. Peters called attention to the use of acetate of lead in obstructions of the bowels. It was suggested that an exploratory incision should have been made in the case presented by Dr. Draper; but Drs. Draper and Peabody thought that the case showed that such incision would not have led to the discovery of the obstruction.

Dr. E. C. Seguin, the President, arriving, took the chair, and Dr. Peabody presented a specimen of

DOUBLE URETER.

The patient, æt. 34, had died of pneumonia after a few days' illness. He gave a history of excess in drink, but there was no reason for supposing that he had had Bright's disease. At autopsy there was a slight lesion of the aortic valves. The kidneys showed the lesions of chronic diffuse nephritis and hydro-nephrosis, and on the right side there were two ureters. One of these pursued the usual course; the other, before it entered the bladder, dilated into a sac similar to the bladder itself. The bladder was in a condition of marked hypertrophy; there was no stricture of the urethra. Dr. Peabody added that the condition of double ureter was not infrequent.

Dr. Gerster presented a portion of

A SARCOMATOUS TUMOR OF THE NECK.

The patient from whom it was removed was 33 yrs. old. The origin of the tumor had been, as it was in so many cases, a simple one. The patient had suffered from a bad tooth as a result of which the sub-maxillary glands had inflamed, had remained stationary six months, and then enlarged and led to the formation of the tumor. The operation for excision had been done three weeks ago. The attachments were very close and the hemorrhage formidable. The larger vessels had been first exposed and ligatured and the tumor then dissected away from them. The operation lasted two hours when the pulse became very weak and the operation had to be hastened. The patient had died 38 hours after operation from collapse and shock. Dr. Gerster reported nine similar cases in seven of which Fowler's solution had been injected, and also given internally, only one good result was obtained; in this case the tumor had entirely disappeared under this treatment. In another case there was partial improvement. In a third the patient was still under treatment there being at the present time partial improvement. Five cases had been operated upon, and all had relapsed. The dissections in such cases were very difficult and objections to such operations were justifiable.

Dr. Wyeth said that a case of the kind described by Dr. Gerster had been reported by Dr. Frank H. Hamilton in the MEDICAL GAZETTE, in which he had effected a cure by the arsenic treatment.

Dr. Seguin inquired what the action of arsenic was

supposed to be in such cases. If it was to act by its topical destructive properties and also by promoting absorption he thought it should be given in very full doses. Dr. Gerster replied that it had been so given in the cases reported.

Dr. Beverly Robinson presented a specimen of
HEMORRHAGIC PERICARDITIS.

The society then went into executive session.

LECTURES.

PARALYSIS OF THE SPHINCTER ANI, WITH INCONTINENCE OF FÆCES.

A CLINICAL LECTURE.

BY

A. JACOBI, M. D.,

Clinical Professor of Diseases of Children College of Physicians and Surgeons; Visiting Physician Bellevue, Mt. Sinai, and German Hospitals; Consulting Physician St. Elizabeth's Hospital, etc., etc.

Boy, 10 years of age. During the past eight years had trouble in defecation. Has a number of times daily, involuntary discharges of fæces. These discharges are hard and black and greatly resemble those passed by a goat. They smell very offensive. At first the bowels only were involved. Now he has also involuntary discharges of urine during the day and is obliged to get up at night. When cathartics are given the bowels are moved the same as if he were in normal health. This trouble has persisted in spite of treatment. He does not know when his bowels have been moved normally.

While his attention is drawn to some other subject, you can palpate his abdomen quite well. I do not find out anything, however, from palpation. From the nature of the history, viz., that he passes fæces involuntarily, we conclude that there is paralysis of the sphincter. If the muscular layer of the intestine is paralyzed we have constipation as in peritonitis, in which opium, though considered a narcotic paralyzing remedy, will bring on evacuation of the bowels and not constipation. When the sphincter is paralyzed the fæces will dribble away. The patient does not feel it. From this we conclude that there is loss of sensation. My impression is that when I run my finger into the rectum there is no resistance. When you pass your finger $1\frac{1}{2}$ " up, the rectum appears a good deal narrower than the rectum naturally does. Incontinence of the fæces is either due to paralysis of the sphincter, or you may have a normal sphincter and the mucous membrane of the bladder may be in an irritable condition. Thus, if the nerves of the bladder are very sensitive you have a good deal of abnormal contractility on the part of the bladder, and when the sphincter is not watched the bladder will be emptied. Thus, for instance, in early sleep children will wet the bed in the early hours of sleep when the brain is least active. When there is irritability of the inner surface of the bladder, contractility of the bladder will take place. Resistance on the part of the sphincter is not perceived by the brain, and then the urine will pass involuntarily. In such a case as this it is important to convince ourselves whether it is abnormal irritability of the intestine or paralysis of the sphincter. It looks to me as if there was nothing inside of the rectum to justify irritability of the mucous membrane. It feels like a normal rectum, but the

sphincter is not normal. This partial paralysis of the sphincter requires local or general treatment, or both. The indication is to restore the power of the sphincter.

For the general treatment we want nerve stimulants and tonics as strychnine. For local treatment we want the local use of strychnia, the galvanic and faradic interrupted current. One part of the extract of nux vomica with 15 or 20 parts of fat is a good application to a rectum in a condition of prolapsus applied after every act of defecation when the mucous membrane is swollen, and where there is hypertrophy of the part. This is frequent in chronic rectal catarrh or protracted diarrhœa. You could use the sulphate of strychnia in solution $\frac{1}{8}$ of a grain of strychnia dissolved in water once a day hypodermically. The galvanic and faradic currents may be used alternately once a day. These little balls of fæces are formed in the colon because it is known that the fæces in the upper part of the intestine are liquid. When they get down to the lower portion of the ileum through the ileo-cæcal valve into the colon they have the water absorbed from them and get thickened. Besides, the colon is the larger division of the intestine. In some children the folds and corners of the colon found in adults, with dilatation, are developed.

Children with catarrh of the colon and follicular colitis are very apt to have a dilated colon. In such dilated artificial diverticula, masses of fæces are retained, the serum is absorbed, and in this way the hard fæces form. This boy probably had diarrhœa eight or nine years ago, with dilatation of the diverticula of the colon, paralyzing the colon and perhaps the rectum and sphincter. In the fœtus the colon is overwhelming in size in proportion to the small intestine. Particularly the colon descendens with the sigmoid flexure and upper part of the rectum. Every fœtus has 2-3 sigmoid flexures, and every adult is expected to have a normal sigmoid flexure. In the sixth, seventh and eighth years the normal relation of the part is obtained. Therefore, a constipation dependent upon an abnormal length of sigmoid flexure and the presence of a number of sigmoid flexures will wear off and is not amenable to treatment by purgatives. The main treatment consists in the regular daily use of injections into the bowels. If such cases are treated with purgatives, you may produce just such a condition as you have in this boy. This boy is to have injections of cold water twice a day, in addition to the treatment above mentioned.

ORIGINAL ARTICLES.

CASE OF STRICTURE, WITH MARKED REFLEX SYMPTOMS PERMANENTLY RELIEVED BY OPERATION.*

BY

F. N. OTIS, M.D.

Clin. Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons, N. Y. Attending Physician Charity Hospital, Consulting Surgeon St. Elizabeth's Hospital, Etc., Etc.

P. J. F. æt. 33, presented with the following history. Had gonorrhœa at 21, again at 22. The first attack was severe and lasted three months. The second was followed by a gleet lasting a year. He had no further trouble until a year ago, when the discharge returned.

* Transcribed from Dr. Otis' Case Book by t. e. Reporter.

It continued four months when it was temporarily checked by quack preparations. It however came on again in a month and was accompanied by increased frequency of urination, and a throbbing pain extending from the posterior border of the scrotum to extremity of the penis. He was examined by a physician who passed a steel sound and found an obstruction of the urethra at the anterior border of the scrotum. From this time the discharge continued and frequency of urination and pain increased and continued to give trouble greater or less until the present time. For the past three months he has noticed a white sediment in the urine and has passed water day and night every half hour and sometimes every fifteen minutes.

After the examination with the steel sound previously alluded to he was ill five days with urethral fever. He was also supposed to have Bright's disease.

Examination at the present time, Jan. 2nd, shows the circumference of the flaccid penis to be $3\frac{3}{4}$ inches. The meatus 24; urethral tenderness is excessive throughout. From 2 to 3 inches it is most exquisite but with slight pressure permits the passage of 24 bulb down to 3 inches, beyond which point the urethra is apparently of normal size. Examination of urine shows considerable albumen with pus and bladder epithelium.

Feb. 24th. Patient much the same. Pain above the pubes and in the back but chiefly at the junction of the scrotum with the perineum. He has consulted Drs. Clark, Parker, James R. Wood and L. A. Sayre. The latter after hearing his case referred him to me. Up to this time all treatment had failed to give relief. The patient still continued to pass water every hour, and his stream is abruptly stopped at the end of the penis when he commences to urinate.

The operation of dilating urethrotomy was done on Feb. 24, in the presence of Drs. Oakley Vanderpoel, Sherburne, and W. Parker, Jr. Patient was etherized by Dr. Fuhs. The operation was commenced by dividing a stricture one inch in length; then passed 36 bulb easily for four inches, when it was arrested, and on examination at this point a band of stricture was found admitting only 34. Passed in urethrotome, turned it up to 36, and divided the stricture; after which 36 bulb was passed to bulbo-membranous junction without obstruction, and 37 solid steel sound passed by its own weight into the bladder.

Patient rallied from operation well. Administered suppository quinine gr. x., and morphia gr. $\frac{1}{4}$. He passed water fifteen minutes after operation with considerable pain, and every twenty minutes up to 8:30 p. m. Gave suppository hyoscyamus gr. iv., opium j. Dr. Fuhi passed the night with the patient, and reported his condition the following morning as follows:

T. 99, p. 80. Has had no hemorrhage; no erection; intervals of micturition gradually increased from half an hour to an hour; pain after micturition greatly diminished; very slight pain during the act, and complete relief after it; the irritation and pain during the intervals of micturition, from which he suffered so much before the operation, has entirely disappeared; he slept soundly, which was in marked contrast to his restlessness before operation; does not complain any more of the sudden stoppage of urine and burning sensation in urethra; is free also from the pain in the back and above the pubes; intervals of urination from forty minutes to an hour and a quarter, and increasing; very comfortable every way.

Feb. 26. Patient has done well up to to-day. He now complains of some return of his old nervous trouble

and pain, and also of a feeling of irritation in the glans. Examination shows the wound at the meatus to be inflamed and covered with a gray diphtheritic pellicle. Quinine and iron freely administered. As he complains of unusual weakness, milk punches and full diet ordered. Wine of pepsin was applied to the wound and the same diluted one-half ordered as an injection.

Feb. 28th. Patient improved. Find a cause of his nervousness and debilitated condition to be overwork in receiving visitors and employees on business. This to be stopped. Suppository of belladonna and opium substituted for hyoscyamus.

March 3rd. Patient has had painful spasm at neck of bladder. To-day by aid of Pullna water and by partially breaking it up with the nozzle of a syringe has passed a mass of scybala. Since then has been free from spasm, and 35 passed with ease to b. m. junction. Intervals of micturition between three quarters of an hour and an hour.

March 11th.—Patient improved, but suffering occasionally spasmodic pains in or near the vesical neck, evidently due to flakes of mucus engaging in the orifice, as he passes one of considerable size before he is relieved. Application of powdered ice to the glans promptly arrests these spasms. Examined him for stone with negative result. Pus in urine greatly diminished since operation. Spasm of compressores impedes examination.

Has improved gradually in every way up to present time.

March 17th.—During sexual connection last night had a feeling as though a place in urethra just in front of the scrotum had given way, and a smart hemorrhage followed. This place had felt bound down for many months, and after hemorrhage felt free. The hemorrhage was controlled by applications of ice. Has had no further trouble except smarting at the point of rupture.

March 18th.—Has done well; has had no trouble in the urethra and bladder since the rupture and hemorrhage described, but has had marked threatenings of renal colic, severe pain in left groin and at obturator foramen, with drawing up of the testes.

March 19th.—Improving, but still has occasional spasm from engagement of clots of mucus in the vesical neck. Some pus noticed at bottom of *pot de chambre*. Searched carefully and gently for stone with my new canulated sound. Thought once I felt one, but could not get it afterward, so am still in doubt. Patient to wait until some other evidence of stone presents before making another exploration.

March 27th.—Patient has steadily improved. No more spasm or other trouble, and urine has been getting gradually clearer. While actively employed pus increases somewhat. He is in grand spirits. Intervals of urination are now two hours and over, and he is sanguine of complete recovery. He says when any friends ask him how he is getting on, he bursts into tears, and can scarcely realize that he is free from the terrible sufferings before experienced no further evidence of stone.

April 8th.—Has an average of over two hours between acts of urination. No straining. Is improving in general health, and says he does not have a bad feeling anywhere.—Patient reported himself over a year from date of operation, as completely well in every respect.

HOSPITAL RECORDS.

PRESBYTERIAN HOSPITAL, NEW YORK.

TORTICOLLIS—OPERATION—CURE.

SERVICE OF

C. K. BRIDDON, M. D.

Patient, K. T. Single; æt. 15; domestic; native of Germany. Family history unimportant.

Previous History.—Patient had measles when a mere child. When 2 years of age had a severe convulsion, which lasted from 6 to 7 hours. Never had any injury. Since the time of the convulsion, patient has had convulsive twitchings on both sides of the body.

Present History.—About 5 years ago patient noticed that the right sterno-mastoid muscle was tense, and that the head was drawn to the right side. The contraction of the muscle has steadily increased, and head has been drawn further down. Has never complained of pain.

On admission.—General condition fair. Physical examination negative; examination of urine negative. The entire head leans to the right side and slightly forwards. The right side of the neck is hollowed, whilst the left is unnaturally convex. These changes are more pronounced opposite the base of the cranium. Chin is drawn toward the left shoulder, and right ear is approximated to sternal end of the clavicle. The sterno-mastoid of the affected side is reduced to a narrow hard, tight cord, 4 inches in length, the muscle on the opposite side being 6 inches long. The cervical vertebræ present a slight convexity on the left side, and a compensating curvature in the opposite direction, lower down. The right side of head, neck and shoulder are considerably smaller than the same parts on opposite side. Right shoulder and capsulæ raised (*vide Holmes' Surgery*, vol. iii., p. 100). Measurements of face are as follows:

Left Side.

From Ext. canthus of eye to lobe of ear, $3\frac{1}{2}$ inches.

From Ext. canthus of eye to angle of mouth, $2\frac{1}{2}$ inches.

From lobe of ear to angle of mouth, 4 inches.

From lobe of ear to symphysis of jaw, $4\frac{1}{4}$ inches.

Right side (affected side).

From ext. canthus of eye to lobe of ear $3\frac{1}{4}$.

From ext. canthus of eye to angle of mouth $2\frac{1}{4}$.

From lobe of ear to angle of mouth $3\frac{1}{2}$.

From lobe of ear to symphysis of jaw $4\frac{1}{2}$.

Operation by Dr. Briddon.—Ether. Sterno-mastoid of affected side held tense. Small incision made through skin and superficial fascia by scalpel just outside the extreme border of the muscle at its separation into clavicular and sternal portions and a long straight probe pointed bistoury inserted and the contracted bands carefully divided. Towards the close of the operation the anterior jugular vein was accidentally cut, hemorrhage was controlled immediately by pressure and the operation necessarily continued according to the open method. Hemorrhage was considerable but was finally controlled by ligature. Sutures and carbolized lint dressings.

Dec. 10th.—Discharge appeared, wound has not united except at upper portion.

Dec. 15th.—Dressings renewed—wound healing by granulations fairly well.

Dec. 28th.—Wound reduced to a simple healthy ulcer $1\frac{1}{2}$ inches by $\frac{1}{2}$ inch. Strapped daily. Head kept in good position by torticollis brace aided by the long plaited hair of the patient being tied to her belt, thus keeping chin elevated. Good free motion of head and neck.

Jan. 10th.—Wound has entirely healed. Head still kept in good position by torticollis brace, etc. To-day complains of some pain in the side and on physical examination some friction sounds are heard. Ordered side cupped.

Jan. 25th.—Patient was discharged to-day with the torticollis brace and instructions as to further treatment; position of head good. Also good motion of head and neck. Discharged cured.

FORMULÆ AND POINTS IN PRACTICE.

IN SMALL SECONDARY SYPHILITIC ULCERS ABOUT THE TONGUE.

R Hydrarg. iodidi viridis grs. 6

Extract conii grs. 30

Mix. divide into six pills and order one to be taken every night at bedtime.

IN OBSTINATE FORMS OF TUBERCULAR DISEASE OF THE SKIN.

R Hydrarg. iodidi rubri grs. 3

Potass. iodidi grs. 60-120

Spts. vini rectificati 3 j

Syr. zingiberis 3 iv

Aquæ destillatæ 3 xij

Mix. Sig. Thirty drops three times a day in a wine-glassful of water. Very efficacious in conjunction with the mercurial vapor bath.

BENEFICIAL IN CANCER.

R Sanguinariæ canadensis grs. 12

Arsenici iodidi grs. 2

Ext. conii grs. 40

Mix carefully, divide into 24 pills, and order one to be taken three times a day.

Or,

R Bromidi chloridi grs. 3-4

Pulv. glycyrrhizæ grs. 60

Mix intimately and divide into 20 pills. Sig., one pill twice or thrice daily.

IN PROGRESSIVE LOCOMOTOR ATAXY.

R Argenti nitratis grs. 3-12

Micæ panis grs. 30

Divide into 12 pills and order one to be taken three times a day. The gums should be watched, as the gingival mucous membrane becomes discolored before the skin is affected. There is consequently time to prevent the latter by discontinuing the silver salt.

IN PLEURODYNIA AND MYALGIA.

R Ammonii chloridi grs. 80-106

Syrupi hemidesmi ʒ 1

Infus. gentianæ co ʒ 8

M Sig., two tablespoonfuls every six hours.

IN PHLEGMASIA DOLENS, THROMBOSIS, ETC., WHERE THE FIBRIN OF THE BLOOD IS IN EXCESS.

- ℞ Liq. ammon. acetat..... 3 2-4
 Ammon. chloridi..... grs. 15
 Infus. dulcamaræ..... 3 2
 M Make a draught to be taken every four hours.

IN DIMINISHED SECRETION OF BILE.

- ℞ Ammon. chloridi..... grs. 20
 Ext. taraxaci..... grs. 15
 Tr. gentianæ co..... 3 i.
 Infus. sennæ ad..... 3 2.
 Make a draught to be taken twice or thrice daily.

IN INFLAMMATORY AFFECTIONS OF THE MOUTH, AND TONSILLITIS AND GLOSSITIS.

- ℞ Pot. chlorat..... grs. 120
 Aquæ camphoræ..... 3 8.
 M Sig. One sixth part every four of six hours with two tablespoonfuls of water.

IN BLOOD POISONING.

- ℞ Potass. chlorat..... grs. 120
 Sig. This powder to be dissolved in one or two pints of lemonade or of barley water to form a days drink.

SELECTIONS FROM JOURNALS.

CASE OF LOCOMOTOR ATAXY; STRETCHING OF THE SCIATIC NERVE. By H. E. SPENCER, L.R.C.P. EDIN., YORK

A. B., aged 30, general laborer, came under my care in March 1880. He stated that, in very early life (at fifteen years of age), he had been led into all kinds of excess, drinking and indulging his sexual passion to a frightful extent. Still, he did not contract venereal disease. But, about the age of seventeen, he began to notice an irregularity in his gait—having to calculate each step. He also observed a loss of feeling in his soles. Previously to this he had "slight touches of the rheumatics," but "nothing to notice." The irregularity of gait became more and more marked, though he did not feel any loss of strength in his legs; but he did not think he was any worse than he was four years before he consulted me. There was no family history of nervous disease. His "present state" was this. He was quite unable to walk without support. He brought up his feet with a flourish, and down again with a clumsy stamp. The least touch threw him off his balance, and he could not turn round without much trouble. He could not stand at all with his feet close together. There was no loss of power in the limbs; but there was much anæsthesia. Patellar and plantar reflexes were both absent. The characteristic pains of locomotor ataxy were absent, and there was no nervous or other trouble elsewhere. He was a man of powerful build, and in excellent general health. He articulated the liquids with some hesitancy; but he had always done this ever since he began to speak at all, and it always disappeared when he spoke in public—he being an energetic platform orator for the cause of total abstinence.

Sixteen months after the above notes were taken, I decided to try the effect of nerve-stretching, as no change whatever was to be perceived in him, and he regarded himself as a hopeless cripple. On July 7th, therefore (Messrs. Weekes and Kirsopp assisting me), he was placed under the influence of chloroform, and the left sciatic nerve stretched, under antiseptic precautions. It was first pulled steadily and vigorously downwards, and then upwards; and, finally, passing my fingers round the nerve, I lifted up and held the entire weight of the limb suspended by the nerve for about a minute.

On the following morning there was complete return of plantar reflex on both sides. A week after the operation, I got him out of bed, and assisted him to walk across the floor. There was now a marked difference between the two sides. The movements of the left limb were now nearly normal, while the right remained as before. He stood pretty firmly on the left foot with a slight support; while, if he attempted to do so on the right, he reeled over at once. There was also much increase in sensation on the left side. Patellar reflex was still absent. A month afterwards, however, the difference had disappeared, and everything was as bad as ever again. I therefore, of course, abandoned the idea of operating on the right nerve, as I should have done. Yet, I think the result instructive. We had to deal with a case in which pain was absent, and in which we had simply to test the effect of the operation on muscular co-ordination. The interesting points in the case are the restoration of plantar reflex, and the temporary improvement, both in sensation and motion, of the limb operated upon. The operation itself was followed by no bad consequences, either local or general.—*Brit. Med. Jour.*

A COMPLICATED MIDWIFERY CASE; EPILEPTIC CONVULSIONS; INVERSION OF UTERUS.

The following case possesses many points of interest, not the least being the power shown by the human frame to recover after the most violent strains and shocks:

Celia R., aged 44, wife of a quarryman, and mother of eight children, commenced her ninth labor on Monday night, December 12th, having engaged a supposed "midwife" to attend her. She continued (according to the midwife) in strong labor until the night of Wednesday, the 14th, when, epileptic convulsions having set in, the husband called me in.

When I arrived, I found her in strong convulsions, taking two persons to hold her. On examination, I found the head of the child well in the vagina; and without any difficulty I used the short forceps and delivered her. The placenta came away in about twenty minutes' time, without any tension whatever being used. She remained insensible for some time, but had no return of the convulsions. The next day, I found her going on very favorably, and, except that I had to use the catheter, gave no cause for any anxiety. At my visit on Monday, December 19th, I ordered a dose of castor oil, which the midwife, who was still in attendance as nurse, gave her. About five o'clock the same day, I received a very urgent message to go up, "there was another baby coming, which the nurse could not get away." When I arrived more than one hour had elapsed; and during that period I found that the midwife, still persisting in her idea of another child, had been continually "hauling" at its supposed head, until made to desist by the cries of the patient and the

interference of her neighbors. Upon inquiry, I found that, when the oil given in the morning was about to act, this midwife had made her unfortunate patient get out of bed and have the action of the bowels in a standing position and leaning over the back of the chair, when, as the patient afterwards informed me, she soon felt something give way and fall. On examination, I found the uterus completely inverted and prolapsed, and lying outside the vagina. It was returned slowly and with great difficulty; but, from the history of the case, and especially from the treatment used for removing the tumor before my arrival, I held out but faint hopes of her recovery; her pulse then being 125, temperature 100°. However, with the exception of the retention of the urine, which continued, and required the daily use of the catheter, she did not show a bad symptom; and she is now well, and able to walk about, the only medicine used being a grain of opium every four hours for the first two days.—Geo. C. Searle, in *Brit. Med. Jour.*

TREATMENT OF HYPERTROPHY OF THE TONSILS BY IGNIPUNCTURE.

The removal of diseased tonsils, by the help of the finger, ligature, cauterisation by caustics of the actual cautery, are all methods which have fallen into disuse. In Europe, the bistoury only reckons a few partisans, amongst whom is one of great authority, M. de Saint-Germain. The treatment now-a-days most in favor is excision, performed with the guillotine, which has given rise to very serious and often fatal hemorrhages. It is now alleged that, with the thermo-cautery, this serious accident is no longer to be dreaded. M. Krishaber, who has tried it during two years, and has collected more than forty cases (*Annales des Maladies de l'Oreille et du Larynx*, July 1881), has never had any accident after this treatment, and the results obtained have been lasting. It is likewise a novel application of a method which he has found perfectly successful for granulations of the larynx and pharynx. He proceeds as follows: The patient is placed—firmly, if a child—as if for laryngoscopic examination, in front of the operator, the mouth open, the tongue held back by a large spatula, the bottom of the throat well illuminated. M. Krishaber generally uses Paquelin's narrow-pointed thermo-cautery, heated to red heat. When it is only required to modify the nutrition of the gland, he gives preference to Trouve's polycyclic galvano-cautery. The puncture of the gland, made as deeply as possible with the point of the instrument, should be repeated five or six times at each sitting. An interval of two or three days is left between the sittings, so as to allow the fall of the eschar, and to estimate the result. The operation is not at all painful, and pain, from burning, is rarely felt. Nothing need be administered after the operation, except, in some cases, a gargle of warm water, slightly carbolized.

RELIGIOSITY AND ANIMALISM.

We have often heard it asserted that excess of religion and sexual immorality go together. This, however, is impossible, or at any rate the statement is crude. True religion and immorality of any kind exclude one another. There is, however, much in the assertion when proper terms are used. In an address to the Education Society by a head-master, Mr. J. M. Wilson, reported in a recent number of the *Journal of Education*, the following occurs: "There is, and always has

been, an undoubted coexistence of religiosity and animalism." We adopt Mr. Wilson's term, "religiosity," as a name for disease of religion or for fanaticism. Admitting the absurdity of supposing that religion can coexist with sexual immorality, there is evidence that religiosity, or fanaticism, coexists with, or perhaps is a result of, sexual excesses after the normal period of sexual life. Medical men know this well enough, but the quotation given, and the one next to be given, show that it is recognized by sincerely religious men outside our profession. In a sermon delivered on Christmas Day, Mr. Spurgeon, as reported (*Pall Mall Gazette*, December 27th), said "Let us not forget, too, that excess of spirituality is, by a strange but certain law, placed next door to sensuality." We suppose that what Mr. Spurgeon calls "excess of spirituality" is the same thing as that which Mr. Wilson calls religiosity. The following quotation shows that the doctrine of the association of religiosity and animalism is a very old one. In Robertson's *Charles V.*, vol. iii., book 5, p. 58, tenth edition, 1800, we find: "Having now attained the height and power, Boccold began to discover passions, which he had hitherto restrained, or indulged only in secret. As the excesses of enthusiasm have been observed in every age to lead to sensual gratifications, the same constitution that is perceptible of the former being remarkably prone to the latter. He instructed the prophets and teachers to harangue the people for several days concerning the lawfulness, and even necessity, of taking more wives than one, which they asserted to be one of the privileges granted by God to the saints."—*Brit. Med. Jour.*

WRITERS' CRAMP.

The treatment of functional spasmodic affections in general is so very unsatisfactory that we should gladly welcome any substantial addition to our therapeutic knowledge from any quarter. M. Wolff, a German teacher of writing, has earned for himself a considerable reputation by his skill in the treatment of this class of affections; and his success is attested by such authorities as Nussbaum, Bamberger, Benedikt, Billroth and Esmarch. Hearing of the beneficial results of his system, M. Charcot invited him to Paris, and placed under his care two patients suffering from writers' cramp, who had been treated by himself and M. Vigouroux for some months without any improvement. M. Vigouroux has published the cases (*Le Progres Medical*, 1882, No. 3), and mentions that, after being handed over to M. Wolff, the first was cured in fifteen, and the second in thirteen days. M. Wolff's system consists in a combination of gymnastics and massage. He makes his patients execute movements in all directions with the affected hand for half an hour to an hour and a half at a time, three or four times a day; and, in addition, the muscles involved are stretched more or less forcibly three or four hundred times daily. He also uses massage and friction, and attaches considerable importance to percussing the affected muscles. The most essential part is the extension of the spasmodic muscles. He thinks, if no improvement is apparent after five or six sittings, the case should be abandoned. The method is worth imitating, though, as M. Vigouroux remarks, while M. Wolff generously explains his procedure, he cannot give us, at the same time, his experience, his practical skill, or that medical instinct which not only enabled him to devise his method, but guides him in its application.

ON THE USE OF SULPHIDE OF CALCIUM IN STRUMOUS OPHTHALMIA. BY SIMEON SNELL, Ophthalmic Surgeon to the Sheffield General Infirmary, and to the Institution for the Blind.

The good effects resulting from the use of sulphide of calcium in the sores of scrofulous children, and in other affections associated with this diathesis, have been particularly insisted upon by Ringer. It is now my purpose, however, to speak of its value in "strumous ophthalmia." Under this head I allude to phlyctenular and pustular conjunctivitis and keratitis, the characteristics of which I need not further mention. In many of these cases, when other remedies have been used for some time with little or no benefit, the sulphide of calcium has proved of great service. I do not know if it has been much, if at all, recommended in this class of cases, but I was led in the outset to employ it by noticing its beneficial effects in other scrofulous affections, and this especially in the practice of my friend Dr. Dyson.

The sulphide will be found particularly serviceable in those cases of children with manifest strumous habit, enlarged cervical glands, swollen face, the eyelids tightly closed, photophobia, and where, on opening the eyes, a gush of hot tears is emitted, and examination of the ocular surface discloses one or more phlyctenules on the cornea, or it may be merely increased vascularity of conjunctiva. These cases treated by the ordinary constitutional and local remedies are often tedious, but with the sulphide of calcium, coupled with the usual applications to the eyes, such as atropine and warm fomentations of poppy, or what not, frequently quickly yield a happy result. In other cases also of phlyctenular conjunctivitis or keratitis, and not alone in children, the good effects of this medicine are conspicuous. Of course, like all other drugs, it will be hardly likely to be suitable for, or to benefit, all cases, but I have now employed it with good results so frequently that I am quite satisfied as to its being a useful remedy. After little or no benefit with steel in its various forms, and cod-liver oil, the rapid recovery often after the substitution of the sulphide has been astonishing. The mode of administration is generally in the form of a powder, and from gr. $\frac{1}{10}$ to gr. $\frac{1}{4}$ of the sulphide, with a few grains of sugar of milk, are given about three times daily. In this way children take it readily.

The following are brief notes of some out of several cases:

1. Annie B., aged 7, from Hoyland, near Bemsby, came to the Sheffield General Infirmary on Feb. 4, 1881, as an out-patient, suffering from phlyctenular keratitis, especially in the left eye. She improved a little under treatment, and then became worse again. At different times the following remedies were prescribed internally: Syr. ferri phosp. co.; cod-liver oil; hyd. c. creta, &c., &c.; and locally, in the course of treatment, atropine, eserine, warm fomentations of various kinds; a seton was placed in the temple, and the ulcer in the left eye was also touched with nitrate of silver.

July 22.—All other treatment abandoned, and sulphide of calcium (gr. $\frac{1}{10}$) prescribed.

July 26.—Better. Ulcer in left eye nearly healed.

Aug. 2.—Quite well. A few days later discharged cured.

2. Ellen S., aged 11. Came to infirmary April 12, suffering from enlarged cervical glands and phlyctenular keratitis in both eyes, and photophobia, especially

left side. Treatment: atropine, hyd. c. creta powders; and later on, cod-liver oil, syr. ferri phosp. co., and eserine substituted for atropine locally, and poppy fomentations also were used.

May 3.—The glands on the left side seemed disposed to suppurate. Eyes no better. Ulcer in upper part of left cornea apparently inclined to perforate. Directed to continue ol. morrh. eserine, and syr. ferr. co., and sulphide of calcium—gr. $\frac{1}{8}$ prescribed three times a day. Immediate improvement; the cervical glands suppurated, but in two or three weeks the eyes were well.

3. Emma O., aged 12. Phlyct. keratitis in both eyes. Admitted at infirmary April 15. Little benefited under ordinary treatment.

Aug. 2.—Ordered calc. sulphid. gr. 1-10, all other treatment, local and general, to be stopped.

Aug. 16.—Much better.

Aug. 30.—Discharged cured.

4. Robert G., aged 11. Phlyctenules on both corneæ; came under observation Oct. 21. Treatment adopted: hyd. c. creta powders, atropine, and tinct. iodi. applied once or twice to lids.

Nov. 22.—No better. Great intolerance of light. Calc. sulph., gr. $\frac{1}{8}$ t. d.; to continue atropine.

Nov. 25.—Better.

Dec. 2.—Nearly well.

5. A young lady, a medical man's daughter, from a distance, at present under treatment, appears in like manner to be benefiting from the use of the sulphide of calcium. There was great intolerance of light. Phlyctenular keratitis; one cornea being rendered much opaque from previous attacks. She had been some time ill, and other remedies had been adopted. She had enlarged cervical glands, and came of a strumous family.—*Practitioner.*

SODA A REMEDY FOR BURNS AND SCALDS.

By F. PEPPERCORNE, L.R.C.P., M.R.C.S.

Accidental burns and scalds, even when not very severe, extensive, or dangerous, commonly cause so much pain for an indefinite time, depending probably as to duration and severity a good deal on the age of the sufferer, and on the greater or less degree of sensitiveness of the individual's skin or constitution—not forgetting the feverish reaction and the dangerous internal secondary inflammations that are apt to follow in some cases—that any easily applied and quickly available remedy and relief, without perhaps the immediate necessity of calling in professional assistance, will be acknowledged as a boon by most persons, and especially so when it is remembered that the sooner the agonizing burning pain in the part can be allayed, the less chance there is of dangerous secondary effects, besides sloughing, &c., so severely trying to children and old persons.

The usual first applications to these painful injuries, whether so-called *popular* remedies or such as are usually recommended by members of the profession, are numerous enough, but cannot unfortunately hitherto be considered as generally successful in giving certain and speedy relief from pain, and too often intense suffering. One friend will recommend that the parts be covered with flour from the dredger; another will advise fine cotton-wool, or wadding; another, starch in powder, or soap, or treacle, or the so-called Carron oil, etc.; but hardly one of such applications can be said to give more than very uncertain or temporary relief from pain; although perhaps, by

occupying the attention of the sufferer, they may in this way prove of some *mental* benefit during his sufferings; being indeed employed really for want of anything better; although in fact, some of these applications, such as treacle, flour, starch, &c., prove so disagreeable in their after effects, being often difficult to remove and renew, as to add frequently to the poor patient's depression and suffering, owing to their adhering to the injured parts in dry cakes, very irritating to the raw surface.

It is now many years ago (see the *London Medical Gazette* of March, 1844) that the author of this paper, whilst engaged in some investigations as to the qualities and effects of the alkalis in inflammations of the skin, &c., was fortunate enough to discover that a saline lotion, or *saturated* solution of the bi-carbonated soda in either plain water or camphorated water, if applied speedily, or as soon as possible, to a burned or scalded part, was most effectual in immediately relieving the acute burning pain; and when the burn was only superficial, or not severe, removing all pain in the course of a very short time; having also the very great advantage of cleanliness, and, if applied at once, of preventing the usual consequences—a painful blistering of the skin, separation of the epidermis, and perhaps more or less of suppuration.

For this purpose, all that is necessary is to cut a piece of lint, or old soft rag, or even thick blotting-paper, of a size sufficient to cover the burned or scalded parts, and to keep it constantly well wetted with the sodaic lotion so as to prevent its drying. By this means, it usually happens that all pain ceases in from a quarter to half an hour, or even much less time.

Where the main part of a limb, such as the hand and forearm or the foot and leg, have been burned, it is best, when practicable to plunge the part at once into a jug or pail or other convenient vessel filled with the soda lotion, and keep it there until the pain subsides; or the limb may be swathed or encircled with a surgeon's cotton bandage previously soaked in the *saturated* solution, and kept constantly wetted with it, the relief being usually immediate, provided the solution be saturated and cold.

What is now usually sold as bi-carbonate of soda is what I have commonly used and recommended; although this is well known to vary much in quality according to where it is manufactured, but it will be found to answer the purpose, although probably Howard's is most to be depended on, the common carbonate being too caustic. It is believed that a large proportion of medical practitioners are still unaware of the remarkable qualities of this easily-applied remedy, which recommends itself for obvious reasons.—*Practitioner*

MEDICAL NOTES AND NEWS.

Poisoning by Iodoform.—The application of large quantities of powdered iodoform to granulating surfaces does not appear to be as harmless as has been hitherto supposed. Since the recommendation by Mikulicz German surgeons have applied iodoform in large quantities to the wounds caused by resections and carious cavities, with no untoward results. But two deaths are now reported by Dr. Henry (*Deutsche Medicin. Wochenschrift*), not referable to anything but iodoform-poisoning. One was an extended resection of the elbow, on account of fungous synovitis, with

intra-muscular abscesses, in a man fifty-seven years of age. After the operation the entire cavity was packed with about 150 to 200 grams of iodoform, a quantity no larger than has often been employed. The operation had been performed antiseptically. The patient became somewhat excited, and even delirious, within a day; subsequently remarkably quiet. He stayed in bed, with open eyes, indifferent to his surrounding, and evidently misunderstanding questions asked him. Food was taken when handed him, and scanty urine passed in bed. This state increased. The temperature remained normal, but the pulse was frequent and small. The sinking in of the abdomen and stiffness of the occipital muscles gave the appearance of tubercular meningitis. The patient died on the fifth evening, in deep coma, with symptoms of pulmonary oedema. The only anomalies of consequence revealed by the post-mortem were fatty degeneration of the heart, kidneys and liver. A second case died under similar circumstances, with the same symptoms and lesions. Cerebral depression and muscular weakness are the symptoms produced by iodoform-poisoning in animals. When these appeared the dressing was removed, but without stopping the course of the poisoning. The urine was diminished in quantity and contained no albumen during life, but large quantities of iodides. The author advises caution in the use of large quantities of the substance, especially in old and feeble individuals.—*Chicago Medical Review*.

Action of Coffee and Sugar in Digestion.—M. Leuen makes a report before the Paris Biological Society of the effects of these articles of food, in connection with Dr. Semerie. There is great diversity of opinion on these subjects. Some, as Trousseau and Pidoux, consider coffee an excellent digestive. Others, on the contrary, consider it very injurious.

M. Leuen thus writes: He mixed 30 grammes of coffee in 150 grammes of water, for a dog, which is killed three hours after. The mucous membrane of the stomach is found pale, discolored, and profoundly anæmic. The vessels on the internal surface, as well as those in the periphery, are contracted. There remains 145 grammes of the mixture undigested, and the stomach digestion diminished, because the contraction of the vessels, and the consequent anæmic condition of the mucous membrane, prevent the secretion of the gastric juice. The abuse of coffee will produce dyspepsia. Thus the English and the Dutch, who drink freely both of tea and coffee, are very dyspeptic. Coffee increases the cerebral functions, an effect useful, agreeable, and innocuous.

Sugar has been denounced by modern chemists as a substance whose effects on dyspeptics are deplorable.

Dr. Leuen does not partake of these fears. He cites the case of a dyspeptic doctor, who for twenty years had a terror of sugar, but who now consumes 120 grammes ($3\frac{3}{4}$ oz.) of sugar daily, without inconvenience. He followed similar experiments with sugar. A dog ate 80 grains of sugar with 200 of other food. Six hours afterwards its stomach showed little food. The mucous lining of the stomach was red and highly congested. The congestion of the liver was notable. If one opens an animal after eating 200 grains of food and no sugar, 90 to 100 grammes of food is undigested. Sugar, then, favors the secretion of the gastric juice. Coffee sweetened loses part of its defects.—*Le Médicin Practicien*.

Antiseptic Properties of Essence of Wintergreen.—We see in the *Concours Medical* that Professor Gosselin and Dr. Bergeron have experimented with oil or essence of gaultheria (*Gaultheria procumbens*), wintergreen, and have obtained good results from it, as an antiseptic in the dressing of sores. Essence of wintergreen is much used in perfumery; it has an agreeable odor, and is insoluble in water, but soluble in alcohol.

Two solutions are used by Professor Gosselin:

No. 1. Oil gaultheria, f. $3\frac{1}{4}$; alcohol, 60° , f. 3 xiiss.; and No. 2. Oil gaultheria, f. $3\frac{3}{4}$; alcohol, f. $\frac{3}{4}$ iij.—f. 3 j; water, f. 3 xiiss.

Dr. Chandler on Sewer Gas.—INSTRUCTION TO PLUMBERS ASSEMBLED IN THE SCHOOL OF MINES.—President Chandler, of the Board of Health, lectured in the School of Mines recently before the class in plumbing of the Trades Schools of the Metropolitan Museum of Art. The lecturer illustrated the downward pressure of solids, the downward and lateral pressure of liquids, and the pressure of the gases in every direction, and then he led his hearers to the practical application of this knowledge to plumbing. He said that the usefulness of the ordinary trap depends upon the pressure of the atmosphere, and that as an increase of pressure on the sewer side of the trap will burst that trap, it follows that there must be an equal pressure on both sides of the trap. In a proper system of plumbing our pipes contain nothing but air; they are not filled with sewer gas. At a public meeting last week experiments were made to show that we must put chemicals into our pipes. That is arrant nonsense. As to sulphuretted hydrogen, we don't care for it. I have lived in it for twenty-five years, and got fat on it, and as to carbonic acid gas, there's not enough of it gets into the pipes to hurt anybody. The same may be said of ammonia. The fact is, you must prevent an excess of pressure upon your traps, and you must also prevent a deficiency of pressure. Everything depends upon maintaining an equal atmospheric pressure in your pipes. What we are afraid of is a water pressure on the sewer side of the trap. There is never any air pressure in the sewers, as they all leak. The lecturer went on to demonstrate the action of heat upon the atmosphere, and closed with illustrations calculated to teach the young gentlemen how to make the best use of nature's forces in properly plumbing our houses.

Next week the Professor will speak of the chemical properties of the atmosphere.

Help for the Injured.—The State Charities Aid Association of this city has organized a movement for the promotion of "first aid to the injured," the object of which is to educate all classes and both sexes in the knowledge required in case of accidents—viz., how to arrest hemorrhage, to relieve suffocation, to restore the drowning, to promote circulation—in a word, to act in the case of a grave accident or emergency with promptness and intelligence, and to provide, as far as possible, the apparatus and other needful agencies required under such conditions. It will easily be seen how valuable such knowledge and such helps would be if possessed not only by laboring men and women, but by railroad officials and employees, by policemen, by dwellers in tenement houses, by shop girls and workingmen, by seafaring men, stevedores and the like, and by firemen and engineers. It is very often the first five or ten minutes that settles the question whether an injured man or woman is to die or not,

and to know what to do and to be able to do it promptly, is worth more than all the rest. We hail, therefore, with hearty satisfaction such a movement as this, and we trust that it will have the sympathy and co-operation of all classes of the community.

A Charitable Dispensary for Women.—We believe that a great deal of misfortune and misery and shame would be alleviated in New York if it were better known that it is that there exists in the city an admirable dispensary for the charitable treatment of women's diseases by skilful female physicians. Such a dispensary has existed for several years as a branch of the New York Infirmary for Women and Children, one of the best conducted and most useful of the local charities. It is open daily from nine till eleven o'clock in the morning at No. 128 Second avenue, and the treatment at it is free to the poor. The physicians in attendance are women of approved skill in their profession, and the list of consulting physicians includes many of the most eminent practitioners of the other sex. Last year the number of cases treated in this dispensary was nearly forty-five hundred. Children as well as women are among the subjects of its care.—*N. Y. Herald.*

Russia encourages women in the medical profession. Twelve female doctors are now officially engaged in teaching medicine to women, thirty are in the service of the Zemstvos and forty other serve the hospitals. The number of female students is steadily increasing. Twenty-five female doctors who took part in the military operations of 1877 have been decorated, by order of the emperor, with the Order of St. Stanislas of the third class.

Dr. Beard, who is fond of investigating phenomena of all kinds, has just exposed the fraudulent attempts of a medium to humbug her audience with masks and laces that purported to be materializations. It does not need great intelligence to make such an exposure. What is required is earnestness, incredulity and courage. Few of these brazen mediums would be left if these qualities were more general in investigators of spiritualism.—*Evening Telegram.*

Night Medical Service.—REPORT OF THE EXECUTIVE OFFICER.—Dr. W. A. Ewing, executive officer of the Night Medical Service, has submitted to the Health Commissioners a report concerning the work performed by the members of the organization founded by Dr. Henri Nachtel, of Paris, and established by an act of the Legislature, since September 1, 1880, to December 31, 1881. The report was as follows:

During the past sixteen months 573 calls were made by 132 of the 450 physicians enrolled by the station houses. The patients which they attended were found to be ailing from the following diseases: 22 with cholera infantum, 25 cholera morbus, 20 gastric catarrh, 4 diarrhoea, 2 dysentery, 13 enteritis, 1 marasmus, 21 colic, intestinal; 2 lead colic, 1 renal colic, 42 convulsions, 6 delirium tremens, 9 hysteria, 1 hydrophobia, 8 tonsillitis, 57 croup, 7 scarlatina, 9 diphtheria, 4 measles, 3 laryngitis, 1 mumps, 7 phthisis, 7 hemoptysis, 7 asthma, 26 bronchitis, 28 pneumonia, 10 pleuritis, 1 congestion of the lungs, 3 catarrhal fever, 3 angina pectoris, 1 valvular disease of the heart,

3 syncope, 2 congestion of the brain, 2 meningitis, 3 insolation, 3 insanity, 3 apoplexy, 2 paralysis, 10 epilepsy, 6 rheumatism, 1 congestive chill, 1 typhoid fever, 3 typhus fever, 14 malarial fever, 1 smallpox, 6 erysipelas, 1 purpura hæmorrhagica, 2 epistaxis, 6 abscesses, 1 hepatitis, 55 childbirth, 13 abortion, 4 hemorrhage, 3 puerperal fever, 3 colic, 2 peritonitis, 2 metritis, 6 retention of urine, 1 prolapsus ani, 9 wounds, contused and lacerated; 2 gunshot wounds, 3 scalp wounds, 11 fractures and dislocations, 3 sprains and bruises, 4 burns and scalds, 2 popliteal aneurisms, 2 secondary hemorrhage, 1 hemorrhage, varicose veins; 1 suicide, hanging; 1 suicide, drowning; 3 suicides, poisoning; 3 accidental poisoning, 10 died before physician arrived.

In my investigations as to the urgency of these calls and the worthiness of their recipients, I have become convinced of the great value of the service, not only to the sick and worthy poor, but to the well to do classes and to the physician, enabling the physician to decline with an easy conscience to go out at night, knowing that competent medical attendance may be quickly obtained by applying to the nearest station house, and giving to the physician, who has signified his willingness to serve, an assurance that he will, at least in some manner, be rewarded for his services.

The visiting physicians of the dispensaries are so miserably paid for their services (in some cases only \$100 per year), that necessity compels them to attend their private patients first; hence many hours often elapse before the arrival of much needed medical or surgical aid. Prior to the establishment of the night medical service it was often impossible for the very poor to obtain medical attendance in the night time; for even physicians sometimes tire of doing gratuitous labor. The well known urgency of night calls is further attested by the foregoing table and by the fact that of the 573 patients ten died before the arrival of the physician.

The gratitude of the public is due to Dr. Henri Nachtel for his indefatigable energy in the introduction to this country of this most valuable charity.

A Distinguished Convert to the New School of Urethral Surgery.—In a recent number of the *London Lancet* (Jan. 7, 1882), Sir Henry Thompson, the great exponent of the old school of genito-urinary surgery, after years of denial now tacitly admits that he has been in error, and it seems to us accepts what has been claimed by Dr. Otis, of New York, with respect to the calibre of the urethra. It is well known, both here and abroad, that Dr. Otis was the first to demonstrate the true normal urethral calibre and teach and practice the tolerance of the urethra to surgical interference and the law of the proportionate relation between the circumference of the flaccid penis and the calibre of the urethra, and insist upon the necessity of bulbous sound for urethral exploration. It is also well known that on each of these important points he has been rigorously combated by the exponents of the old school. Dr. Otis has, by his teachings, which are now, in view of accumulative testimony, facts rather than theories, and by dint of free discussion, and by the most convincing of all arguments, an unparalleled array of successful cases revolutionized to an important degree the principles and practice of urethral surgery.

As contrasting the material change in Sir Henry

Thompson's views we quote the following extracts from his published writings.

In the *London Lancet* (Dec. 11, 1875,) he discusses as follows:

"When therefore a young man consults you for certain troubles relative to which you desire to learn whether urethral obstruction be a cause or not, do not be tempted for an instant to adopt so unnecessary a course, (to say the least), as the introduction of very large instruments or instruments with huge bulbs at the end of them. But simply take a flexible English gum elastic bougie well curved toward the point, with a blunt end (since a tapering point of course will not mark distinctly the site of stricture) not larger as a rule than 10 or 11 of our scale, and pass it very gently and slowly into the bladder. If it goes easily,—above all if it is withdrawn without being held, and slides out with perfect facility, take my word for it he has no stricture, and *quoad* obstruction wants no use of instruments whatever."

In the *London Lancet*, Jan. 7, 1882, in a lecture on lithotripsy at a single sitting he states the following, (the italics are our own):

"In 1878 an important change was proposed, as is well known, by Professor Bigelow. He advised that the stone, however large, and without respect to the presence of cystitis or other considerations, should be invariably removed at one sitting, by means of more powerful lithotrites, larger evacuating catheters, and a stronger india-rubber bottle than had before been used. *The condition necessary and preliminary to this proposal had been the adoption of a doctrine taught by Otis, of New York, that the ordinary male urethra might be treated as capable of fairly admitting instruments of 16 or 18 gauge. English, instead of Nos. 12, 14, English, which had been generally regarded in the two countries as about the limits of safety in dealing with an ordinary healthy urethra.* Once satisfied that the canal would safely admit the larger instruments under the influence of ether, there was no longer reason why a large and hard stone should not be removed, so far as the mechanical procedure is concerned, at one operation."

Again in the same lecture alluding to Bigelow's operation which he has stated to be dependent on the teachings of Otis he says: "This method has now been employed by several operators both English and American, but, at present has not been generally accepted on the continent. I tested it without delay in my own practice at the outset and my own views of its capability may be gathered from the fact that I have employed it largely ever since."

We call attention to this published admission of Sir Henry, since it can not fail to influence those who have so long sworn by his tenets, and such an admission from such a source must inevitably hasten the time when the possibilities and advantages of early surgical interference in urethral lesions, will be more fully appreciated.

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EDITORIAL.

THE REVISED CODE OF ETHICS.

In reading over the revised code, of which so much has been expected, and in anticipating the results of its adoption, we confess to a feeling of disappointment, if not of regret.

No doubt the problems that were presented to the eminent gentlemen who composed the Committee on revision were not easy of solution. And yet it would seem a simple thing to devise a series of rules which would express the sentiments of the better element of the profession in regard to the restrictions or rather the facilities for practicing their profession with a due regard for the rights of others and a proper appreciation of what constituted professional dignity and indignity, courtesy and discourtesy.

As the President of the State Medical Society expresses it in his annual address "if every man were a gentleman and every woman a lady no code and few laws would be required."

But it is not our intention to lament over the fact that medicine has for its devotees real, not ideal, men, but rather to criticise in the revised code, what seems to us to be fraught with danger to the best interests of the profession. We refer more particularly to the two following clauses, viz: "Members of the Medical Society of the State of New York and of the Medical Societies

in affiliation therewith may meet in consultation *legally qualified practitioners of Medicine*," and "All practitioners of medicine, their wives and their children, while under paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them whose assistance may be desired."

With all due respect for that feeling of tolerance and liberality which is here exhibited by the Committee we must exclaim against what we interpret as a concession to the unqualified element of the profession, to those who are, by the acknowledged looseness of the laws, permitted to practice medicine *legally*, but who are in reality just that element that the most earnest laborers for the good of the profession have been striving to exclude from it. We ask in all candor: Does not this clause signify, that not only homœopaths, but also eclectics, and others who have been heretofore regarded as irregular practitioners, (but who are *legally qualified*), are to receive recognition? We think before the paternal profession thus takes to its bosom these prodigals it should at least make sure they have repented. And of this fact there is certainly no evidence.

As showing how this action of the State society is interpreted, the President of the Homœopathic Medical Society of New York, Selden H. Talcott, at their recent annual meeting at Albany, in alluding to the address of Dr. Jacobi, President of the State Medical Society said, "That though it had been assumed that the homœopathic school were deserting their principles for the sake of affiliating with their brethren of the dominant school, the allopathic school was dominant no longer, as was evidenced by the offer of its supporters to consult with their formerly despised brethren, etc."

It will thus be seen that what was probably intended as an effort to harmonize discordant elements for the good of the whole has been interpreted as a concession to homœopathic principles.

As for the other clause alluded to we fail to recognize the justice or even the expediency of placing the skill and time of the faithful honest practitioner gratuitously at the disposal of the families of all the incompetent, unqualified impostors who may be *legally* qualified to practice medicine, but who certainly, to say the least, have no claim on the honorable men whose honorable profession they disgrace.

We must believe that a great mistake has been made by the committee in revising the code and by the society in accepting it, and we trust that some effort will be made as early as possible to undo the wrong which has been done, we will say unconsciously, but it seems to us stupidly. We would not of course say intentionally.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE Feb. 16th 1882.

Dr. Fordyce Barker the President presided. The minutes of the previous meeting were read and approved. The council reported in regard to the proposed amendment to the night medical service which had been referred to them, that they did not deem it expedient to take any action in the matter. Dr. Murray, U. S. A., and Dr. Richardson of Rome, Ga., were invited to seats on the platform.

The paper of the evening entitled,
"CLINICAL OBSERVATIONS UPON DIABETES MELLITUS AND INSIPIDUS, WITH CASES,"

was read by its author, Dr. A. A. Smith, and discussed by Drs. Flint, Barker, Draper, Gibney, Peters, Arborton and others.

The following is a brief summary of Dr. Smith's paper:

Mr. President and Gentlemen of the Academy: I dislike to make apologies and especially before this society, but in justice to myself must say that the gentleman who was to read a paper before this society this evening was called from town by the illness of his mother, and I have had only a few days to prepare my paper.

During the past three years four cases of diabetes mellitus have come under my own and Dr. Barker's care.

CASE I.—Mr. X., a lawyer, about 60 years old presented with the following symptoms: great restlessness, disability for work, muscular languor, being easily tired by slight effort, excessive thirst, perspiration not abnormal, poor appetite, insomnia, great mental depression, a sense of some great impending evil, loss of flesh; in few months from 200 lbs. came down to 165. Was subject to hepatic and gastric dyspepsia, was a hard brain worker, and a high liver, always taking wine, usually champagne, at his meals.

Gave no history of injury or special mental shock. Examination of his urine showed sp. gr. 1034, considerable amount of sugar, 65 ozs. of urine passed in 24 hours.

CASE II.—Mr. G., æt. 49, leads a sedentary life, being devoted to literature and fond of studying abstruse subjects. Had suffered all his life from indigestion and headache, suffered from great mental depression and was in full a pessimist, taking gloomy news of everything. For a time he had placed himself on a farinaceous diet but became worse on this diet. Had excessive thirst, got up three or four times during the night to urinate, was very weak and nervous, had lost thirty pounds in four months; examination of urine showed sp. gr. 1036, sugar in abundance, and 220 ozs. of urine passed daily.

CASE III.—Mr. Z. æt. 46, an artist of eminence, high liver, hard worker, and did his work with considerable mental friction. Complained of great weakness, irritability, loss of appetite, insomnia, excessive thirst and had lost 25 lbs. of flesh in a short time. No history of injury or mental shock. Excessively fond of sweets; had no skin troubles, no headache. Examination of urine showed sp. gr. 1035, sugar abundant, and 80 ozs. of urine passed in 24 hours.

The treatment in these cases had been the regular diet prescribed in the books sedulously adhered to, codeine gr $\frac{1}{4}$ gradually increased to $\frac{1}{2}$ t. i. d. Tr. ferri. chlor. gtts. xx t. i. d. a pill to relieve constipation and water ad libitum. Under this treatment there had been a gradual diminution in the quantity of sugar in the urine and a gradual disappearance of symptoms, and in three months the sp. gr. had fallen to 1022, 1020, and 1018 respectively. Treatment was persisted in for three months longer and the patients were entirely well, they had been kept under observation for 2 yrs. or more and there had been no relapse and no reappearance of sugar in the urine.

There were in these cases some points of interest bearing on the etiology of the disease. All of these patients were hard mental workers, high livers and took little muscular exercise. Digestive disturbance

was marked in all. The history pointed to the conclusion that disturbances of the nervous system were primarily responsible for the production of the disease. It had been demonstrated that by pricking the floor of the fourth ventricle sugar could be made to appear in the urine or the same effect would be produced by shock, injury, or great mental pressure. Then again all of these patients were excessively fond of sweets. It was well known that the disease was common in Italy where the inhabitants were fond of sweets. Some observers thought the disease was produced by starchy diet, but among the Irish and Scotch who eat largely of potatoes and oat-meal the disease was not prevalent. Just what part in the production of the disease the disturbance of pancreatic digestion played was not yet known.

Dr. Smith narrated the history of a case of diabetes in which the hepatic and gastric disturbances were very marked; there were cramps in the feet, persistent headache, and often a state of semi-unconsciousness. The patient was much harassed by domestic trials, her sleep was much broken, she had lost 20 pounds in weight in a short time. Passed a gallon and a half of urine in 24 hours. On examination of urine sp. gr. 1034, sugar in considerable quantity, 200 ozs. of urine passed in 24 hours. She was put on the same treatment as the others, except that five drops tr. belladonna were ordered to each dose of codeine. In a short time the sp. gr. had fallen to 1028, and patient was so much better that she refused to continue treatment, when the sp. gr. again rose to 1032, sugar appeared in the urine and 150 ozs. were passed daily. But on resuming treatment she again improved. In spring of 1873 a gentleman from Boston, who held a position of great responsibility, applied for treatment. He was 40 years old, very nervous and excitable, and utterly hopeless of living, having been told by his physician that he had diabetes and must succumb to the disease. Urine, sp. gr. 1044, contained sugar, and passed from 200-220 ozs. daily. He had lost 50 pounds in weight. He was encouraged to believe that he would recover, was put on dietetic treatment and advised to drink freely of claret. Improvement began at once, and in eighteen months sp. gr. of urine fell to 1022. He was soon able to resume his business, and was seen at intervals of a few years subsequently, when he expressed himself as feeling in better health and better able to attend to his business than he had been for many years.

In view of these results, one patient having remained well for seven years, three for two years, one being still under observation, Dr. Smith thought the profession would be justified in giving a more favorable prognosis in cases of diabetes than was now given. They also tended to show that the disease had its origin in the nervous system, and that it was a mistake to cease treatment too early. There were no doubt many cases unrecognized and in such organic changes might take place. The cases also illustrated the necessity of examining the urine in every case.

All these cases occurred with marked disturbances of the nervous symptoms. None had albuminuria. None had rheumatism. All had hepatic and gastric trouble. None had skin trouble. None had increase of appetite. A case was narrated in which a lady patient had purposely added cane sugar to her urine sent for examination, which had disguised the reaction for glucose with Fehling's test, and had sent the specific gravity up to 1080.

A case of Dr. Griswold's was cited, showing that glucosuria may exist without diabetes. Mr. S., æt. 60,

-stout and healthy. Presented for treatment on account of eye trouble. Urine: specific gravity 1020 and contained about eight grains of sugar to the ounce. He had no other symptoms. The urine was repeatedly examined and always contained sugar.

Dr. Austin Flint said the disease under treatment had many points of great interest and practical importance. It was either a disease of much greater frequency now than formerly, or else it was now more often recognized. During the past five or six years he had met with more cases than ever before. At some stages of the disease there was no sugar in the urine and no symptoms pointing to its presence. He concurred with Dr. Smith in the importance of routine examination of urine, and narrated a case of a clergyman whose only symptom was itching at the head of the penis. He was about to dismiss the patient with the assurance that there was nothing of any importance the matter with him, when, on second thought, he decided to examine the urine and found it loaded with sugar. The patient recovered under treatment in a short time.

Dr. Flint also concurred with Dr. Smith in the matter of favorable prognosis. He believed that in a considerable number of cases dietetic treatment alone would cause the symptoms to disappear. Failure resulted from want of thoroughness in carrying out the treatment. The patient should be given a list of every article of food which he might eat and should not eat, and the diet should be sufficiently varied to be satisfactory. As a substitute for the ordinary wheaten bread, the gluten bread prepared by the Health Food Company should be used.

With regard to medicinal treatment, he had not used codeine systematically, and therefore could not testify as to its efficacy. A remedy had been suggested by Dr. Husted which has some curative power, viz., sulphide of calcium.

He alluded to cases which died suddenly in coma, respiration greatly embarrassed, etc., and believed from observing such cases that the sugar was capable of developing some tonic agent in the blood.

With proper care the disease might at least be kept in abeyance for an indefinite time, and often a cure effected. He knew of at least half a dozen patients who had diabetes who had recovered, and were now performing arduous duties.

Dr. Arburton had two cases under treatment, one for two years, the other for four. Both were ladies in easy circumstances and had no history of mental strain. He had treated them dietetically and the sugar had disappeared entirely in one case, but was still present in the other. He had given a tablespoonful of brewer's yeast t. i. d.

Dr. Gibney recalled a case of a girl of 14 who had had diabetes at the same time with nervous disease, but no connection was made out between the two.

Dr. Kinnicut said he had a number of cases on record of tumors of the brain accompanied with diabetes. There were two distinct forms of the affection, one in which but a small amount of sugar can be digested (and this variety yielded readily to dietetic treatment), and another form which was never fully controlled, in which there was danger of slight causes producing diabetic coma or collapse.

Dr. J. C. Peters said he had adopted the nervous theory of the origin of the disease. He thought experiment had settled this point. He agreed with Dr. Kinnicut in thinking that there are two classes of cases. There were either two forms or else two stages of the disease the second accompanied by organic

disease of the liver and pancreas. Ergot might be given with advantage in some cases.

Dr. Barker wished to add another case to those cited. That of an English Peer who came to this country four years ago with diabetes and had come to him for treatment. He had found him excessively nervous, sugar in the urine and 3 or 4 quarts being passed daily. He was a very free liver, accustomed to wine and brandy freely. It was exceedingly difficult to restrict him to the proper diet as he was traveling about the country all the time. Under treatment, however, the sugar had disappeared from his urine and he became much better. Since he had returned, Dr. Barker had seen his physician in London, who told him that any great mental effort, as strain of presiding on great occasions, (which he was often called upon to do), would cause subsequent prostration, excessive nervousness, and the appearance of sugar in the urine.

Dr. W. H. Draper said that the theory of the nervous origin of the disease must now be accepted. The range of nervous irritation which would induce the disease was exceedingly wide. After all, the liver was the organ which was the chief instrument in the production of the disease. Diabetes was often associated with lithæmia, and was amenable to the same dietetic treatment. There was an error in the digestion of nitrogenous foods as well as starches in diabetes. That form in which dietetic treatment did no good gave either a hereditary history of gout or illustrated the disease in their own persons. There was not only an excess of sugar in the urine of diabetes, but also an excess of urea and uric acid. In the milder forms the association between diabetes and lithæmia was still more marked. Diabetic and gouty patients were relieved by the same diet and the same medication, anomalous and paradoxical as it might seem.

Dr. Draper thought it was not yet possible to estimate the value of medicines apart from the dietetic treatment. The alkaline treatment with diet was sufficient for the cure of mild cases. He had no hopes of the recovery of grave cases. He could not say of how much value sulphide of calcium was.

Dr. Smith closed the discussion. The Academy then adjourned.

LECTURES.

PERINEAL ABSCESS—FISTULA OF THE NECK—POTT'S DISEASE.

CLINICAL REMARKS

BY

HENRY B. SANDS, M. D.,

Professor of the Practice of Surgery, College of Physicians and Surgeons; Attending Surgeon Roosevelt Hospital; Consulting Surgeon New York Hospital, St. Luke's Hospital, etc., etc.

PERINEAL ABSCESS.

CASE I.—Male, colored, has a swelling in the perineum. This is a very prominent tumor which at first sight one would not doubt was a urethral abscess. Such abscesses are frequently connected with stricture of the urethra and they often occur in consequence of ulceration of the urethral wall behind the stricture and escape of urine into the connective tissue. It has been suggested that the tumor is probably a testicle in the perineum, as there is no testicle on one side of the

scrotum. There are cases in which the testicle, instead of being retained in the abdomen or inguinal canal, passes beyond its ordinary situation and finds its way lower down, viz.: in the perineum. The case is exceptional in interest and we must endeavor, by careful examination of the tumor, the scrotum, and the inguinal canal, to arrive at a diagnosis, which has not yet been made. We notice that the tumor is exactly median in its situation, the raphe striking the upper limit of the tumor about its middle. On inspection we find at the upper surface a portion as large as my thumb nail, which is abraded and moist. It looks as if there were one or more pin-hole openings into it. This suggests the possibility of the tumor's being an abscess. The patient denies having had gonorrhea, and says he has sustained no injury. The left side of the scrotum is flat and empty while just above it in the groin is an elevation which looks very much like that which would be produced by an inguinal hernia of moderate size. We must examine this side therefore to see what is the significance of this swelling above, and flatness below. The flatness below seems to be due to the absence of a testis. On feeling the swelling in the groin I discover that beneath the skin there is a somewhat firm body, rather difficult to grasp and when it is grasped and slightly squeezed, the patient suffers testicular pain. When I feel the perineal swelling on its deeper aspect and endeavor to circumscribe it, I find this impossible, from an apparent connection of the tumor with the urethra. This increases the chances of its being an abscess. Moreover the tumor evidently fluctuates. It is proper, under such circumstances, to explore the urethra and ascertain whether there is a stricture, (a steel catheter was passed and met with an obstruction, some blood being discharged. A number of flexible catheters were then passed readily into the bladder.)

Either because there is a narrowing of the urethra, or more probably because, in consequence of the perineal swelling, the urethra deviates from its normal course, the inflexible catheter does not pass readily. I will explore the tumor with a hypodermic needle, and ascertain whether it contains fluid or not. (The hypodermic syringe was inserted, and revealed the presence of pus). I have rarely seen an abscess in this locality not dependent on injury or stricture. The proper treatment of this case is to drain the abscess, apply a poultice, explore the urethra, and, if a stricture is found, dilate or divide it.

FISTULA OF THE NECK.

CASE II.—Here is a little child, gentlemen, 8 years old, who comes to see us on account of a disagreeable looking fistula in the median line of the neck. She had a swelling which broke and discharge took place, but the cavity did not close. Now and then it would become distended by an accumulation of fluid, and then relieved by its escape, the fistula always remaining. When we look at the neck, we find that there is a spot about $\frac{1}{4}$ -inch diameter, of a red color, at the centre of which there is a very small opening. This disease is an example of what is called a sub-hyoid bursa. It is situated externally to the thyro-hyoid membrane, and when it breaks the bursa often remains open, unless special means are taken to close it. These swellings are sometimes mistaken for abscesses. The difficulty experienced in the closure of the parts is owing to their mobility. During the function of deglutition the friction of the opened surfaces prevents their adhesion. To promote adhesion, injections of iodine may be used, or the nitrate of silver, either in

the form of solution or by means of a probe coated with this substance, which may be inserted into the opening; or a wire may be introduced into the sac and heated by means of the galvano-cautery; or Pacquelin's cautery may be introduced. In case a cure does not occur spontaneously, it may be effected by one or other of the means described. I should advise for this little child, first a trial of iodine, inserting the point of a small syringe in the cavity, and injecting a few drops of iodine tincture.

POTT'S DISEASE OF THE SPINE.

CASE III.—Female, æt. 16. Has two lumps in the back. The upper one came last winter, and the lower one about six weeks ago. She is weak, and incapable of exertion. I cannot discover in this case that the disease has yet caused any compression of the spinal cord. Such compression is indicated by a loss of power in the lower limbs, or parts below the point at which the cord is compressed. It is also indicated by pains, as a rule, along those nerves which come off from the spinal cord at the level where the pressure is felt. Although the woman is somewhat weak in the lower limbs I do not discover that she has paraplegia. I doubt whether there is any impaired sensibility. The projection is very plain, and angular, and the 8th dorsal vertebra is prominent. Below, at the level of the first lumbar vertebra, is another projection. This is called curvature of the spine, of which affection there are two varieties, one called lateral curvature, and the other antero-posterior or angular curvature, because the deformity is rather that of an angle than of a curve. The angularity of the deformity is quite well marked in this case.

This case is instructive in several ways: First—in teaching us that caries of the vertebræ, upon which this disease depends, may advance so as to cause a very considerable loss of substance, without revealing itself by any other marked signs. Second—This case shows that a considerable progress of the disease may occur without implication of the spinal marrow.

Although bone has been destroyed and there is angular curvature, and although the girl is feeble there is no reason to doubt that by proper treatment the disease may be arrested. If the girl is allowed to go without treatment she will probably get worse, for the greater the deformity the greater must be its tendency to increase. To guard against abscess, to prevent this increase of deformity, perhaps to rectify what deformity already exists, mechanical treatment is necessary. Something must be done to compensate for the support which ought to be given by the bodies of the vertebræ which have disappeared. There are several forms of spinal apparatus used for this purpose. One of these is the plaster jacket, an immovable apparatus applied to the thorax while the spine is placed in a state of extension so far as is compatible with safety. My own preference is for a steel apparatus which consists essentially in a girdle fastened around the body at the level of the pelvis, and provided with two upright pieces, one on either side of the median line of the spine; attached to these at their upper extremities, are straps which pass around the shoulders.

Such a support being made more or less vertical the inclination of the spinal column can be corrected, and traction can be made so as to arrest or diminish deformity. With proper general treatment, administration of tonics, proper selection of food, exposure to fresh air, etc., many cases of spinal caries are prevented from proceeding to the unhappy termination of abscess and death.

HOSPITAL RECORDS.

PRESBYTERIAN HOSPITAL, NEW YORK.

CANCER OF RECTUM—EXTIRPATION OF LOWER END OF
RECTUM AND ENTIRE PROSTATE GLAND.

SERVICE OF DR. C. K. BRIDDON.

Pt. J. E. S., æt. 69; married; engineer; admitted Feb. 28th; family history of phthisis; no history of cancer; thirteen years ago had necrosis of right femur. Had gonorrhœa twice about forty years ago. Three years ago experienced a sharp cutting pain near the root of the penis; ten months ago micturition became painful and caused a burning sensation along entire urethra. Since last June has had griping pain in rectum and in region of penile portion of the pudic nerve. Fæces passed without pain; had retention of urine last December; relieved by hot hip baths; during last five months there has been constant difficulty in voiding urine; straining and dribbling. Has had pain in the region of the prostate gland, radiating down the thighs, and up the back. During the last two months has voided urine every half hour during the day and every hour during the night. Three months ago he discovered an ichorous discharge from the rectum; defecation very painful, especially when fæces are solid, and has tearing pain in the rectum and lancinating pain in the loins. Fæces somewhat flattened and at times covered with ichorous fluid; bowels constipated; pressure over prostate in perineum causes pain; micturates every 15 minutes; strains more now than two months ago; urine stops suddenly but after passage of some mucus begins to flow again.

Examination of urine—sp. gr. 1008; reaction alkaline; amount in 24 hours, 50 ounces; color light straw; odor foul; sediment yellow and stringy; numerous pus corpuscles; bladder epithelia; no casts; chemically, albumen, $\frac{1}{2}$.

On examination of urethra an obstruction was found at the meatus, admitting a flexible olive pointed bougie No. 3; also another obstruction at the bulbo-membranous portion admitting No. 1.

Examination per Rectum.—An oval ulcer was found in the antero-lateral wall immediately within the sphincter. It was about two inches in length, craterous in its conformation, and of almost cartilaginous consistence. The deepest portion appeared to be continuous with the prostate and apparently was incorporated with the gland.

The patient was told the result of examination, and consented to operation.

Operation by Dr. Briddon, March 11th.—Ether: The meatus was divided and an attempt made to pass an instrument into the bladder without success. An incision was made from a point over the tip of the coccyx to the posterior extremity of the anus, thence along the margin of the anus and along the median raphe to the base of the scrotum. These incisions carried through the superficial and deep fascia divided the ano-perineal region into lateral halves, which were retracted. The levator ani was then divided on either side and an attempt made to separate the lower portion of the rectum from a solid mass which seemed to be continuous with it and which projected upward and outward toward the pubic arch. This was accomplished by aid of the curved scissors and the fingers. In the concluding part of the operation the

finger entered the bladder and it was supposed that the detached mass was formed out of a part of the prostate. By further traction the whole mass was brought down outside the external wound. The gut was divided in sections, each vessel being tied as it spurted, and no further difficulty was encountered. There was but little hemorrhage, considering the magnitude of the operation.

The parts were left open, with directions for frequent irrigation with a disinfectant. On examining the parts removed it was found that the rectal portion of the tumor was considerably broken up by the manipulations, and that the solid mass portion was formed of the prostate gland enlarged to the size of a billiard ball.

Operation was done March 11th. The patient's recovery from ether and rallying from the shock of operation were good, but he subsequently succumbed, dying comatose on the 13th.

SELECTIONS FROM JOURNALS.

EXTRACT FROM A LECTURE ON TUBERCLE, in the Course of Pathological Anatomy at the Middlesex Hospital Medical School, January, 1882. By SIDNEY COUPLAND, M. D., F. R. C. P., Physician to and Lecturer on Pathological Anatomy at the Middlesex Hospital.

GENTLEMEN:—Having, in my last lecture, given you as explicit an account of the general pathology of tubercle as far as I understand it, I propose to-day, before leaving this subject, to recapitulate to you these facts in the form of a concise summary. In doing so, you must allow me to adopt a somewhat aphoristic and dogmatic method; for I feel that upon this subject, of all in pathology, it is necessary for us to have clear and definite ideas. There is hardly any pathological question that has been so swayed by every wind of doctrine as this of tubercle; not even the subject of inflammation has been viewed from so many stand-points, and received so many and varied explanations. The conclusions I am about to give you do not claim to be anything else than the formulated expression of ideas gathered from time to time from various sources. They embody simply the essential points I have learned from others, confirmed, so far as opportunities have been given me, by my own *post-mortem* experience. Therefore, they are in no way original or novel. I hope they may be nearer the truth in consequence; as near, that is, as our present knowledge allows us to go. My sole aim is to teach you the facts, which are established, and the inferences that appear to flow from them, in the simplest and plainest manner:

1. Tuberculosis is an infective disease to which man and the higher animals are liable.
2. It is characterized anatomically by the formation of minute nodules or "granulations," composed of elements like those met with in granulated-tissue, the result of simple reparative inflammation.
3. These nodules, or elementary or primary "tubercles," may occur in an isolated manner, or, by their confluence, may form larger or smaller conglomerate masses.
4. The typical structure of each fully formed primary nodule consists in (a) a collection of lymphoid round cells, enclosed in a delicate fibrillar meshwork or stroma; (b) in an internal zone, more or less evident, of larger nucleated epithelioid cells; and (c) a central multinucleated or giant cell.

5. These "tubercles" arise apparently in connection with the lymphatic tissue that pervades the body. No region is exempt from them. They may occur in the substance of organs, in the bones and muscles, in serous membranes, as the pia-arachnoid, pleura, pericardium, and peritoneum; in synovial membranes; in mucous membranes (arising in the submucous stratum), as in the mouth, pharynx, larynx, trachea, bronchi, intestines, and genito-urinary tract.

6. Being ill supplied with blood-vessels, they can only attain a certain size, and then perish. The central cells degenerate first, because they are the farthest removed from the nutrient blood-stream, and mutual pressure due to their increasing growth hampers their vital activity. They become fatty degenerated, soft, opaque, caseous, forming "yellow" tubercles, which, when isolated; are larger and manifestly of older formation than the milinary translucent grey granules. Where such tubercles are confluent, larger and more irregular caseous masses are formed. Caseation may pass into cretification. On the other hand, there is no doubt that occasionally the tubercular nodules take on a fibroid change, passing from the stage of "granulation tissue" to one resembling "cicatricial tissue."

7. Almost invariably there occurs, in the vicinity of the tubercular formation, some reactive inflammation. This may be protective by ultimately leading to encapsulation by fibrous tissue of the caseated tubercular focus; or, as more frequently happens, it aids in the disintegration of the surrounding tissues, and leads, with the necrosis of tubercles themselves, to destructive ulceration.

8. Individuals who are prone to the development of tubercle are called "tubercular." The disposition may be inherited. Probably what we recognize as "struma" or "scrofula" is only one form of this: a tendency to tuberculosis of lymphatic glands especially; just as in phthisical subjects we have a tendency to pulmonary tuberculosis.

9. The tubercular manifestation is, in the majority of cases, at first local, *i. e.*, limited to one organ or tissue. It may remain so limited throughout life—may not even endanger life—or may lead to death by the local destruction to which it gives rise. On the other hand, it may be more or less widely diffused throughout the body of the same individual. This diffusion may be due sometimes to the simultaneous development of tuberculosis in many parts. More frequently, it is due to secondary dissemination, by a process of infection.

10. This dissemination takes place, as in cancer, in two ways: *viz.*, by direct extension, or infection of neighbouring tissues by contiguity; and by general distribution of the tubercular virus through the medium of the blood-system (including lymphatics).

11. The tubercular virus seems to be most potent, or, at any rate, to retain its potency, *i. e.*, its infective property, in the caseous state.

12. Examples of the local extension of tubercle, or of propagation by contiguous infection are seen: (1) in the development of peritoneal tubercle from intestinal*; (2) in the spreading of tubercle from one part of an organ (*e. g.*, lung) to another part; (3) in extension from lung to pleura*; (4) in bronchial, laryngeal, and intestinal ulceration excited by the passage over their mucous membrane of material expectorated from a phthisical lung; (5) in tuberculosis of bladder and vesiculæ seminales following upon renal or testicular tubercle, etc. The mode of its local extension

approximates tubercle to the neoplasmata, *viz.*, by its elements exciting in the tissue they infect changes leading to the formation of cell-masses resembling the primary focus.

13. The generalization of tubercle is shown in the disease known as acute milinary tuberculosis, which is characterized by an eruption of milinary granulations in diverse organs and tissues. Its mode of occurrence may be (as above) compared to the general dissemination of secondary cancer, or, perhaps with equal truth, to the metastatic suppuration of pyæmia. With few exceptions, it appears to necessitate a primary tubercular focus to give rise to it. It is believed that the infective virus, whatever it be, enters the blood-stream at this local focus, and is thence widely disseminated, the resulting growths being for the most part milinary, grey, and translucent; life not, as a rule, being prolonged for a sufficient length of time after the occurrence of the generalization to permit of the growths becoming confluent or caseous. As the membranes of the brain are generally involved in this widespread infection, death occurs early.

14. Lastly, tuberculosis is inoculable. In this respect, it resembles pyæmia, and differs from the cancers; for there is reason to think that it may be and is communicated from one human being to another, *e. g.*, from husband to wife, and *vice versa*; and that it can be inoculated in animals from man (artificial tubercle). There is, further, a possibility, based on certain morphological resemblances of the formations, that bovine tuberculosis is communicable to man.

15. If the foregoing data be true, it follows that tuberculosis is an infective disease, probably due to the presence of a virus, which gives rise to the development of peculiar tissue-formations, capable of localized or general propagation in the body, and characterized mainly by their tendency to early disintegration.

16. Until the nature of the virus is known, it is impossible to formulate data concerning the conditions under which the disease arises in subjects free from inherited taint.—*Brit. Med. Jour.*

FOWLER'S SOLUTION IN THE TREATMENT OF TETANUS. BY WILLIAM A. BYRD, M.D., of Quincy, Illinois.

In looking over the late treatises on surgery, I do not find any allusion to the treatment of tetanus by the use of arsenic, in any of its forms; not even in the able addition of Dr. J. S. Jewell to Holmes' System, Am. ed. In a conversation with Dr. John T. Hodgen, last fall, he spoke so highly of the use of Fowler's solution in the treatment of tetanus, that I resolved to put it to the test in the first favorable case that presented. December 5th, 1881, George Schell, a robust laborer, presented himself for treatment. Three weeks before he had received a cut with a stove-shaping machine, on the ring and middle fingers of the right hand, cutting off about half the nail, and last phalanx of the middle finger, and splitting the end of the ring finger for about three-quarters of an inch. He had been under treatment elsewhere, and the fingers were coated with a salve that had shrunk in drying, and had cracked open, curling up at the points of fracture, something like shellac varnish does when applied too thickly to any surface. The wounds were very much irritated, and very painful. The sweat was standing upon his skin in great drops; his tongue was heavily coated with a brownish yellow, pasty mass; he was unable to open his mouth over a quarter of an inch,

* In these cases, probably by extension along lymphatic channels.

on account of pain in the masseter muscles. There was pain of a paroxysmal type along the whole of the back, aggravated by a draft of wind or a touch of one of the affected fingers. This pain was so intense that he would at times fall down and cry out with it. When attacked with one of these paroxysms, his head and heels would be drawn backward, but not enough to call it typical opisthotonos. The first two days I treated the fingers with emollient applications to get off the salve that was constricting them, and gave ten grains of chloral hydrate and fifteen grains of bromide of potassium, every hour, to allay the pain and to correct the spasm. The appearance of the fingers improved under this treatment, but the general symptoms became worse. I then decided to use Fowler's solution, in large doses as recommended by Dr. Hodgen, with the exception of giving it by mouth, instead of by hypodermic injection. This I did because there was no irritability of the stomach. He was given ten drops of Fowler's solution, every three hours, for forty eight hours, and the symptoms closely watched. At the expiration of which time he was so much better that he was given the same amount every six hours. He steadily improved until the 16th, when excessive granulations began to spring up on the wounded surface, on the middle finger, and the nervous symptoms began to reassert themselves. There being no abatement, on the 19th, with the assistance of Dr. G. Connell, I amputated the middle finger at the middle of the first phalanx. All went well until the 22d, when there was found an abscess in the middle of the palm of the hand, requiring to be opened. Upon making the opening there came out a piece of white, swollen, macerated nerve, about one-fourth of an inch in length. When dressing the wound the next day, another piece about the same size came away, and the next day a piece about half an inch in length came away. From this time on he made a speedy and satisfactory recovery. Although amputation had to be resorted to in the end, yet the arsenic exerted so prompt an effect for the better, when chloral and bromide of potassium had failed, that I am satisfied that it deserves all the praise bestowed upon it by Dr. Hodgen, who credits Dr. A. S. Barnes, of St. Louis, with having suggested its use to him many years ago. Any of my readers who desire to read an account of it, written by the doctor himself, will find a very interesting article in the *St. Louis Courier of Medicine*, for December, 1880, p. 519. To Dr. G. W. Connell my thanks are due, for assistance and counsel throughout, in the treatment of this case.—*Med. and Surg. Rep.*

ON ACUTE TRAUMATIC MALIGNANCY.* By
RICHARD BARWELL, F. R. C. S., Senior Surgeon to
Charing Cross Hospital.

The title of this communication, "Acute Traumatic Malignancy," is intended not as denoting a distinct doctrine, but as a means of eliciting opinion and confirmatory facts, of which latter I cannot but think several are probably in the note-books or the memory of others in the profession. The cases on which the name is founded made a great impression on my mind, leading me to think that occasionally, under the stimulus of severe irritation, the tissue-elements which, under favorable circumstances, would assume only the additional activity necessary for repair, may take on

a more prolific cell-germination, culminating in a rapid form of malignant disease in one of those forms, be it named myeloid or round-celled sarcoma, or encephaloid cancer, which consists of little else than heaped up cells and their progeny. Without further preface than these few words, I will proceed to read the cases.

CASE I. Mr. B., aged 17, in playing football, fell violently on his shoulder, and was disabled: this happened on April 24th, 1875. He rested the arm in a sling, and applied cold lotions, and in about ten days was so much better that he began to use the limb again; but, after about a week, pain slightly returned; then some swelling was observed, which, increasing rather quickly, alarmed his father, who then brought him to me.

May 19th. I found the shoulder enlarged, the tumefaction being most marked in front; it was soft, but not uniformly so, there being some patches, ovoid or circular, harder than the rest, but which seemed to float on a soft substratum. The swelling did not rotate with the bone. Behind the joint, little or no enlargement was perceptible. The arm below was considerably shrunken. I gave a very guarded diagnosis and prognosis, the tumor having the appearance of malignancy.

May 25th. The shoulder was considerably increased in size, the skin a little tense, the surface white and waxy; a meshwork of large veins marking themselves out under the skin; the texture soft and doughy, with a sense of false fluctuation, chiefly manifest in front and on the outer aspect. I passed in an exploratory instrument, and, pushing the canula home after withdrawal of the trocar, was fortunate enough to extract a shred of tissue. Under the microscope, this showed a congeries of large cells, with a number of brilliant nuclei. I gave my view that excision of the shoulder must be at once performed. Mr. B.'s father said he must think it over.

I saw nothing more of this patient until June; he had, I believe, in the interim, consulted other surgeons. Although the disease had so far advanced as to render operation of doubtful value, as I at the time stated, I nevertheless thought it my duty to afford the chance; and therefore, since no glands, either in the supra-clavicular space or in the axilla, were involved, I excised the shoulder. The disease, however, returned shortly afterwards, and the young man died in about three months.

I am sorry not to be able to bring the specimen, which is in keeping at the Charing Cross Medical School; but our removal into the new premises has not yet afforded time for putting all our museum in order, and the subcurator in charge is ill. I must, then, simply describe it as a round-celled sarcoma, commencing apparently in the subsynovial tissue. It is only necessary to call attention to the fact that, twenty-six days after receipt of injury, the growth had so far advanced as to bear pretty strong evidence of its nature. It therefore probably commenced not later than six or eight days after traumatism, perhaps sooner.

CASE II.—John G., aged 63, stevedore, first came under my notice when seeking admission into Charing Cross Hospital, October 12th, 1881, suffering from the effects of falling down a ship's hold eighteen days previously, severely bruising his left side.

History.—His own and his relatives' account is that, up to the time of his accident, he had been a perfectly healthy, and, for his age, a remarkably vigorous man, with the exception of a slight winter-cough. After the fall, he had considerable pain in both sides; kept

* Read at a meeting of the South London District of the Metropolitan Counties Branch.

his bed, and put on poultices. About a week before application at the hospital, he first noticed a little swelling on the right side. The man appearing ill and suffering, I followed him shortly into the ward, expecting to find a localized traumatic empyema.

Condition.—The man was weak, pale, and suffering a good deal of pain, increased on inspiration. About three inches outside the angles of the ninth and tenth ribs was a lump about the size of half a small egg, its lesser end projecting outward and backward. It was very slightly or not at all painful on pressure, and felt solid, or semisolid. The tumor itself, and a considerable area around it, were dull on percussion. On going further, I also found the whole left chest dull, and the respiratory sounds very weak, and apparently distant. An exploratory puncture in the lump produced merely a little blood.

I do not think it worth while to follow the short history of this case. There seemed nothing surgical about the state, and Dr. Pollock was kind enough to take charge of the case. He, in consultation with medical colleagues, detected signs of some fluid in the left pleura, which was punctured, and about five ounces of turbid serum withdrawn; but the man became rapidly weaker, and died October 24th, thirty-one days after the receipt of the injury.

Post mortem examination, October 25th (twenty-four hours after death).—The appearances were such as certainly had not been diagnosed or even suspected during life. The specimen is on the table. The whole left pleura (parietal) is one mass of malignant growth, in places three-quarters of an inch thick, nodulated on the surface, and white. The lung is infiltrated with a like material. The right pleura (parietal) is, at the lower part, in the same condition, but traced upwards the amount of growth diminishes, and, quite at the apex, disappears also. Through the right lung, isolated masses of this substance are scattered. It is curious to observe that while, on the left side, the parietal pleura is most affected, on the right the visceral layer is most diseased; and that, while the left kidney was healthy, the upper part of the right kidney contained a like mass of the neoplasm.

The new growth was an oat-shaped or oval sarcoma. There were no giant-cells. In that part which was examined, there was no stroma or intercellular substance; or, if any, it was perfectly homogeneous. The cells were $\frac{1}{1000}$ of a millimetre long, $\frac{2}{1000}$ broad (thousand is the denominator as an entity of measure which we mark with the Greek letter μ). A few of them were caudate at one or both ends; others had no prolongations. Nuclei were large, often multiple.

One other case I feel sure I am justified in shortly relating. I was speaking to Sir J. Paget about this latter case, asking him if his experience had brought him in contact with cases of malignant disease rapidly following injury. He stated that, many years ago, a man came into St. Bartholomew's Hospital, under the care of Mr. Lloyd, with a fractured fibula. The limb remained the usual time in splints; and, when they were removed, a peculiar and unusual swelling was observed about the parts. Shortly afterwards, this was diagnosed as a malignant growth; the limb was amputated, and the diagnosis verified by anatomical examination. The man left the hospital well.

Now these cases, although they do not justify me in a dogmatic assertion that traumatism may call forth in a previously healthy individual a rapid development of malignant growth, do, I hold, more than justify me in calling attention to the possibility of such occurrence. Of course I have not lost sight of the other

alternative; namely, that, in all these cases, malignancy may have been present previous to the injury. But, if we take the circumstances of the three cases, the hypothesis of previous malignant disease necessitates the occurrence of a series of coincidences such as could hardly arise. For example, in my first case (Mr. B.) and in Mr. Lloyd's case, the very part injured would have to be the part previously affected by malignancy. In those two cases, the presence of such disease elsewhere is negated by the course of events; while in my case, No. 2, we can hardly conceive the pleura, previous to injury, to have been at all like that now shown. Even if we suppose such disease, how strange that it should cause no symptoms till the moment of the injury, and then give very marked ones; and how still more strange that in this case also the injury should fall on a place occupied by such severe and such singularly occult or quiescent disease.

We must also consider the possibility that the man's kidney alone was affected previous to injury, and that afterwards the disease spread into the chest; but the right kidney is the diseased one; the left pleura most involved. Nevertheless, if we grant this supposition as possible, it rather goes to prove my contention, when taken in connection with Cases 1 and 3, in which no other malignant manifestation is present. For, I presume, the development of tumor depends upon two factors—the tendency to neoplasm, what Billroth calls tumor-diathesis, and a local irritation, the nature of which is generally quite occult, sometimes is mechanical and long continued. It must always be understood that irritations, either mechanical or chemical, produce in healthy individuals only common or traumatic inflammations resulting in thickening, suppuration, or other of the usual terminations. So, after an ordinary wound of the skin, a scar, which slowly more and more assimilates itself to normal skin, results. But, in persons endowed with a form of tumor-diathesis, all skin wounds, however slight, even little points of acne, result in a small fibroma, to which we give the name of *keloid*. So also we find that epithelioma of the lip is in many cases attributed to the habit of smoking short clay pipes; of the tongue, to manifold *irritamenta*; certain sarcomata are apt to form at the site of ancient, sometimes of forgotten injuries. If, then, in persons possessing the tumor-diathesis, wound or other irritation is often the local provocative of a neoplasm, the fact of traumatic tumor, therefore evidently of traumatic malignancy, is in reality already established. The only additional point in the sequence is the doctrine concerning the acute character such growth may assume. Acute or rapid formation of malignant growth is not, however, an unknown condition. Occasionally, after operations in which every part of a tumor seems to have been removed, a fresh development sometimes, in the as yet unhealed wound, will grow so rapidly, as in a few days to overwhelm and involve all the neighboring tissues.* We cannot, therefore, refuse to believe that, when a constitutional proclivity to new growth is present, some fortuitous traumatism may set up a similar rapid development of malignancy at the site of injury.

In the instances I bring before you, there must have been tumor-diathesis. The point to be remarked is this, that injury supplying the local irritation was followed immediately, not merely by a more or less slow and chronic growth of tumor; but by an acute and violent outbreak of local malignancy, such as is evidenced by the history of these cases, and more particularly is demonstrated by the condition of pleura and

lung now before you. In other words, these cases—I do not see how they can be otherwise interpreted—point to the existence of an acute traumatic malignancy.—*Brit. Med. Jour.*

OVARIOTOMY DURING PREGNANCY. By THEODORE A. MCGRAW, M.D., Professor of Surgery in the Detroit Medical College.

Cases of ovariectomy performed during pregnancy are sufficiently uncommon to justify their being put upon record. Mrs. James McC., of Wyoming, Ontario, consulted me in April, 1881, in regard to an abnormal tumor of eight months duration. She had first noticed it in July, as a swelling in the right groin. She had previously borne two children, the youngest of whom was then twenty-one months old. In September, 1880, her menstrual periods returned, and she was regular until February, when she ceased again to menstruate. The tumor had grown rapidly, and in April had extended to within two inches of the ensiform cartilage, occupying nearly the whole abdomen. Examination revealed an abdominal fluctuating tumor, dull on percussion, excepting the loins. Auscultation gave only negative results. The aortic impulse could be distinguished communicated through the tumor, but there were no foetal heart sounds nor any bruit of any kind to be heard over any part of the abdominal surface. The tumor could not be felt through the vaginal roof, on account of the intervention of the uterus which, enlarged and soft, lay across the pelvic brim. The os was soft and patulous and was jammed beneath the pubic arch. There was no ascites. The urine was scant but free from albumen. The countenance in its pinched and wan aspect indicated the nature of the disease, and the lower extremities were swollen and cedematous; the diagnosis of ovarian tumor complicated with pregnancy was established, and on April 12th, 1881, I proceeded to operate. There were no adhesions, and the multilocular cyst was removed without much trouble, although it broke in handling and permitted some of its syrupy contents to escape into the peritoneal cavity. The left ovary appeared to be healthy. The enlarged uterus evidently contained a foetus of about three months. The operation was performed under the carbolic spray with the strictest antiseptic precautions and the peritoneal cavity was most scrupulously cleansed. The pedicle was secured by a clamp. The patient afterwards suffered very little pain but complained even to the fourth week of her convalescence of distress from flatulence. The first two days the temperature ranged at 101° F., after that went down gradually to nearly normal until the 8th day, when it made a sudden jump to 104° F. This continued for three days without apparent cause, and then slowly subsided again. On the eleventh day the clamp was found to be detached and the pedicle seemed to be healing, but two days afterwards there was a sudden hemorrhage from it that was quite copious and alarming. It was checked, however, by pressure and persulphate of iron and did not recur. About the middle of May, she went home, and on the eleventh of last October she was confined. She had a rapid and easy labor, which she accomplished before the arrival of her doctor, and convalesced rapidly and thoroughly. She is now in the best of health. I regret to say she lost her baby on the eleventh day after its birth by hemorrhage from the naval.—*Detroit Clinic.*

CORRESPONDENCE.

THE REVISED CODE OF ETHICS.

EDITOR OF THE GAZETTE :

As a permanent member of the State Medical Society, I desire to present my protest against the recent action of that body in modifying its code of ethics, and assure those wire-workers who have been so assiduous in bringing it about, that it has already begun to produce its legitimate results—deep humiliation. Instead of the surprise being “an agreeable one,” it is quite the contrary.

Without fear of contradiction, I have not the slightest doubt, had the proposed change been submitted to the profession throughout the State, that not more than ten per cent. would have been found to favor such a suicidal course, and I think 'twould have required undue influence to obtain that proportion.

Already, those practitioners who have heretofore been considered irregular, are beginning to exult; already they are saying, “The *allopaths* are now begging consultations with us,” (and they are right in such declarations). No one can have failed to notice, within the past few years, that there have been symptoms, in *certain localities*, and confined to a certain few individuals, of a desire to throw the code entirely aside and obtain the “mighty dollar” at any sacrifice.

I had hoped, however, that there would not be found a sufficient number in the society to adopt so ruinous a course. For my part, I can conceive but one motive which could have actuated the moving spirits in this step of degradation.

It throws wide open the doors for those, and those only, who have heretofore been possessed of very elastic professional pride (and they are not few), to pass out and sink themselves to a level which the former code never contemplated, and who were, to a great degree, kept within the pale of a healthy organization by its judicious and prudent requirements. It will not do to say that it is for the purpose of guarding the interests of the sick. Neither does it sound well to say, “Oh! the consultations are only intended for the purpose of establishing a ‘diagnosis,’ in a case.”

Take the following for an illustration of such a ridiculous idea:—A messenger calls to say that Dr. A. desires your attendance at the bedside of Mr. B. You go and are met by a practitioner who believes (or professes to) that *a sixtillionth part of a grain of Carbonate of Lime will, at the end of twenty-one days, produce great heat at the extremity of the big toe.* Dr. A., and perhaps the patient also, says: “Dr., there seems to be a doubt about the character of this disease; I have sent for you to ascertain its locality and establish the diagnosis; I don't care what your treatment would be, if I can only establish its true character—its pathology, that is all I want.” Should the patient express his “true inwardness,” he would say the same, and add: “I can more safely and easily be treated by infinitesimal doses than by you.”

Now, I would ask what dollar can be “mighty” enough to tempt any high-minded medical man to lend himself “to such base uses”?

Far worse will it be (or ought to be), when delegates from the great State of New York, that State whose motto is “Excelsior,” present themselves at the door of the American Medical Association at St. Paul.

I shall pity the young physician, one, perhaps, whose

purse is short, who for the first time goes as a delegate to that body, and who, with pardonable pride, desires to see his name in print as such delegate. He will be met with the salutation, "You come from that State Society whose code entirely ignores ours so far as the leading features and requirements are concerned. Oh! no; you can't come in. We are sorry that you are so unfortunate as to belong to such a society, but the code which your State Society has recently adopted is so antagonistic to ours that we are surprised at your effrontery in expecting that you could gain admission." The delegate may be allowed a seat upon the floor (having gone such a long distance), yet I very much question that, unless the reception committee be possessed of an excess of sympathy for the young delegate.

For one, I don't propose that any delegate from my society will go on such a Tom-fool's mission, and I have no doubt there will be many other societies unrepresented the present year.

"If this be treason, then make the most of it."

Sincerely yours,

D. COLVIN.

Clyde, Feby. 19th, 1882.

FORMULARY AND POINTS IN PRACTICE.

IN GASTRODYNIA.

- ℞ Potass. bicarb..... gr. 120
 Spts. ammon. aromat..... ʒ 3
 Tinct aconiti..... min. 30
 Infus. lupuli, ad..... ʒ 8
 M. Sig. One-sixth part three times a day.

IN LANGUOR WITHOUT APPRECIABLE CAUSE.

- ℞ Tr. assafœtidæ..... 3 2
 Ammon. carbonat..... grs. 20
 Aquæ camphoræ ad..... ʒ 4
 M. Sig. One or two table-spoonfuls occasionally.

IN CHRONIC GOUT.

- ℞ Potass. bicarb..... ʒ 1 1/2
 Tinct. chirate..... ʒ 2
 Decoc. aloes co..... ʒ 8
 M. Sig. One-sixth part early every morning.

ALKALINE DRINK.

- ℞ Liq. potassæ..... min. 15-45
 Liq. calcis saccharat..... min. 20-60
 Mix, and take in a cup-full of beef tea or of milk two or three times a day.

SOLUTION OF CHLORINE FOR INTERNAL ADMINISTRATION IN SCARLET FEVER, TYPHUS, DIPHTHERIA, CHRONIC AFFECTIONS OF THE LIVER, ETC., ETC.

Put sixty grains of finely-powdered chlorate of potash in a strong pint bottle, and pour upon them two drachms of strong hydrochloric acid. Close the mouth of the bottle until the violent action ceases; when gently add one ounce of water and agitate well; add another ounce, again shake, and continue this process until the bottle is full. Afterwards keep the bottle in the dark. The mixture is to be made fresh every day.

Sig. One or two table-spoonfuls may be taken frequently, according to the age. An adult may use the whole pint in 24 hours.

DISINFECTANT LOTION.

- ℞ Zinci chloridi..... grs. 25
 Aquæ..... ʒ 1

Ft. sol. For use add one ounce of this solution to two pints of water. To disinfect a sick room, a piece of flannel three or four feet square is to be moistened with a solution thus made, and frequently waved through the air. Some of it should also be placed in the stools and bed-pan.

FOR FETOR OF THE BREATH, WHETHER DUE TO MERCURY OR OTHER CAUSES.

- ℞ Calcis chloratæ..... grs. 60
 Sacchari albi..... ʒ 4
 Amyli..... ʒ 1
 Olei menthæ pip..... ʒ 1
 Pulv. tragacanth. co..... grs. 120

Aquæ menth. pip. sufficient to form a mass. To be divided into lozenges of 20 grains each. One may be taken frequently.

LOTION IN UNHEALTHY ULCERATIONS WITH OFFENSIVE DISCHARGES.

- ℞ Tinct. iodi..... ʒ 6.
 Aquæ destillatæ..... ad ʒ 8.
 M Sig. Lotion.

DISINFECTANT FOR MALIGNANT SORES OR SUPPURATING WOUNDS.

- ℞ Ext. hæmatoxyli..... ʒ 1.
 Olei theobromæ.....
 Adipis benzoat..... aa ʒ 1/2
 M Sig. To be applied to the suppurating surface.

IN PYÆMIA, ERYSIPELAS, TYPHUS, DISSECTING WOUNDS, ETC.

- ℞ Acid sulphurosi..... ʒ 6.
 Tinct. aurantii..... ʒ 1.
 Tinct. chloroformi co..... min 90.
 Quiniæ sulphat..... grs. 12-18
 Aquæ ad..... ʒ 6.

M Sig. One sixth part with two table-spoonfuls of water every six or eight hours.

SERVICEABLE IN CONTROLLING THE NERVOUSNESS OF THOSE NURSING THE SICK.

- ℞ Spiritus camphoræ..... mim 20.
 Spiritus lavandulæ..... ʒ 1.
 Mucilag. tragacanthæ..... ʒ 7.

Make a draught. Sig. To be taken every six or eight hours. Its efficacy may be increased by the occasional addition of a glass of port wine.

MEDICAL NOTES AND NEWS.

Vaccination.—Our misguided and misinformed friend, Mr. Bergh, who recently tried in vain to convince the public that vaccination is a curse and not a blessing to human kind, may find some instructive facts and figures on this question in an address just delivered in London by Dr. Carpenter, "the father of English physiology," whose efforts in behalf of the hygienic good of man have been not less earnest or less successful than those of Mr. Bergh for the physical welfare and comfort of the beast. Dr. Carpenter is a zealous advocate, not only of vaccination, but of compulsory vaccination. He maintains that in mat-

ters of health as well as of education it is both the right and the duty of the State to act for the public-good—that society should be protected against death and disease not less than against illiteracy. In support of this view he cites an array of statistics to show the marvellous efficacy of vaccination as a preventive of small-pox. He shows that when Parliament provided the means of vaccination in 1840 the result was a remarkable decrease in the mortality from small-pox and that compulsory vaccination ordered in 1853 led to a still greater reduction. In the decade ending with 1880 the ravages of small-pox were extraordinary in England, and yet, so far as Dr. Carpenter knew, not a single person who had been vaccinated died of the disease in the year named.—*N. Y. Herald.*

A Crocodile's Strength.—A strange kind of experiment has lately been made in Paris by Drs. Bernard and Blanchard, viz., measurement of the power exerted by the masseter muscle in a crocodile (a muscle passing from the cheekbone to the lower jaw). Ten live crocodiles of the species *C. galeatus* of siamensis, that had been sent in large cases from Saigon to M. Paul Bert, afforded the opportunity for such experiments. Some of these animals were as much as ten feet in length, and weighed about 154 pounds. The difficulty of managing such creatures in the laboratory was, of course, considerable. The crocodile was fixed with ropes on a heavy table, the lower jaw kept in contact with the table by a cord, while the upper was raised by means of a cord attached at the extremity and passing up to a beam overhead. A dynamometer was inserted in this cord and was affected when the animal was stimulated with an electric current. In this way a crocodile of about 120 pounds weight gave an indication of about 308 pounds (140 kilogrammes). The application of the cord at the end of the snout was necessary but unfavorable, seeing the application of the force is thus at the end of a long lever, and there is at least five times more space between this point and the insertion of the masseter muscle than between the latter and the joint of the jaw—the fulcrum. Hence the masseter really produces a force five times that indicated by the dynamometer, or about 1540 pounds (700 kilogrammes).

This extraordinary force, it should be remembered, was of an animal somewhat weakened and at a low temperature. The force (of about 308 pounds) is readily applied at the end of four large teeth that project beyond the others, and, considering the surface here represented, the authors estimate the pressure, while the bite is executed by the extremity of those teeth, at nearly 400 atmospheres. Making similar experiments with an ordinary sporting dog, they obtained in the dynamometer a pressure of about 72 pounds; while the effect at the insertion of the masseter was about 360 pounds. The pressure at the point of the canine teeth would be about 100 atmospheres. It is calculated that the crocodile is about one-third stronger than a dog of the same weight would be.—*From Galignani.*

The Air we Breathe.—PROFESSOR CHANDLER ON THE CONSTITUENT ELEMENTS OF THE CITY ATMOSPHERE—AN INTERESTING DISCOURSE BEFORE THE PLUMBING CLASS OF THE TRADES' SCHOOLS.

"Chemistry in the Atmosphere" was the subject of a very interesting discourse which Professor Chandler delivered lately before the plumbing class

of the trades' schools. Many persons, he said, have an erroneous idea that because one gas is heavier than another it goes to the bottom. As people see that water and oil separate and that the oil goes to the top they imagine that the heavier gas lies at the bottom and the lighter ascends. The fact is that gases, light and heavy, mingle. Architects have an idea that the worst air lies at the bottom, and therefore they ventilate at the top. There is no such thing as a stratification of gases. Gas makers think that gases are in layers, and that the heaviest lies at the bottom. There is no such thing as a settling of gases. It is the greatest of heresis. There is enough carbonic acid in the air to make a layer of eleven feet, and if it should settle there would be that depth resting on the water and the land around the globe, and that would put an end to all human and animal existence. The dust in the atmosphere, Professor Chandler said, is another consideration. Some of it is mineral, by which he meant the fine powder arising from the streets from the clay, sand and pulverized stone. In the ocean there is another kind of dust called salt. As the waves break upon the shore little globules of salt are thrown up in the air from the spray. There is also the dust that comes from animals and plants which is called organic. In the first place we have the dead dust—the dust of leaves that fall from the trees. In cities we have another kind of dust, arising from horse manure, with an occasional dead cat or dead dog and decayed vegetable and animal substances. There are two kinds of living dust, the pollen of the flowers which is detached and goes through the air in certain seasons of the year, and this when breathed into the lungs of some people gives them hay fever. There is the fungi, the mould-fungi, as illustrated in the clothes and other things that get covered with mould when they are laid away in a closet or some damp, secluded place. Another kind of dust is that which turns milk sour, turns potatoes and other vegetables stale and dry. A piece of meat becomes foul but it does not turn sour like the milk or the vegetables, and that kind of fungi is called bacteria, which eats all kinds of putrefaction and is the most offensive of any other kind of fungi. The object of the refrigerator is to get rid of the bacteria for they cannot get along without heat. A strong solution of salt is a protection against this class of fungi. They are the scavengers that take charge of dead flesh and return it to the earth again. Then we have the bacteria that produce smallpox, diphtheria, cerebro-spinal meningitis and a number of other diseases. Some of them get into our stomachs through the impure water we may drink. Illustrations were thrown on a screen by aid of a stereopticon showing the vast multitude of bacteria and infinitesimal insects that pervade all nature. There is at least twenty pounds of sulphur in every ton of coal and that throws off what is called sulphuric acid. Factories fill the air with bituminous smoke and a great variety of offensive trades go to make the air impure. The ground air in cities is always foul.

New York ground is saturated with sewage, and the air that comes up from it completely pollutes the atmosphere. The air of our houses is constantly contaminated. We are constantly using up the oxygen, and we are putting moisture and carbonic acid into it besides the effete organic matter that is given off from the skin. People do not stay long enough in a room to get killed, but take the case of the 146 men who were imprisoned in the Black Hole of Calcutta. It was a room 18 by 18, with one entrance and a window

on the same side. The men were confined from six in the evening till eight the next morning, and 123 died, all from the effects of the poisoned atmosphere, while those who survived were afflicted for the remainder of their existence with incurable complaints. We need a certain amount of air space; for the human lungs use up the air of a room rapidly, and at night, with the gas lighting, there is an increased consumption. We are particularly liable to have the air of our rooms poisoned by stoves. Putting a damper between a fire and a chimney is one of the grossest blunders people make. The common practice is for people, when they are about to go to bed, to turn the damper to prevent the draught from escaping, and the result is the carbonic oxide from the coal escapes through the openings at the top and sides of the stove, and people are made sick and rise with headaches. "If I had my way," said the speaker, "I'd remove every damper from every stove the city." He thought the air boxes in houses should be in the rear in place of the front, as there would be less dust and gases from the street. Sewer gases are another cause of complaint. We rarely get any real sewer gas. If you take a foot of cubic sewage it will give off in twenty-four hours a cubic foot of sewer gas composed of the following elements:—Marsh gas 72 parts; carbonic acid, 13; sulphuretted hydrogen, 7; carbonic oxide, 2½; ammonia and other small quantities of other elements, 1. He would recommend a good trap between the house and the street sewer. The only way to keep out the sewer gas is by good plumbing. The germs of disease never come through the water. He believed in having all the privy vaults in the city removed, for he considered that they were a fruitful cause of the increase of the death rate. Cesspools are equally offensive, and garbage refuse and manure should be quickly removed. All things that contribute to pollute the atmosphere should not be allowed to remain longer than is absolutely necessary. All the money spent for carbolic acid is practically wasted. It does not kill the germs of disease. The different patent disinfectants are of no use. They may make the air pleasant for a time and hide the smell, but the danger is simply concealed, not removed. What is wanted is proper plumbing and proper ventilation and attention to cleanliness.

British and American Physicians in Paris.—

With a view to promote social intercourse and maintain good fellowship between British and American physicians, a society has been formed under the name of the "British and American Medical Society of Paris." Membership is limited to British subjects and citizens of the United States of America legally entitled to practice as physicians in Paris, and actually doing so. A certain number of dinners are appointed to be held annually; the first took place on February 1st. Among the members who form this society are Dr. McCarthy, Sir John Rose Cormack, Dr. Thomas Bishop, Dr. the Hon. Alan Herbert, Dr. Pratt, Dr. Marion Sims, Dr. Johnston, Dr. Faure-Miller, Dr. Jennings, Dr. Murray, Dr. Pepper, Dr. Rowlatt, and Dr. Loughnam, etc. The President for 1882 is Sir John Rose Cormack, and the Vice-President Dr. Bishop.

Scrotal Calculus.—Dr. Lippmann reports, in the *Centralblatt für Chirurgie*, April 23rd, 1881, a unique case of this affection. The patient was a peasant aged 68, who stated that fifteen years previously, finding great difficulty in micturition, he consulted a medical

man, who removed from the scrotum a calculus weighing 120 grammes (about 4¼ ounces). From this there resulted a urethral fistula, which gave passage to the urine, first easily, then with increasing difficulty. The fistula was situated a little behind the point of the junction of the penis and the scrotum. All attempts at catheterism failed, that portion only of the canal situated in front of the fistula being permeable. The scrotum was distended to the size of the head of a fœtus, and was of hard consistence. The testicles were retracted towards the external inguinal ring, and extremely atrophied. When a catheter was introduced into the fistula, a calculus stopped the way. The next day, an incision of the length of the scrotal raphe was made, and four calculi, weighing in all forty grammes (about an ounce and a-half), were removed. They were rough, of a greyish-yellow color, presented facets, and were made up of phosphates. When joined together, they were about the size of a goose's egg. The cavity was afterwards washed out with carbolic acid. The wound healed quickly, leaving a fistula, through which the patient passed his urine. Later on, he emptied his bladder by the help of a catheter of his own invention, which was simply a goose-quill.

Antiseptic Treatment of Lung-Disease.—For several years, I have largely employed dry antiseptic inhalation in phthisis, and as an adjunct to general constitutional measures. The treatment I believe to be useful; but every case of improvement must not be attributed to the inhalation. The most suitable cases are those attended with profuse expectoration, especially when softening has commenced or cavities formed.

The effect is sedative; in a large proportion of cases the expectoration diminishes in quantity and improves in quality, cough becomes less frequent and severe, and sounder sleep is enjoyed, enabling the patient to dispense with objectionable cough medicines. The same effects may be noted when the general progress of the lung affection is not arrested. I have never seen hæmoptysis produced by its use. As a respirator, I prefer a simple tin-box, perforated and shaped to the mouth, introduced by Dr. Roberts of Manchester. The patient is directed to place a few drops of the carbolic solution on the tow in the box, and to use the respirator for ten minutes after the morning cough, and at intervals during the day. Many habitually use it for hours while reading. If dryness and irritation of the mouth and throat be caused by the carbolic inhalation, other remedies may be substituted—such as terebene and eucalyptus oil.

To produce an aseptic atmosphere, the constant use of the vapor of carbolic acid in the sick-room has been recommended; few can be induced to submit to this treatment, which I cannot recommend.—W. V. SNOW, M. D., in *British Med. Jour.*

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EDITORIAL.

SPECIAL HOSPITALS FOR SCARLET FEVER AND DIPHTHERIA.

In his recent annual address before the State Medical Society, and again in a paper read before the New York County Medical Society Feb. 27, 1882 (an abstract of which we publish in another column) Dr. Jacobi called attention to a subject which is truly of vital importance to the community. The address alluded to was replete with suggestions regarding protective sanitary legislation, and will doubtless commend itself to medical men.

To those of our readers who have witnessed the terrible ravages of scarlet fever and diphtheria (and who has not?) it would be superfluous to cite statistics of mortality or detail the misery which the oft repeated epidemics of these dread scourges entails, especially in large cities; mortality and misery which might to a very great degree be prevented, if there were facilities for properly isolating and caring for the little patients among whom these diseases rage with the greatest virulence and fatality.

It is a lamentable fact, perhaps unknown to the majority, that the only place at the disposal of the Board of Health where patients with scarlet fever and diphtheria can be sent is the Reception Hospital for

small-pox patients, and as might be anticipated not infrequently the patients sent to be cured of the two former diseases contract the latter. Truly this is a condition of affairs that should claim the immediate attention of sanitary reformers and philanthropists.

It is claimed that hospitals established within the city limits might be rendered self-supporting, but even if this were not so, there are few projects to the execution of which our philanthropists could contribute which would effect a greater saving of life than this.

It seems almost incredible that such a city as our own; the centre of so great wealth; with so large a proportion of the population who can afford the luxury of giving to great charities, and who have so often lent their sympathy and financial aid to the needy of all countries, should have heretofore failed in appreciating what a rich field there was for the exercise of their beneficence in their midst.

We can only infer that it must be attributed to the fact that the matter has not been intelligently presented to them, if at all.

Let it not be the reproach of physicians that they were lacking in their duty in using their influence, professional and social, in awakening public and legislative opinion to the importance of this matter.

What Dr. Jacobi has so ably advocated let the medical societies bring to the legislature with their indorsement and endeavor to enlist the sympathies of the people that no longer it may be said of New York, that she compels her children to attend to their mental development and provides facilities for their so doing, but leaves them exposed to the horrors of pestilence.

PROTECTIVE LEGISLATION FOR FACTORY CHILDREN.

To the President of the New York State Medical Society we owe the agitation of this subject before the State and County Society, and we are indebted for some very sound and we think practicable suggestions regarding the laws that should be enacted to prevent this very large class of the community from being exposed to influences which dwarf them physically, mentally and morally, and consign to an early grave or to life-long misery little ones whose puny physique and diseased condition should entitle them to the consideration and care of the doctor rather than demand of them the work of an adult, which is too often the case.

Dr. Jacobi reminds us that though most other States of our own and other countries have long ago adopted measures protecting factory children, New York has as yet done nothing in this direction. He indicates the method by which reform in this matter must be brought about and advises that a bill be presented to the legislature, endorsed by the various medical societies, embodying rules looking toward the exclusion of all children from work in factories who have not attained the age of fourteen years, of all children who are unfit, from constitutional taint or weakness, to discharge the duties demanded of them in factories; and limiting the number of hours per day during which it shall be lawful to work these little ones.

Charity, policy, humanity demand that if we are to have a population of working men and women who are physically sound and morally sane we must protect the children from abuse, for as the twig is bent the tree's inclined.

We trust a bill such as the one proposed will be

passed as speedily as possible, and that the medical profession of our State and of other States who are without protective legislation in this matter, may be instrumental in presenting its claims on public and legislative attention. For on agitation and endorsement by medical men will depend to a large extent the success of the measure.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK COUNTY MEDICAL SOCIETY, FEB. 27th. 1882.

The President Dr. F. R. Sturgis presided. The minutes of the preceding meeting were read and approved. The comitia minora recommended that the Society approve of the association established to secure "First aid to the injured" and on motion of Dr. Wylie a copy of the resolutions endorsing the proposed association was ordered sent to the chairman of the State Charitable Society. Dr. Geo. H. Fox read a paper entitled,

"THE PERMANENT REMOVAL OF SUPERFLUOUS HAIR"

which was discussed by Drs. Heitzman, G. M. Beard, A. Jacobi, Wylie and others.

Dr. Fox alluded to the frequency with which this disfigurement was met with among women. He said there were at least half a dozen bearded women on exhibition through the country, that there were hundreds of others whose beards were just as prominent, and that the number of those women who were annoyed and disfigured by hairy growth on the face, more or less extensive, could not be estimated. Many of these were obliged to resort to the use of the razor. If they consulted a physician they were usually dismissed with the remark that the growth of hair on the face would not prove fatal, but women were able to derive little consolation from such remarks. This condition was often observed among inmates of insane asylums, and it was doubtless true in many instances that the growth of hair on the face developed a condition of melancholia and was an exciting cause of insanity.

Very often great improvement in the general health of the patient occurred after the removal of superfluous hair.

Dr. Fox here cited the case of a patient æt. 31, married at 18. Had abundant growth of hair on neck and chin. Her sleep and health were much disturbed, she was a monomaniac on the beard subject. She had tried pulling the hairs out, but this seemed to increase the growth. Dr. Fox had removed from this patient about 2,500 hairs.

The development of the operation for the removal of hair he considered one of the most brilliant on record. No longer than five years ago Dr. Duhring wrote in regard to this matter that the only justifiable means of treating such hairy growth was palliative and this represented advanced opinion at that time.

The operation by electrolysis was a simple one but should be performed by a surgeon with a keen eye and a steady hand. All that was required was an ordinary galvanic battery and a fine needle. Success in its performance depended largely on the kind of needle employed. The cambric needle had been much used but was too stiff. A platinum wire sharpened or a dentist's needle were better. The next thing was to place the

patient in a proper chair and in a suitable light. The eye of the operator should be on a level with the chin of the patient. A sharp stinging sensation was produced by the introduction of the needle and in 10 to 30 seconds after the circuit was completed and the needle introduced the hair was loose and might be easily withdrawn with the forceps. After operation the parts were congested and swollen, but this disappears in a day or two, and if a fine needle has been used, only minute red points are left. Rarely does the patient complain of pain. At the first sitting she is usually nervous. If the sitting is prolonged it is very trying to the eyes of the operator; a lens has been suggested but was not of much aid.

Dr. Fox's usual plan was to remove from 30 to 50 hairs at one sitting lasting $\frac{3}{4}$ of an hour.

If properly done no scars should be left, or at least none that are observable except on close scrutiny. About five to ten per cent. of the hairs removed return.

In conclusion Dr. Fox cited a number of cases operated upon with good results. He alluded briefly to the cause of hirsutes about which little was known, though it was thought to be dependent on a mal-condition of the nervous system and was certainly an evidence of perverted nutrition. The depression and melancholia so marked in these patients were symptoms of general nervous debility.

Dr. Heitzman said he could testify to all that Dr. Fox had said with respect to the operation described. He was now actively engaged in its performance and he could say that the operation was more than a success. It was a triumph.

As to the claim that large needles were more liable to leave scars than small, this had not been in accordance with his experience and that of Dr. White of Boston who had referred to this subject at a meeting of the Dermatological Association and expressed the belief that scarring after the operation was dependent on individual idiosyncrasy. Some skins were more prone to leave scars than others. The deformity in any case was very slight. He had been led to believe that the operation was not dependent upon electric but upon thermic action. He based this opinion upon a series of experiments made 12 years ago at Vienna to determine the viability of tissue by the aid of the electric current. It was then found that the electric and thermic element could not be separated. The redness, swelling, and pustulation following the operation indicated that slight inflammation took place dependent upon thermic action.

Dr. Hardaway, of St. Louis, who had been most instrumental in introducing the operation accepted this view.

Dr. Geo. M. Beard said that his interest and experience in the subject were historic rather than present. He had used Glover's needles and had been annoyed by the return of the hairs removed. The pain was not worth consideration.

There was no question in his opinion that the action was a chemical one. There was of course heat evolved in all electric action, but that was only incidental to the electric action just as in burning illuminating gas the chief object was light, though incidentally heat was the result of the combustion.

With respect to the relation of the growth of hair to the condition of the nervous system, he felt as Voltaire had expressed it, "the more we know, the less we are sure." The views expressed in the paper were his own.

Dr. Jacobi said there was one point he wished to allude to, viz., with regard to the time the hairs should

be pulled out. He did not pull out the hair when he applied the current, but waited until the next day, by which time, if the electric action had been sufficient, the hair would have dropped out itself, if not, he would use the current again. Then, too, it had been said that the effect of the operation was to produce congestion or hyperæmia of the parts, whereas the immediate effect was anæmia.

The report of the Delegates to the State Medical Society was next read, after which Dr. A. Jacobi read a paper on

"LEGISLATION LOOKING TO THE ESTABLISHMENT OF SPECIAL HOSPITALS FOR SCARLET FEVER AND DIPHTHERIA AND ALSO FOR THE PROTECTION OF FACTORY CHILDREN."

Dr. Jacobi said what he wished to present had erroneously been called a paper. He wished merely to offer some hints regarding subjects he had already presented to the State Medical Society and to propose the adoption by the County Medical Society of a few resolutions.

Dr. Jacobi then made an earnest plea for the enactment of laws to secure protection to factory children, and the establishment of hospitals for scarlet fever and diphtheria.

He recounted in detail the dangers to which factory children were specially liable and the benefit to the patients themselves and the community the proposed hospitals would be. He called attention to the bad hygienic surroundings of factory children, their lack of proper sleep, food, etc., and also the frequency of the diseases due to mal-nutrition among this portion of the population. He alluded to the mechanical and chemical injuries to which they were liable and cited statistics exhibiting the measures that had been adopted by other countries and many of our own states to secure proper protection to factory children.

The manufacturer had but one law "to produce at the lowest and sell at the highest" and thus the opportunity for health and life was diminished.

The statistics and experience of older countries should be utilized. No commonwealth will stand when so large a proportion of the population suffers in body and soul. While there were protective laws in Mass., Pennsylvania, Rhode Island, and other states New York state had nothing but an act to secure elementary education. The danger described was one that was increasing with wealth and growth, and it was time that New York by protecting its young secure its future.

He recommended that a bill be enacted which embodied the following points:

1. Children employed in factories should be under official supervision. In large cities boards of health could be entrusted with it.
2. Before being admitted to factory work, a child of legal age ought to be examined physically by a medical man. Chlorotic, anæmic, scrofulous, crippled, and phthisical children, and those under normal size for their ages, should be excluded.
3. No night or Sunday work should be permitted.
4. Some branches of work are to be forbidden entirely—those which are known to interfere with physical development, and others which are known to prove highly dangerous to childhood and adolescence.

The earliest age at which the young ought to be admitted to manufacturing employments is fourteen.

No child should be permitted to be employed in factories who has not been previously examined by a

physician, and can present a certificate properly acknowledged before a notary testifying to his physical fitness. No child should be permitted to work over ten hours a day.

Dr. Jacobi then moved that the County Medical Society insist and urge upon the legislature the necessity of appropriate legislation in this matter.

The speaker next discussed the advisability of establishing hospitals for scarlet fever and diphtheria within the city limits.

He alluded to the beneficent effects of vaccination, and said that the lancet and law would outlive by eternities the fanatics who attempted to throw discredit upon them.

There is, he continued, no year passes without great mortality from scarlet fever and diphtheria, both of which are contagious diseases, and some years the slaughter is appalling. While in small-pox and other contagious diseases, for which suitable hospital provision is made one attack of the disease rendered the patient less liable to another, it was quite the reverse in diphtheria, in which one attack predisposed to another. The horrors of a patient with either of these contagious diseases, scattering pestilence among his associates, were graphically portrayed. A portion of a letter from the President of the Society of Cruelty to Children to the Mayor of the city was read, in which complaint was made of the woeful inadequacy of the means at the disposal of the health authorities to provide for children with these diseases. The only place they could be sent at present was to the small-pox reception hospital, where they were liable to contract small-pox.

Dr. Jacobi said, in conclusion, that such institutions as were needed might be made self-sustaining, and moved that the society declare that both diseases were highly dangerous to health and life, even in mild cases, which might communicate a malignant form of the disease; that protection to the well can only be had by isolation of the sick; that the establishment of hospitals such as were proposed would be a blessing to the rich and poor alike, to the community, to society, to humanity.

This motion was carried. Dr. Johnson, in seconding it, said he could do so with perhaps more feeling than most of the members, since, as a representative of the Health Board, he appreciated the powerless, almost impotent position of the Board in this matter. North Brother's Island had recently been given to the Health Board for the purpose of erecting further accommodations for small-pox patients. There was plenty of room for other buildings, and if it were not feasible to establish hospitals within the city limits, they might be built on North Brother's Island.

The Secretary read a communication from the New York Medical and Surgical Society indorsing the code of ethics adopted by the State Medical Society. The Society then adjourned.

MEETING OF THE NEW YORK MEDICO-LEGAL SOCIETY MARCH 1st 1882.

The 179th meeting of the Medico-Legal Society, was one of usual interest. The paper of the evening read by Dr. W. A. Hammond, was upon "Reasoning Mania; Its Medical and Medico-Legal Relations; with special reference to the case of Charles J. Guiteau." A discussion followed which was participated in by Dr. Ralph L. Parsons, George H. Yeamans, Drs. E. C. Spitzka, George M. Beard, Landon Gray, Mann, Henry, Clark Bell and others. The general sentiment

coincided with Dr. Hammond's opinion that Guiteau is a victim of reasoning mania, a partial lunatic or a monomaniac, as he was variously called, but dissent was expressed to Dr. Hammond's conclusion that he should suffer the penalty which has been imposed upon him.

The president, Clark Bell, occupied the chair. The preliminary business consisted of the election of four new members, the reports of committees and the adoption of two resolutions, one requesting Congress to provide a fire-proof building for the library collected in the office of the Surgeon-General at Washington, and the other advocating the appointment of a committee to consider what changes of existing laws are necessary in regard to expert testimony in criminal trials when the defence of insanity is interposed, and to determine who are competent experts, how they shall be chosen and by whom compensated.

DR. HAMMOND'S PAPER.

Although it is scarcely possible that so well-marked a mental disorder as that which forms the subject of this paper could have escaped the notice of the earlier observers, no distinct account of it appeared till Pinel, in 1801, published the first edition of his remarkable work. Under the head of "Mania without Delirium" he gave excellent accounts of several cases, and then, in a few words, summed up his description of the affection. "It may," he says, "be continuous or characterized by the occurrence of periodical accessions. There is no marked change in the functions of the understanding, the perception, the judgment, the imagination, the memory, etc., but perversion of the emotional faculties and blind impulsions to the perpetration of acts of violence, or even of sanguinary fury, without its being possible to recognize the existence of any dominant idea or any illusion of the imagination to which the acts in question can be ascribed." Yet, although Pinel had some idea of the affection under consideration, he did not have a very exact conception of it. He seemed to be under the impression that a tendency to the perpetration of unwarrantable acts of violence is its most marked feature, whereas we know very well that such acts are often done by its subjects after very thorough deliberation and from what are deemed ample motives.

I wish to present at the beginning some idea of the characteristics of reasoning mania, as well as to show that such a mental disorder is well recognized by medico-psychological writers. I have confined my citations to French writers, for the reason that the affection was first differentiated by alienists of that country; but I might have drawn fully as largely from English and German writers. Indeed Prichard, Conolly, Bucknill and Maudsley among the former, and Hoffbauer, Casper, Griesinger, Liman, and Kraft-Ebing, and others of the latter, have written quite as strongly in support of the actuality of the affection in question as those I have cited. In this country the most distinguished authority in the affirmative is Dr. Isaac Ray.

Before proceeding to the consideration of the medico-legal relations of reasoning mania, it will be well to give a somewhat systematic description of the affection as it has been portrayed by others and as I have observed it in my own experience. The most prominent characteristic of the disease is an overbearing egotism, which shows itself on all, even the most unimportant, occasions. The individual without social position, without wealth and without political influence conceives that he has only to make his wishes known to

those in authority to have them granted. He does not hesitate to push himself forward as an applicant for high office, and this when he has no one qualification fitting him for the position he seeks; refusals do not dismay him; the most pointed rebuffs do not abash him. He is sure that his application will be favorably considered, and any little act of common politeness that may be shown him is at once construed into a promise of assistance. He is invariably sure his appointment is about to be made, and when, as always happens, some other person is selected, his chagrin is of short duration. He has some plausible excuse for his failure, and at once directs all his energies towards another and perhaps still higher position.

It may be said that these are the characteristics of all office-seekers, but this I emphatically deny. We have in this country ample opportunity to study the natural history of the class in question, and I think all who hear me will bear me out in the assertion that it is the rarest thing in the world to find a person applying for an office for which he is totally unfit, and for which he could not obtain the indorsement of any intelligent person.

Not long since a young man was under my professional charge who for several years had been a source of great anxiety to his friends on account of his vagaries and general impracticability. His father had a large shoe factory, and the attempt was made to instruct him in the details of the business. It was found, however, impossible to make him give his attention to the subject. He was firmly convinced that Nature intended him for something better than a shoemaker, and he destroyed a good deal of valuable property, leather, tools, etc., in order to induce his father to abandon the project. Finally he succeeded. He had received a tolerably good education in the branches usually taught in the public schools, and was, moreover, exceedingly quick in his perceptions of things which he desired to understand. As he told me the story of what he considered to be the wrong done him by his father in trying to make a shoemaker of him, he reasoned with great plausibility, and tears came into his eyes as he detailed the story of the indignity which had been attempted to be put upon him. "The fact is," said he, "that when I went to school I paid great attention to the study of languages. Now, if I had known that I was going to be a shoemaker I would have turned my attention to the study of the human foot, and then I should have been qualified to make the best shoes this country has ever seen. I have thought over the matter, and to-morrow I am going to Washington to ask the President to appoint me a Commissioner of Emigration, and send me to all the nations of Europe to see after the emigrants and instruct them in their duties as American citizens. I shall give lectures on the subject in all the principal cities of Great Britain, France and Germany."

"But," said I, "do you speak French?"

"Well, I studied French; I can't say I speak it, but I can learn it on the way over."

"You understand German?"

"No, but as soon as I am in Germany I shall go to a private family to board, and I will soon pick up that language."

"Do you know anything of political economy?"

"That is not essential. Emigrants do not require a knowledge of that science."

"Now won't you tell me your idea of the duties of an American citizen in which you are going to instruct those people?"

"I shall simply read them the Constitution of the

United States in their own language, and then distribute copies of it among them. That paper," he continued, "contains the germs of all that a citizen requires to know."

"But," I remarked, "there is not a word in the Constitution about the duties of citizens. It relates to quite different matters."

"Nothing about the duties of citizens in the Constitution! Well, then, I'll supply the omission; I'll make it right; I'll know just what I'm about, and I'm just the man for the place."

He drew up his application, went around among prominent persons asking for letters of recommendation, and though he did not get a single one, he proceeded to Washington and sought an interview with the President. His father, however, followed him, but could not bring him home without the assistance of the police. He is now an applicant for the command of an ocean steamship.

The intense egotism of these persons makes them utterly regardless of the feelings and rights of others. Everybody and everything must give way to them. Their comfort and convenience are to be secured though every one else is made uncomfortable or unhappy, and sometimes they display positive cruelty in their treatment of persons who come in contact with them. This tendency is especially seen in their relations with the lower animals.

Another manifestation of their intense personality is their entire lack of appreciation of kindness done them or benefits of which they have been the recipients. They look upon these as so many rights to which they are justly entitled, and which in the bestowal are more serviceable to the giver than to the receiver. They are hence ungrateful and abusive to those who have served them, and insolent, arrogant and shamelessly hardened in their conduct toward them. At the same time if advantages are yet to be gained they are sycophantic to nauseousness in their deportment toward those from whom the favors are to come. The egotism of these people is unmarked by the least trace of modesty in obtruding themselves and their assumed good qualities upon the public at every opportunity. They boast of their genius, their righteousness, their goodness of heart, their high sense of honor, their learning and other qualities and acquirements, and this when they are perfectly aware that they are common-place, irreligious, cruel and vindictive, utterly devoid of every chivalrous feeling, and saturated with ignorance. They know that in their rantings they are attempting to impose upon those whom they address, and will even subsequently brag of their success, as I have had them do to me.

It is no uncommon thing for the reasoning maniac, still influenced by his supreme egotism and desire for notoriety, to attempt the part of the reformer. Generally he selects a practice or custom in which there really is no abuse. His energy and the logical manner in which he presents his views, based as they often are on cases and statistics, impose on many worthy people, who eagerly adopt him as a genuine overthrower of a vicious or degrading measure. But sensible persons soon perceive that there is no sincerity in his conduct, that he cares nothing whatever for the cause he is advocating, that his cases and statistics are forged or intentionally misconstrued for the direct purpose of deceiving; in short, that the philanthropy or morality which he affects is assumed for the occasion. Even when his hypocrisy and falsehood are exposed he continues his attempts at imposition, and even when the strong arm of the law is laid upon

him prates of the ingratitude of those he has been endeavoring to assist, and of the disinterestedness and purity of his own motives. Many of those who hear me will call to mind a recent notable case in point, in regard to which the public was enlightened through the agency of one of the daily newspapers.

Thus, in the case of William Speirs, who attempted to destroy by fire the State Lunatic Asylum at Utica, there was a motive, though a very insufficient one, for the act. On the 14th of July, 1857, the cupola of the institution was discovered to be on fire. The central building was almost entirely consumed before the flames were subdued. Four days afterward, in the afternoon, the store, barn and stables were discovered to be on fire, and a man at the time was seen going from them. This man was William Speirs, who had been a patient in the asylum from 1850 to 1856, and then having been discharged by an order of a Justice of the Supreme Court had been employed up to the time of the fire as a messenger and otherwise. He had been committed to the asylum on the ground of insanity, after a trial for arson, so that he perpetrated at least three separate acts of incendiarism. He confessed to both the attempts at Utica, and was committed for trial on the charge of arson. At the trial it was shown, by his confession how and for what reasons he had set fire to the asylum. His motives were the facts that one of the assistants, Dr. Chapin, would not let him help, and that Dr. Gray, the superintendent, had taken away his keys. These acts made him angry.

It was also shown that Speirs had previously been in the lunatic asylum on Blackwell's Island; that he had had a sunstroke; that after that he would go out and stay whole days and nights, on one occasion remaining absent from home eight days, sleeping in wagons. During this period he went into a house and got some things and was going to set it on fire when he was discovered. He was tried and sent to the Blackwell's Island asylum. Then he came to the city and got some work at a saloon. "Did some depredation there," was tried and sent to the asylum at Utica. A sister was also insane and had been in an asylum. Drs. Day and Dering, of Utica, and Dr. M. H. Ranney, the superintendent of the Blackwell's Island asylum, testified to the insanity of the prisoner. The latter, under whose care Speirs has been was very positive as to his insanity. "I discovered no delusion," he says; "think he has no uncontrollable impulse; I believe the act resulted from a perverted condition of the several moral faculties of the mind, with a propensity to burn buildings, and a feeble intellect. . . . Perhaps anything that would excite the prisoner would induce him to burn buildings, or even might stimulate him to commit an assault with intent to kill. I judge that he is a pyromaniac because he has committed these acts, and is insane."

Drs. Gray, Cook and Bell, however, testified to the sanity of the prisoner. The former stated that he had never believed him to be insane. We have seen, however, that he was kept in the asylum under the charge of lunacy for six years. Speirs was convicted.

Helene Jegado, a Frenchwoman, between the years 1853 and 1857 killed twenty-eight persons by poison, besides making several unsuccessful attempts. In none of her murders was any cause alleged or discovered, though undoubtedly the pleasure derived from the perpetration of crime was the chief factor. Her victims were her masters and mistresses, her fellow-servants, her friends and several nuns, for whom in their last moments she displayed the utmost tenderness and care. The plea of monomania was set up in

her defence, but no evidence of insanity was brought forward by her counsel save the apparent want of motive for her crimes. It was shown, however, that she had begun her career of crime when only seventeen years old, by attempting to poison her confessor; that she had, while perpetrating her wholesale murders, affected the greatest piety, and was for a time an inmate of a convent; that she had committed over thirty thefts; that she had maliciously cut and burned various articles of clothing placed in her charge; that when asked why she stole things that were of no use to her, she had replied, "I always steal when I am angry;" that she was subject to alternate periods of great mental depression and excessive and unreasonable gaiety; that she was affected with pains in the head and vertigo: that when she was angry she vomited blood: and that while in prison awaiting trial she was constantly laughing and joking about indifferent subjects. She was found guilty, and on being asked if she had anything to say why sentence of death should not be passed, made an answer so much like one given more recently by another criminal that I give it here. "No, your Honor, I am innocent. I am resigned to all that may happen. I would rather die innocent than live guilty. You have judged me, but God will judge you." Her last words on the scaffold were directed to accusing a woman as her instigator and accomplice, whose name was not even mentioned during the trial, and who, upon inquiry, was found to be an old paralytic whose life had been of the most exemplary character.

The most noted case of similar character occurring in this country is that of Jesse Pomeroy, the boy torturer and murderer of Massachusetts. The plea of insanity here was of some avail, for his sentence of death was commuted to imprisonment for life. These cases are sufficient to illustrate the nature of the relations of reasoning mania to crime.

As to derangement of the intellect, I am quite sure that though the emotions and the will are primarily and chiefly involved, there is more or less aberration of the purely intellectual faculties in every case. Certainly this has been so in every instance that has come under my observation. To a superficial examination the intellect may appear to be unaffected, as it very generally happens that there is an absence of marked delusion. But a ready susceptibility to be impressed by slight exciting causes, an unquestioning faith in their own powers, when in reality these are far below the average, and an entire disregard of their duties and obligations and of the ordinary proprieties of life, are certainly indications of intellectual derangement. Most authors who have described the affection appear to think that it invariably exists without the participation of the intellect; others, perceiving that the intellect participates to some extent in all cases of mental derangement, refuse to admit the existence of reasoning mania. The question is a mere quibble—for whether the intellect is involved or not is by no means a matter of prime importance, and is resolved affirmatively or negatively according to the idea of what constitutes intellectual derangement, entertained by the disputants. In any event the reasoning maniac is, as Dr. Spitzka declared while on the witness-stand in the Guiteau trial, and as Campagne said seventeen years ago: "A true moral monstrosity."

And now to apply the foregoing remarks to the assassin of President Garfield. To do so fully would require me to traverse the whole record of the trial. But I scarcely think it is necessary to do this to get a definite opinion of the mental condition of the man now

under sentence of death. We have only to take the hypothetical question proposed by the District-Attorney, and which was answered by every one of the medical witnesses for the prosecution in positive language, that if the statements therein contained were true, the prisoner was sane. Let us see what these statements are:

That he had had several insane relatives; that while at college he abandoned his studies and entered the Oneida Community; that he left it and subsequently returned; that he again left it and went to New York to establish a newspaper devoted to the dissemination of peculiar religious ideas; that he abandoned this project; that he studied law and was admitted to the bar; that he was married and then divorced through his own procurement; that he became interested in religion and delivered lectures on the subject; that while thus engaged he attempted to strike his sister with an axe; that though a physician could find neither illusion, hallucination nor delusion he pronounced him insane, "because of exaltation of the motives and explosions of emotional feeling, also excessive egotism, and that he was the subject of pseudo-religious feeling," and advised his confinement in a lunatic asylum: that he soon afterward gave up lecturing; that he associated himself with the National Republican Committee and prepared a speech which, however, he only delivered once; that after the election of General Garfield he asked by letter for the appointment of Minister to Austria; that he went to Washington to urge his claims; that not getting the position, he applied for that of Consul to Paris; that he "earnestly and persistently followed up his application by verbal and written requests, having no special claims for this place except his own idea of the value of his services," and having the recommendation of but one person; that he unwarrantably inferred from a remark of the Secretary of State that he might be appointed; that in spite of rebuffs from the officials in authority he continued to expect the appointment; that he made inquiries about a pistol which he subsequently purchased, borrowing money to pay for it; that he practiced with it by shooting at a mark; that he followed the President on two occasions for the purpose of killing him, but was deterred, once because his wife, who was sick, was with him; that finally he lay in wait for him at the railway station, and shot at him twice, intending to kill him, and inflicting a mortal wound.

That after the shooting he attempted to get to the jail for protection; that he was arrested, and that a letter to General Sherman, asking for troops to protect him, was found upon his person; that in two letters written several days before the shooting, he declared the President's nomination was an act of God, that he has just shot the President, "that his election was an act of God, his removal an act of God"; that in another document addressed to the American people, and dated as early as June 16, he used this language: "I conceived the idea of removing the President four weeks ago; I conceived the idea myself, and kept it to myself," and other words of like character.

That he subsequently claimed that he was inspired by the Deity to kill the President, and that he had had previous inspirations; that for years before the shooting he had procured a precarious living, not paying his board-bills, borrowing money, evading the payment of his railroad fares, retaining money collected by him as a lawyer, and being several times in prison on charges of fraud; and that on the stand he stated that he felt remorse for his deed so far as his personal feelings were concerned, but that his duty

to the Lord and the American people was paramount.

On such a statement of facts, and with a knowledge of the manner in which the prisoner conducted himself while being tried for his life, his abuse of his friends who were endeavoring to save him, his praise of judge and jury and opposing counsel at one time and his fierce denunciation of them at another, his speech in his defence, his entire lack of appreciation of the circumstances surrounding him, his evident misapprehension of the feelings of the people toward him, his belief in the intercession of prominent persons in his behalf and of his eventual triumph, and the many other indications with which you are all familiar, especially his conduct after sentence was pronounced—I have no hesitation in asserting that Guiteau is the subject of reasoning mania, and hence a lunatic. There is not an asylum under the charge of any one of the medical experts for the prosecution that does not contain patients less insane than he.

What is to be done with such persons as Spiers the Utica incendiary, Brown the Maine wife-murderer, Jegado the poisoner, Dumollard the killer of servant girls, Pomeroy the boy torturer, and Guiteau the assassin of the President? That all these people were lunatics I have no doubt; that all were fully worthy of the punishment awarded them I am quite sure.

For this opinion I have been abused by certain ultra-humanitarians and emotional philosophers, who believe no doctrines and accept no statements that are not agreeable to them—the same class of people, in fact, who, during the President's suffering, slandered all who, looking at his condition through the medium of medical and surgical knowledge, were forced to the conclusion that recovery was almost out of the question. With such individuals black is white and white is black, according to the pleasure to be derived from either belief.

It is a source of satisfaction to me to find that the views which for nearly ten years past I have endeavored to promulgate have at last received practical indorsement by the conviction of Guiteau. The emotional philosophers, desiring him to be sane, still endeavor to persuade themselves that their wishes and facts are the same thing, and to the disgrace of American psychological medicine, they are sustained by certain physicians who appeared as witnesses for the prosecution. The charge of Judge Cox shows what he thought, and it is doubtless to his very emphatic declaration that insanity, unless of such an extent as to destroy the knowledge of right and wrong, or prevent the accused knowing the nature and consequences of his act, does not absolve from responsibility for crime, that a verdict of guilty was rendered.

The admirable charge of Chief-Justice Davis, of the New York Supreme Court, in the Coleman case, leaves nothing to be desired. "Emotional insanity," he says, "impulsive insanity, insanity of the will, or of the moral sense, all vanish into thin air whenever it appears that the accused party knew the difference between right and wrong at the time and in respect of the act which he committed." This is very different from the law as laid down by Judge Hogeboom in the case of Cole, tried for the murder of Hiscock. Here it was declared that "an insane impulse, leaving the mind incapable of exertion, holding the individual incapable of exercising his mind, so far as I have defined it to you, exempts him from responsibility, and if, under the influence of such a want of mind, the prisoner commits the act, whether you call it irrespon-

sible impulse or any thing else, it exempts him from responsibility."

As I have endeavored to show quite recently, there is no necessary connection between medical insanity and legal insanity. Let Guiteau suffer the full legal penalty for his crime, but let him be executed with the distinct understanding that he is a lunatic deserving of punishment. To shut our eyes to his exact condition, and to try to flatter ourselves that he was of normally constituted mind when he shot the President, is not only cowardly but it is impolitic. The conviction and execution will be without the force of an example upon hundreds of others of unsound minds who may be contemplating the commission of crimes. And it will lead to the erroneous conclusion that there was a sane man, a man in the full possession of his mental faculties, capable of killing the President of the United States for the purpose of uniting the two wings of the Republican party, when both had never failed to show their contempt for the assassin whenever he had given them the opportunity. Was there ever a more insane motive than this, and was there ever a man whose whole career from childhood to the present day has afforded a more striking example of that form of mental derangement called reasoning mania?

THE DISCUSSION.

Dr. Ralph Parsons was called upon by Mr. Bell to open the discussion, and spoke in substance as follows:

I believe this paper to be in accord with the opinions of the best men on insanity. In all cases of reasoning mania, or emotional insanity, I hold as the result of my observations and my views on insanity, that the intellectual faculties are involved. No faculty of the mind can be deranged without some diseased condition of the brain. The faculties of the mind are so inter-independent that we may not always perceive an individual aberration, but still it exists. In many cases of insanity purely emotional disturbances are most noticeable at first, as a change in the feelings accompanies forms of incipient paralysis, and the physical signs become stronger as the disease goes on. There are few cases of insanity in any asylum where the patients are not governed more or less by motive, as truly as are the sane. Not that sane persons are influenced in precisely the same way, but the very government of an asylum depends upon the truth of this fact. A patient is turbulent and is told that he will be sent to an unpleasant place if he continues, and this has a favorable influence upon him. It is impossible always to tell intellectually whether such motive are beneficial or not, and a strict legal statement is impossible. A person who tries to govern insane persons through their motives carefully studies each case, and, failing to reach one motive, may succeed with another. Then the question comes, If these persons are thus influenced through their motives, if they understand rewards and punishments—although these are not called for—are they not responsible? I think they are. Most patients shut up in asylums are responsible and are so understood to be, and receive rewards and punishments, although under other names.

But as to the legal punishment of such cases I do not agree with Dr. Hammond. It is asked, Why should they not be held responsible if they know the distinction between right and wrong? The patients seem sane perhaps, but they are not influenced by motives as other men are, and if not so, they should be put into a class by themselves. It is said that these

cases should be punished for the sake of example. But the sane are not influenced by such examples, and the few insane who might be cognizant of it would not be affected unless the punishment were brought directly to their knowledge. The motive leading to the evil act is incomprehensible to the patient himself. He cannot compare himself with others. But society should be protected. An adequate remedy is proposed—that a special verdict should be given in criminal trials of persons of unsound mind, stating the fact of insanity, and that such a person shall then be permanently confined in a proper house of detention for the insane. But it is not in accordance with my views of justice or public policy to punish the insane like sane criminals.

George H. Yeamans, who was the next speaker, said in part:

We lawyers sometimes think these talks not practical enough. They abound too much in terminology and fine drawn, hair-splitting distinctions. For instance, I would like to ask Dr. Hammond whether anything is gained to science by the use of the term "reasoning mania?" When I was a student I encountered in my reading the term "partial lunacy," and I want to ask if that doesn't cover the case. A man may be partly bereft of reason, I suppose, as this handkerchief is partly white and partly soiled by use. I concur with the views of Dr. Hammond. Guiteau is a man of not thoroughly sound mind, but amenable to the law, as he knew what he did was unlawful. But to the old rule of absolving a man not knowing right from wrong, I would add the point, Was the condition of the man's mind, will, or self-control such that the knowledge that he would be punished could not deter him? Ought not this to be an element in the question? The term "reasoning mania" confuses me unless we fall back on partial insanity. Experience shows that the mind is not as an entity, but it may be partly in darkness. I agree with the conclusion that the accused man is a fit subject for punishment, not as we would kill a mad-dog, but on the ground that he knew what he was doing to be wrong.

Dr. E. C. Spitzka, when asked to speak, suggested that the doctors believing Guiteau to have been sane should address the meeting, but Mr. Bell stated that no experts for the prosecution in the Guiteau case were present. Dr. Spitzka then said in part:

I learned several things in the Guiteau trial. I learned that a doctor who declines a summons can be forced by an attachment to leave his practice and travel 300 miles for an insufficient fee. I was also under the impression that an expert was a man of profound learning, but I have learned a simple recipe for making experts! Take a doctor whose practice has nothing to do with mental diseases; put him into the limited express for Washington with a lawyer who will coach him all the way; let him meet another lawyer there who will rehearse with him a series of questions and answers; and the expert can go upon the stand and swear there is no such thing as moral insanity. Why, this expert said he based his knowledge on Bucknell and Took's book, in which there are twenty-six references to moral insanity, and a foot-note holding this very expert up to ridicule.

I examined Guiteau carefully and found him full of delusions. He wanted a German mission, knowing nothing of the country or language, a French mission, with equal ignorance, and he was sure of success. His egotism and assurance are wonderful. When he mounts the scaffold it will be in the firm belief and

expectation that God Almighty will descend from heaven and cut the rope. I agree with Mr. Yeamans that there is some confusion of terms in science and I believe with Dr. Parsons, that certain combinations of intellectual acts may be deranged, leaving the rest sound. The most correct term for this case is the German one meaning original insanity. Guiteau was born as much of a lunatic as he is now, and there are the profound defects in his mental make-up of the group of lunatics to which he belongs. His family history is tainted. I presume those here will agree that the word of Dr. McFarland, of Illinois, will outweigh the word of all the witnesses for the prosecution, and he tells of Guiteau's father staying with him once, being palpably insane. I have recently heard of the death of an insane uncle of his in the Bloomingdale Asylum. I will read you the history of a case of inherited taint, excessive egotism, delusions and mental defects from childhood, which is parallel to that of Guiteau. Guiteau's mother had one child born with a deformity of the head, and one with a deformity of the heart, which resulted in fatal disease. I do not unreservedly agree with Dr. Hammond. This is a question not of retribution upon a disgusting and revolting wretch, but whether the example will frighten other lunatics. I say no. There have never been so many attempted assassinations of prominent men as in the few months immediately following the fatal 2d of July. Three days after, McNamara tried to kill Mr. Blaine; three months afterward a lunatic with a shot-gun attempted to shoot Governor Cornell; and not long ago a man armed with a "divine commission" and a revolver went to Washington to kill President Arthur. He was recognized as insane because he did not succeed. Guiteau did, and is therefore sane. This is a question also of national polity. We should have justice, and I ask if a republic cannot do what a monarchy did when Lord Erskine defended Hatfield?

Dr. George M. Beard, who was next called upon, spoke substantially as follows:

I have studied this case for some months, and have expressed my views fully in articles in *The North American Review* and elsewhere. I agree almost entirely with Dr. Spitzka, and very largely with Dr. Hammond. I don't like the term "reasoning mania." I prefer Esquirol's phraseology in a famous chapter of his—so good that it was not referred to in the trial—and should say affected monomania, or simply monomania. I believe in simple terms. You can represent mania by the hand and monomania, melancholia, etc., by the fingers—this is the relation. All ideas on this subject for the last ten years have been based on evolution; on the principle that the brain grows like a tree and thought with it like the fruit, and that there is no cutting out of the moral nature to set it by itself. But what ought to be done with this man? His execution would be the greatest disgrace that ever befel this country, speaking from a scientific point of view. Even during his trial there were insane murderers who were not even tried, and others acquitted, with less evidence in their favor. Stickney in Colorado has just been acquitted on this ground, although there was no talk of insanity before, because he had friends and influence.

But, as a principle, the hanging of Guiteau would be a return to the barbarism of the Middle Ages. At the time of the trial politicians got together in caucuses and swore that he was sane. They knew if they acknowledged he wasn't sane he would have to be acquitted. I was at one of these caucuses [laughter] and I know how things were managed there, but I left

it as soon as possible. We can only hang a crazy man by saying he is sane; so they swore his sanity straight through. All the evidence of his insanity was beautifully marshalled in line, and then adduced to show that he was sane. The whole thing was analogous to the Salem witchcraft trials. There, also, the old dogma about knowing right from wrong prevailed. Insane murderers usually do know right from wrong, and it is because a murder is a terrible act that the insane man commits it. If we carry out the doctrine of condemning every man who knows right from wrong, there is no safety under the law. It will be like the hog-cleaning machine in Chicago. The hog can't stop after he once gets in until he emerges, scalded and cleaned, on the other side. So, if we start with the dogma of knowing right from wrong, which Judge Cox announces, there is no stopping; trial must lead to conviction, and trial under such a dogma is conviction.

Dr. Mann, the next speaker, said in part:

I suppose our knowledge upon insanity came from a common source—Esquiro!—and I could not see how physicians followed him and declared Guiteau sane. His case is an exceptional one, in being an instance of religious mania, or theo-mania, as it might be called. I think Judge Cox recognized this, if the experts did not. It is rare, however, for only 1 per cent of the cases show exaltation instead of depression. The natural history of insanity usually shows melancholy preceding mania.

Dr. Landon Gray, of Brooklyn, said in substance:

Nearly all here will agree with Dr. Hammond, except that an important principle is at stake. We don't want to do as the Judge did who sentenced a man, not for stealing sheep, but to keep others from stealing them. It is irrational to kill Guiteau if we can get rid of him as a harmful agent in any other way. Every such case should be sent to an asylum for life, the superintendent made powerless to release him, no pardoning power vested in the Governor, and thus society is rid of the noxious element and perfect justice performed. I think this method is more humane and just than that which Dr. Hammond proposes.

The president then called upon Dr. Henry, who began by saying: "I am not a member of this society, Mr. President: are you aware of that fact?"

"Yes," replied the president, "but that does not prevent me from calling upon you."

Dr. Henry then took up the subject under discussion. His remarks were in substance:

The question is one of so much importance; and has such general interest to all that, in common with the lawyers and alienists, I have an interest in it also. I have made up my mind to-night from what I have heard said that if I could receive the services of one of those lawyers for a few days I would become an alienist myself. I did think that Washington was a nice place to be in, but if what my friend Dr. Beard has said in regard to caucuses is true, I change my mind. Sometime I shall take the opportunity to ask Dr. Beard about it privately. I read with a great deal of interest the description of the wound made by the bullet from the assassin's pistol, and I have followed with care and minuteness the course of the trial. I have had some experience in this line, for I was head of the hospitals on Ward's Island for some time, and I confess that Dr. Hammond has not said a word here to-night in his paper that I'm not willing to indorse. I will call to the mind of Dr. Hammond a celebrated case in which both of us were called as experts. A

man had committed a deliberate murder. He had been following up the man for a year, and had been leading his friends to believe that he would not kill him. At that time the murderer's wife was in a delicate condition. I was called in to attend to the case, and the woman, who had been talking with her husband, asked me if I didn't notice a very extraordinary condition of his eyes. I replied that I did not. In company with Dr. Hammond I testified to the sanity of the man. On his second trial he was acquitted. I met him shortly after his release in Twenty-fourth-st. I asked him what he was doing and how he got along. He made some reply or other; then I said, "Have you any hard feeling toward me on account of my testimony?" "Oh, no," said he, "but I've a pretty good idea of you as a medical practitioner."

After Dr. Henry's remarks, which elicited some laughter and applause, the president called on Dr. Sayre, who said:

I have a single word to offer, and only a single word, and that is, I regret that the suggestion made by me at the time of the murder has not been followed out, viz., that Guiteau should have had these investigations made of him before the trial. These maniacs should be put in asylums for life. It would be better that Guiteau be shown a lunatic than that the idea prevail that any one other than a maniac would dare to shoot the head of the Nation in this free and enlightened Republic.

At the close of Dr. Sayre's remarks, the president, Clark Bell, said he would speak a few moments on the question, and then the debate would be closed by Dr. Hammond. Mr. Bell said:

There are three points on which I may say a few words upon the very able paper we have listened to this evening, and first, regarding that form of insanity known as reasoning mania. The modern authors who are recognized in both professions as authority are mainly alike in defining that form which a generation since has called monomania, or one kind of it "reasoning mania," and in subdividing and classifying its various phases, so that the term "monomania" is scarcely used at present, or if used has no distinct signification. In all cases, however, properly classed as monomania by the older writers, and of course including that form under discussion, the patient was usually characterized by acuteness of intellect and frequently by remarkable brightness of the reasoning faculties upon all subjects except the particular one upon which the mind was deranged.

"Reasoning mania," as a distinct form of insanity, is well defined, besides the authorities cited by the author of the paper, by other authorities. In many cases it would be impossible to deny that the subject of reasoning mania did not understand fully not only the natural consequences of the act, but that it was wrong per se. The doctrine of the legal responsibility of the insane has been in former years one on which the two professions have not usually agreed. The judiciary and lawyer generally have held that when the accused man knew clearly the nature, character and consequences of his act he was responsible before the law; but physicians generally and the French jurists have not heretofore acquiesced in the legal view taken by our profession.

It may not be amiss here to quote again the answer made by fifteen judges to the House of Lords in consequence of this trial of McNaughten, and their answer, only Justice Maule dissenting, was, as to certain of the questions, as follows: "That notwithstanding the party committed a wrong act while laboring

under the idea that he was redressing a supposed grievance or injury or under the impression of obtaining some public or private benefit he was liable to punishment." The jury ought in all cases to be told that every man should be considered of sane mind until the contrary was clearly proved in evidence. Different however from many of his profession, the author of to-night's paper has taken the view generally taken by the bar and by the judiciary, and has contended that an insane criminal should be held to the same responsibility as the sane, if he was able to understand the nature of his act and its consequences, and to discriminate between right and wrong. Without seeking to disturb the verdict, which is generally acquiesced in, the mental state and true condition of the assassin form an important question in forensic medicine to-day.

The president had concluded his remarks, and was about to ask Dr. Hammond to close the discussion when Mr. Scoville, Guiteau's counsel, who had come in late and unobserved (although it was understood that he would be at the meeting), arose from his seat in the rear of the hall and interrupting the President, said: "Mr. President, may I intrude just a moment?"

"Certainly," replied Mr. Bell, and he then announced to the audience the speaker's name. There was some turning about of heads to catch a glimpse of Mr. Scoville, who said:

I think that it will be found before this case is done with that the law (alluding to the McNaughten case mentioned by the president), is not correct law, and that courts neither in this country nor in England adhere to the rules laid down in the McNaughten case. My investigation of this subject has led me to this conclusion: that the courts, with some degree of humanity, will find some mode of modifying the law so that while they hold to the spirit of the law they do not hold to the letter of the law. In a case like the Guiteau trial they depart from the rules just to the extent that public opinion demands it: if the public opinion demands it then the rules are wholly departed from. It may be thought that I speak from some personal motives. Not so. It is important for the welfare and the future of this country that our code of laws be made to cover the exigencies of to-day, and that we do not make an iron rule to govern sane or insane alike.

Mr. Scoville's remarks were well received. Dr. Hammond was then called upon to close the discussion and did so by answering some of the arguments of his opponents.

At the close of the meeting several members of the society took occasion to speak with Mr. Scoville. The cast of Guiteau's head made by Clark Mills, which was used in the late trial at Washington, was exhibited to the audience. Attention was called by the Doctor to the peculiar shape of the head, and the cast was passed round through the audience.

HOSPITAL RECORDS.

PRESBYTERIAN HOSPITAL, NEW YORK.

ULCER OF LEG—ERYSIPELAS.

Service of

C. K. BRIDDON, M. D.

Patient, H. H., æt. 40: married, cook, admitted Sept. 23rd, 1880. Family history good—intemperate habits. Denies ever having had venereal trouble. Never sick

before present illness. Three years ago received a severe lacerated wound of lower third of right leg, resulting in decided loss of tissue and necrosis, with removal of several small pieces of bone. This gradually healed up with extensive cicatrices. He continued his work until about a month ago, when cicatrix began ulcerating and broke down. On admission, there are two large ulcers in the midst of cicatricial tissue about 3 in. by 2 in. one on posterior and the other on the tibial surface of leg, lower third.

Treatment.—Dressed by placing over each ulcer piece of sheet lint wet with Labarague's solution, absorbent cotton laid on this, and a roller bandage for sufficient pressure over all.

Sept. 27.—Redressed in same manner, decided diminution in size of ulcer, granulations healthy.

Sept. 30th.—Redressed. Remarkable diminution in size.

Oct. 26th.—Patient taken with chill, nausea and vomiting, headache, temperature 105°, pulse 120. Marked œdema of foot and leg, redness well defined, burning sensation in part. Ordered tr. ferri chlor. one half a drachm every hour for six hours. Quiniaz sulph. grs. ten. t. i. d. Liq. plumbi et. opii locally.

Oct. 30th.—Temp. 103°, pulse 88, complains of headache and restlessness. Redness extending toward thigh. Injected carbolic acid mimins xxx. alcohol 3 ss. aquæ destillatæ 3 i.

11 P. M.—Injected nine syringes of same solution into upper border of redness.

Oct. 31.—Erysipelas slowly extending toward the thigh though the redness is not so marked.

Nov. 6th.—Local applications of carbolic acid. The injections discontinued. Ferri et quiniaz continued. Potass. chlor. given for pharyngitis.

Nov. 7th.—Erysipelatous blush almost gone. Fluctuation over and at the side of the patella.

Nov. 12th.—Erysipelas has extended to left thigh. No constitutional disturbance.

Nov. 15th.—Mucus bursa over the patella became inflamed and filled with pus. Drainage tube passed through and acid carbol. 1-40 injected.

Dec. 5th.—Bursa almost healed. General condition good. Transplanted grafts from thigh to ulcer.

Dec. 9th.—Found that four grafts had united. Isinglass plaster applied over the other grafts.

Dec. 15th.—Grafts doing well.

Dec. 27th.—Seven grafts put in right side of ulcer and covered with isinglass plaster to be left on four days.

Jan. 2d.—On removing plaster, found large slough covering whole ulcer. Dressed with Balsam of Peru.

Jan. 5th.—Flaxseed poultice is kept on over eight hours.

Jan. 8th.—Ulcer looking better; Labarague applied and foot bandaged to ulcer.

Feb. 1st.—Dressed with carbolized oil and bandage. Pot. iodid gr. v. t. i. d. to be increased gr. j. t. i. d.

Feb. 15th.—Ulcer doing well. Discharged improved.

FORMULARY AND POINTS IN PRACTICE.

IN CHRONIC URTICARIA.

R Magnesiæ carbonatis.
Sodæ bicarbonatis.....aa grs. 15
Infus. serpentariæ.....3 12
Make a draught to be taken twice or thrice daily.

IN OPPRESSION FROM FLATULENCE.

℞	Magnesiae carbonat.....	grs. 80
	Ext. opii liquidi.....	min. 30
	Spts. ætheris.....	3 3
	Aquæ menth. viridis.....	ad 3 6
Mix. One fourth part when indicated.		

IN DYSPEPSIA WITH ACID ERUCTIONS AND DEBILITY.

℞	Ammoni. carbonat.....	grs. 5
	Tinct. aurantii.....	3 1
	Infus. chirtæ.....	1
	Aquæ.....	ad 3 2
Make a draught to be taken night and morning.		

OR

℞	Sodæ bicarbonat.....	grs. 120
	Spts. ammon aromat.....	3 2
	Tinct zingiberis.....	1
	Infus gent. co.....	ad 3 8
M Sig. A sixth part three times a day.		

IN CHRONIC GOUT.

℞	Lithiæ citratis.	
	Magnesiae carbonat aa.....	grs. 10
Make a powder to be taken twice daily.		

WHERE AN ALKALINE DRINK IS INDICATED THE FOLLOWING WILL BE FOUND AGREEABLE.

℞	Bismuthi carbonat.....	
	Magnesiae carbonat.....	aa grs. 10

Make a powder to be taken in half a bottle of soda water three times a day.

OR

℞	Bismuthi subnitrat.....	grs. 15
	Sodæ bicarbonat.....	grs. 12
	Pulv. tragacanthæ co.....	grs. 60

Make a powder to be taken twice or thrice in the 24 hours in a wineglassful of brandy and water.

IN PYROSIS AND GASTRODYNIA.

℞	Liq. bismuthi et ammon. citrat.....	3 1
	Infus. quassiae.....	3 1

Make a draught to be taken three times a day. One drachm of the solution of bismuth is equal to 20 grains of the powder.

THE FOLLOWING LOZENGES CHECK HEART BURN AND ACRID ERUCTIONS BETTER THAN THE OFFICIAL BISMUTH LOZENGES.

℞	Bismuthi subnitrat.....	grs. 720
	Magnesiae carbonat.....	2
	Calcis carbonat præcipitat.....	3 3
	Sodæ bicarbonat.....	grs. 1800
	Sacchasi albi.....	3 14
	Acaciæ gummi.....	grs. 220
	Mucilag. acaciæ.....	3 1

Aquæ rosæ sufficient make to a mass. Divide into 360 lozenges and dry them with a moderate heat. From one to six lozenges may be taken at a dose.

MEDICAL NOTES AND NEWS.

Medicine in the Hebrides Two Centuries Ago.—Disease was often at the door, and the Hebrideans had a regular system of home-grown medical treatment. For small-pox, there a dreadful scourge, they had really no cure. The general treatment was blood-letting. For a troublesome brochan, a kind of thin gruel, taken in large quantities, and as hot as it could be rendered, was the common remedy. Roots of nettles, boiled down, gave a kind of medicine that was used as a tonic. If the uvula became enlarged, or fell down, they cut it dexterously with a horse-hair, which was twisted round it. For the jaundice, they had several remedies, of which one was this: The patient was made to lie flat on the ground, then the tongs or a bar of iron was made red-hot and gently applied upward to the patient's back, till he got into a great fright and rushed furiously out of doors under the impression that he was being burnt. The shock often gave him the turn, it was supposed. A cure used for catarrh or inflammation of the lungs was perhaps more in the line of modern therapeutics. The patient was made to walk out into the sea up to his middle, with his clothes on, and immediately afterward to go to bed without taking them off. Then, by putting the bed clothes over his head, he frequently succeeded in procuring copious perspiration, and the "distemper was cured." In the beautiful parish of Kilmartin, which contains the grave of many a nameless king and chief, there lived at the time of the Union a blacksmith, who had a wide reputation for his skill in curing every phase of faintness of spirits or nervous complaints. He was a man of singular muscular power and singular command over his arms. He placed the nervous patient on the anvil with his face uppermost; he then took his big hammer in both his hands, and approached the sufferer with a ferocious aspect, as if to murder him with one blow; and the shock completely restored the shattered nervous system!

We can easily understand how a people crushed down for centuries, and facing perpetual poverty as the peasantry of the Hebrides were, would become the prey of all sorts of quacks, and would have to pay the penalty due to their credulity. Bone-setters were numerous among them, and appear to have had a good practice. Herbalists flourished and were trusted. Many of them, no doubt, performed their cures, though they resorted to mysterious proceedings, through their superior knowledge of roots and herbs. Frequently, as in the case of the famous Neil Beaton, they were supposed to effect their cures through a compact with the Devil, rather than from the virtues of their simples, when in reality they derived their medical knowledge from their forefathers. Sometimes a knowledge of medicine was hereditary, like the gift of poesy or of second-sight. But the people believed in the personality and power of the Devil notwithstanding, and when all lawful or recognized means failed, to the Devil they were prepared to go for cure, help or deliverance. Hence all the oldest records reveal an extraordinary contest between the Kirk on the one hand and the various emissaries of Satan on the other. We are dealing with a period when belief in witchcraft was quite common, and when those suspected of trafficking with the Devil were put to death by burning on the ordinary Gallows-hill. Death, almost every where the king of terrors, was made very horrid in the Hebrides through the extraordinary system of belief, worked up by the prophets of the second-sight.

In every parish there was at least one person who lived by performing cures by means of charming. Children who died unbaptized were supposed to be doomed to eternal torments; and evil spirits of various kinds were supposed to watch over helpless infancy to do it some harm.—*From the Cornhill.*

Dr. Theodore Schwann, Professor of Physiology in the University at Liege, died at Cologne on January 11, at the age of 71. He was celebrated as the first exponent of the doctrine of cell-formation in animals.

The Temperature of the Sick Room.—In the *Lancet*, September, 1881, p. 390, an allusion to the well-known difficulty experienced during the illness of the late President General Garfield, to keep the room cool, it was suggested that the plan adopted, of placing blocks of ice about the chamber, afforded the readiest mode of securing the desired result. At p. 574, this suggestion is criticised, the writer showing that the blocks of ice, thus placed, were exposed to the lowest and therefore coolest stratum of air, where also but little movement of the air took place; whilst, by means of Chemical Lung or Punkah, lately exhibited at the Interational Exhibition, charged with ice water, pure or medicated, waving to and fro from the ceiling, the temperature of the hottest room, with an atmosphere of the foulest kind, could be most rapidly cooled and purified.

CORRESPONDENCE.

THE LICENSING OF PHYSICIANS BY A STATE BOARD OF EXAMINERS.

MARCH 6th, 1882.

To the Editor of the MEDICAL GAZETTE.

DEAR SIR:—An editorial article in your issue of March 4 1882, headed "Shall the power to license physicians and surgeons be vested in a state board of examiners" has attracted my attention, and as it shows a misconception of the objects and working of such a board I trust you will kindly give this letter space in the columns of your journal.

In the first place I suppose we all admit that the schools either will not or can not give the relief sought for; indeed, cannot be expected to cut their own throats to carry out a principle which the medical profession, and in this I do not exclude medical journals, is too apathetic or too lazy to insist upon or to secure.

Bad as this condition is with the "regular" schools, it is infinitely worse with the "irregular" ones which send out graduates notoriously ignorant not only of the elements of medical science but of the rudiments of a common school education, and yet these persons are legally physicians and as such are on the same footing in public estimation as the educated and well fitted physician. As the educated professional man is responsible for this condition of affairs in consequence of his neglect, he must now be willing to do something to correct and prevent the evil, unless he is willing to be classed as belonging to a profession the members of which lack the essentials of an educated gentleman.

As regards the difficulties suggested in the editorial they are by no means insuperable, indeed, are more imaginary than real.

1st. "Will the colleges relinquish their chartive rights"—or "can they be compelled to?" The charters grant the colleges the right of conferring the

title of M.D., and a State Board of examiners would not interfere with that right; on the contrary, it would urge candidates for examination to possess the degree. As regards the license to practice implied (?) in the diploma of M.D., the state, so I am legally informed, is competent to regulate and define the qualifications for practice of the physicians within its borders, the diplomas of the medical schools to the contrary notwithstanding, otherwise the medical law of 1880 and all preceding ones on the same subject would be illegal and unconstitutional, which they are not. The colleges therefore would have no power to resist.

2d. "If such a Board is organized, who shall appoint?"

The Regents of the University of the State of New York. The power which grants the charter of all the medical schools here (law of April 12th, 1853,) should have the power of regulating the actions of its own creatures. The Board is a permanent one and its members are appointed by the Governor. Some of the appointments date back to 1858 and 1859.

3d. "If the Government, why will it not become a political appointment?"

The Government does *not* appoint. As rotation in office does not apply to the composition of this Board the evils of "politics" do not affect it or its working.

4th. "What guarantee that proper men will be appointed?"

a. By the Board being out of politics.

b. By the character of the Board.

c. By the jealous scrutiny to which the actions of the Board would be subjected.

d. By the fact that the Board could be held to responsibility by the Medical Societies of the State.

I fail to see why "in our highly Democratic government it is likely to prove a failure." Good democracy concerns itself in the care and welfare of the people and certainly can claim the right to supervise the education of any portion of its citizens and to decide upon what measures shall be adopted to protect its inhabitants from ignorant and reckless practitioners. That being the case and as the state does not concern itself with the petty intrigues or private jealousies of the various medical sects, it follows that an independent Board of Medical Examiners would present the safest guarantee that the physician who practices under its license is an educated man.

That "a State Board of Examiners will have to admit representatives from the Homœopaths and Eclectrics" is undoubtedly true for the reasons stated in the editorial, because "both * * * have medical colleges and under the late laws are 'regular' physicians." To ignore these two sects would be the height of folly; it would convert them at once into a privileged class exempt from showing any qualifications for practice, hence all the incompetent and ignorant would flock to these sects, and the public and the profession would be as badly off as ever. There is a class of medical men who will not or cannot understand that the laws of the State override any law of medical society, or of medical ethics, and that it is wiser policy, by recognizing this fact to retain some control over these various factions than by a stupid and arrogant ignorat of them to hoist them into prominence and convert them into dangerous enemies. Hence I unqualifiedly dissent from the closing proposition of the editorial: "much better as it is."

Very faithfully yours,

16 West 32d st.

F. R. STURGIS

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SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, FEB. 22, 1882.

Dr. E. C. Seguin, the President, presided. The minutes of the previous meeting were read and approved.

Dr. Nathan Bozeman presented a specimen of

CYSTIC TUMOR OF THE OVARY.

When the patient had come to him for examination her general condition was good, she had no pain, no dyspnoea. The abdomen presented the characteristic appearances of unilateral cyst. The uterus measured $3\frac{1}{2}$ inches in length and was anteflexed. There was well marked dulness over the region of the left loin, indicating that the growth was developed from the left ovary.

The operation for removal was done on Friday last. The case is interesting as showing how the physical signs may lead to error. The operation was done in the usual way, the adhesions were very extensive and the hemorrhage considerable.

The cyst weighed altogether fifty-three pounds; it contained five gallons of fluid, the solid portion being comparatively small and weighing about ten or twelve

pounds; after drawing off the fluid contents and dissecting the tumor from its attachments, it was found that the growth was primarily from the right ovary, although the left ovary was found to be involved and about double its normal size. There were also a number of small cysts, but unconnected with each other. The hemorrhage, though extensive, was successfully controlled, and the patient progressed satisfactorily. There was rather more reactionary fever than usual, but this was controlled by ice-cap to the head and ice-coil to the abdomen.

Dr. Garrigues commented at some length on a specimen of cyst of the pancreas which had been presented to the society by Dr. Nathan Bozeman at a previous meeting. He wished to call more particular attention to it, as cyst of the pancreas was very rare. He had examined the literature of the subject and found that cyst of the pancreas was not recognized by many authors. There was a striking likeness between it and ovarian cyst. Dr. Garrigues gave in detail the microscopic appearances of the pancreatic cyst removed by Dr. Bozeman.

Dr. Newman suggested that the fluid cyst be examined with the spectroscope, but Dr. Garrigues replied that the fluid found was not of a character to admit of spectroscopic examination with a probability of such examination yielding any definite information.

Dr. Peabody said he recalled a specimen of cyst of the pancreas presented to the society by Dr. Janeway, taken from a patient in his service at Bellevue Hospital.

In Jan., 1879 Dr. Peabody said he had himself made the autopsy in the case of an eminent gentleman who had died very suddenly, it was supposed from internal hemorrhage. On examination he had found a cyst of the pancreas. It was in this case unquestionably a retention cyst.

Dr. Newman presented a

TUMOR OF THE BREAST.

The patient had been sent to him by Dr. Rosenstein, in consultation with whom he had seen her. She was 51 years old. Gave a history of a fall 2 years previous when she had struck her breast against a stone. She experienced sharp pain from this, and subsequently a small swelling appeared which remained stationary for some time, but had rapidly grown larger within a few weeks before consultation. He regarded the tumor as malignant in character and advised extirpation which was accordingly done. The patient was now progressing satisfactorily, operation was done on Feb. 3rd.

Dr. Peabody presented a specimen of

ANEURISM OF THE ANTERIOR SEGMENT OF THE MITRAL VALVE.

The heart was taken from a patient, a woman æt. 60 who died 2 days after admission to the hospital from Bright's disease. She had had a double mitral murmur. The left ventricle was remarkably hypertrophied as a result of the chronic diffuse nephritis. The point of interest in the specimen was however the aneurism of the mitral valve. In the neighborhood of the aneurism were patches of atheroma. There were also recent vegetations on the aortic valve. On the upper surface of the liver, taken from the same patient, was an erectile tumor. The condition of the surface of the liver presented in the case was not uncommon.

Dr. Robinson presented a specimen for a candidate of

ANKYLOSIS OF THE KNEE JOINT WITH COMPOUND FRACTURE OF OUTER AND INNER CONDYLES.

The patient was an inmate of Bellevue Hospital. Had sustained an injury of the knee when a child. For the past 20 years she had had no symptoms, but about three weeks before admission she had sustained a compound fracture. Over the right knee was an ugly looking wound. On manipulation pus flowed out from this wound. There was free lateral movement at the knee joint. Diagnosis lay between fracture of the condyles and the breaking up of the old ankylosis.

The general condition of the patient was very poor. Pressure on the popliteal vein had caused œdema of the leg.

After keeping the patient some time under tonic treatment to prepare her for operation—amputation of the middle of the thigh was done and the patient died of shock.

The Society then went into executive session.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, MARCH 2nd, 1882.

The President Dr. Fordyce Barker presided. The minutes of the previous meeting were read and approved.

The statistical secretary announced the death of Drs. Kenneth Reid and Theodore Mason.

The paper of the evening, entitled
SOME PRACTICAL SUGGESTIONS IN THE TREATMENT OF THOSE DISEASES OF WOMEN WHICH EVERY PHYSICIAN MAY BE CALLED UPON TO CONSIDER,

was read by its author Dr. F. A. Castle, who alluded chiefly to three points in connection with the treatment of diseases of women, viz: the relief of the nervous symptoms accompanying the menopause, the most practicable way of employing the vaginal douche, and the conversion of an Albert Smith retroversion pessary into an anteversion pessary.

The symptoms accompanying the period of the menopause were regarded by some due to indigestion, other physicians looked upon them as unavoidable. Very little reference was made to these symptoms in medical literature, many of the more prominent writers on diseases of women not considering this subject at all.

One of the most marked symptoms was flushing and general sensation of heat, the attacks lasting from a few minutes to an hour, being repeated several times a day and accompanied by throbbing and followed by free diaphoresis. The sleep also is much disturbed, and there is palpitation of the heart.

As regards treatment for this condition Tait advises drastic purgatives, removal from home, and bromide of potassium, Barnes also suggests the same remedies. Ringer advises the use of amyl nitrite.

Perhaps bromide of potassium is most commonly used but without much benefit.

Dr. Castle had found that arsenic was able to control all the nervous symptoms of this condition. He was accustomed to administer Fowler's solution in 3 to 5 drop doses 3 or 4 times a day. He had found

this treatment very efficient. Besides Dr. Barker and one or two others he knew of no one who employed it.

Dr. Castle then passed to the consideration of uterine displacements. He thought that none of the systematic treatises on this subject laid sufficient stress upon the importance of overdistension of the abdomen with flatus as a factor in causing prolapse of the uterus. If prolapse was looked upon as a hernia, it might readily be understood how overdistension of the abdomen might not only lead to prolapse but maintain it. Flatus, therefore, should be relieved and intra-abdominal tension reduced and if these were done a simpler pessary would be required.

Dr. Castle here alluded to a case in which a retroflexed uterus had become attached to the rectum. There was interference with the bowels and hemorrhage which on examination proved to come from a limited area at the point of attachment which was found to be abraded. The woman had no hemorrhoids. After two years the patient began to void blood with feces. The uterus was replaced in this instance by placing the patient in the knee-chest position and forcing air by means of a syringe into the vagina and bowel. Some air escaped, but though a cure was not effected the patient's condition was vastly improved and the abraded surface healed so that there were no more hemorrhages.

Dr. Castle then illustrated to the Academy how an Albert Smith retroversion pessary might be converted into a useful anteversion pessary by molding by means of the flame of the alcohol lamp and fixing it by cold water. The advantage of the pessary thus altered was the length of the main body of the instrument which prevented its being turned about in the vagina. The bad features of many pessaries were described by Dr. Castle and the necessity of adapting pessaries to individual cases insisted upon.

The vaginal douche was next discussed. Dr. Castle thought that syringes for this purpose should have nozzles with side holes—the hole in the end might be stopped up with a match. While nearly all writers laid much stress upon the importance of the patient being in the recumbent position when the douche was applied he had found that though this was of course desirable, as a matter of fact few patients could be induced to do this and the sitz bath with hot vaginal douche while in it was more likely to be followed by the patient and gave great relief in pelvic inflammation. He believed that the vaginal mucous membrane had little absorptive power. He was in the habit of favoring the osmosis of the serum from the tissues by adding a handful of common salt to the sitz bath.

In conclusion Dr. Castle quoted Dr. T. Addis Emmet to the effect that success in the treatment of diseases of women depended largely on attention to detail.

Dr. Hanks said that the paper touched on points of great interest and practical importance. He had been particularly interested in the first suggestion made by the author of the paper in regard to the treatment of the nervous symptoms of the menopause by arsenic. If they had at last found a remedy to cure these symptoms the members of the Academy should feel well repaid for coming out, by learning that alone.

As to flatulence being a factor in the production of prolapse, many of those present could bear testimony to that. General indigestion, dyspepsia, and constipation were often responsible for displacements of the uterus.

The hemorrhage from the bowel in the case alluded to occurred in such cases during the acute inflammatory stage and passed away when the condition became chronic. A golden rule in displacements was to keep the bowels open.

He was glad to see the modification of the Smith pessary suggested; he had used such a modification in his own practice. He had removed many Gearon pessaries and had never yet found one in place. Of this and also of Thomas's pessary he thought that they did not secure the end in view in the best way.

Dr. Munde said the paper touched upon a subject he had studied for many years and upon which he was supposed to have written a book.

Flatulence and dyspepsia might be regarded as among the causes of displacement but they were not the primary cause. He did not remember to have seen a case in which a fixed uterus such as described, had caused ulceration and hemorrhage. The rectum was often as badly bound down by adhesions as the uterus, and if air pressure were used to restore a displaced uterus the rectum would be dragged with it.

He had made four years ago a number of specimens of the very same pessary described by Dr. Castle. The Gearon pessary was exceedingly useful especially in cystocele. He had been very well pleased with Thomas's anteversion pessary, though he believed it should not be worn too long as the discharges accumulate on it and become offensive. The modified pessary described was well known as the cradle pessary.

He did not think it well to undervalue the absorptive power of the vaginal mucous membrane. He was accustomed to add bromide of potassium to hot vaginal injections with advantage.

Dr. Emmet spoke in part as follows:—I will confine my remarks to displacements and pessaries. The trouble often is that we fail to appreciate what we wish to do; we make a wrong diagnosis, anteversion is not displacement. The error most commonly made is to fail to examine by the rectum, and thus fail to appreciate the inflammation behind the uterus. If this exists we will be disappointed in the use of any pessary. Then it is important to know when to replace the uterus to a position we conceive it should occupy. We may do harm by our attempts at replacement. When the utero-sacral ligaments are inflamed we cannot relieve the symptoms except by lifting the uterus a little in the pelvis. I have for 20 years used Gearon's pessary. It will cause trouble if we are not very careful. We can prevent it twisting by making one end wider or packing with cotton. It matters little what the pessary is, the important thing to know is what we are to do with it.

With regard to injections the position is as important as the water, if the patient will not lie down I forbid injections, as you might as well treat a varicose vein with the leg hanging. To prevent water being thrown into the uterus I always direct the patient to pass the nozzle of the syringe to the opposite side from the cellulitis.

Dr. Lusk said he wished to emphasize the importance of inflammation of the utero-sacral ligaments. The cradle pessary was the same as the one shown. As for Gearon's pessary he had pretty much discarded it though it was of service in some cases if watched carefully.

Dr. Fordyce Barker said that in his own experience he had found purgatives very useful in the disturbances of the menopause in a certain class of cases, they taking the place of the customary drain. But they were only indicated in that class of cases in

which the symptoms were due to a condition of plethora. In those cases in which the sensations were due to vaso-motor disturbances from exhaustion he had found bromide of potassium 10 grs. t. i. d. with tonics most useful.

He believed that no agent acted so efficiently as a nerve tonic in these nerve disturbances as arsenic. In that condition in which there was prolonged loss of blood from the vagina a small amount only each day, arsenic was almost specific in its action. He thought the author of the paper the first who had sufficiently emphasized the importance of flatulence as a cause of prolapse. He himself had never seen this as a cause in his hospital and dispensary practice though he often had in private practice.

As to pessaries, he used them less than most because he believed that the pathological import of various conditions of the uterus was exaggerated. The mistake was made of supposing the uterus to have fixation locally, whereas it was constantly changing its position and these changes were more marked during gestation. He thought we were very apt to overlook this fact.

Flatus was extremely common in cases of retroversion and prolapse and his routine prescription in such cases was made up of Nitric acid; Nux vomica; Majendie's solution; Tr. cinch. co; Aquæ.

Dr. Castle closed the discussion, after which the society adjourned.

ORIGINAL ARTICLES.

THE STRUGGLE FOR LIFE AGAINST CIVILIZATION AND ÆSTHETICISM. A SUPPLEMENT TO THE DISCUSSION OF FEBY. 2, ON PLUMBING, ETC.*

BY

FRANK H. HAMILTON, M.D.

On the evening of Feb. 2, a large assemblage of physicians was gathered in this hall, to listen to a paper and a discussion on the subject of plumbing in particular, and house construction, and house sanitation in general. The speakers included some of our most experienced hygienists—Gentlemen who, for the most part, have enjoyed a large practical experience in matters of general and special hygiene.

The President, Dr. Fordyce Barker, first gave a graphic account of the dangers which surround us, both in our city homes and our country and sea-side residences, from the almost universal presence of poisonous gases generated in the sewers; a danger to which, it would seem, the rich are exposed quite as much as the poor; the latter of whom live mostly in crowded tenement houses, and have, for this reason, been hitherto supposed to be the chief sufferers from the effects of noxious sewer gases.

Dr. Barker, whose practice is chiefly among our most wealthy citizens, had almost daily occasion to witness, what he thought every physician present must have witnessed, typhoid fever, diphtheria, scarlet fever, diarrhœa, etc., which were either caused by sewer gas, or greatly aggravated and rendered fatal by this cause.

Dr. Barker then introduced Mr. Chas. F. Wingate, a well known sanitary engineer, and a man of large

* Read before the New York Academy of Medicine, March 16th 1882.

practical experience. In a paper of considerable length he devoted himself especially to the subject of defective plumbing. Before commencing the reading of his paper, however, he entered a verbal protest against the too hasty conclusion to which some had arrived in view of their own unhappy experience, that they would not hereafter allow any plumbing in their houses, but would return to the out-door closets, and dry wash-basins. He thought he could show that this retrogression toward early simplicity and barbarism was unnecessary.

I propose in the present paper to recall briefly the sources of impure air in our dwellings, as set before us by Mr. Wingate, and by the gentlemen who took part in the subsequent discussion, and the remedies which their experience enabled them to suggest.

We have bad plumbing, says Mr. Wingate, because we occupy houses built by "jerry" contractors, who construct buildings to sell, and not for themselves to live in. He proposes, therefore, as the remedy first in the order of time and of importance, that no man should occupy a house not built by himself, or under his own immediate supervision. A remedy which, as will be readily seen, is wholly beyond the reach of ninety-nine out of every one hundred of our citizens; and which, therefore, does not now, and cannot probably ever in the future, meet the exigencies of the case. The vast majority of our citizens have neither the time, money or knowledge required to build, or to superintend the building of their own houses; and it is fair to assume that they will never do it.

No one should buy a house, says Mr. Wingate, without a legal document which will hold good in the courts, and entitle the buyer to damages in case the plumbing should prove to be defective, and sickness result in consequence.

Mr. Wingate is correct no doubt, in supposing that an appeal to the pocket of the builder would be the most direct way of securing honest work; but the builder may be, and probably often is, deceived by his own plumber; or he may be quite willing to take the chances against the discovery of his dishonesty being made within a period of several years, when it might be found very difficult to determine whether the work was originally defective, or had become so by the lapse of time, or the bad work of some plumber subsequently employed, or from many other causes for which the builder could not be justly held responsible.

Moreover the buyer, in this arrangement, proposes to "get square" with the dishonest seller at some future day, by laying before him the dead bodies of his wife and children, and demanding their money value—the price of what is priceless—for it is more than probable that sickness and death will be the first evidence he will have that the work was badly done.

If any man does undertake to build for himself, says Mr. Wingate, he must employ a competent and honest plumber, and pay his price, asking no questions, inasmuch as it is impossible for any plumber to know in advance what his labor and material would be worth. This suggestion is undoubtedly just and reasonable; but how are we to know who are competent and honest? Unfortunately, plumbing has mysteries which the ordinary mind—the mind of the uneducated citizen—is not capable of penetrating. One plumber tells us that a great many pipes, and a great many valves, goose necks and ventilating flues, are required; whilst another, of equal reputation for honesty and practical experience, informs us that the more we multiply these things the more we increase the evil. One insists upon the adoption of one plan or patent,

and another insists upon another; both of which are declared to be utter failures by a third. The generally received opinion on the part of the public is, that very few or none of the plumbers understand their business, or are honest in the application of the little knowledge they possess. Sanitary engineers have generally endorsed this public sentiment, and even Mr. Wingate intimates the same when he speaks of the urgent necessity there is for "schools" for the purpose of training young men to the art of plumbing; and he distinctly states that "there is probably only one architect in the city competent to execute the specifications for the plumbing of large houses."

I am much more charitable to the plumbers and architects than either the public or the sanitary engineers. It seems to me quite probable that most of them are as honest and competent in their special departments as any other class of artisans; but that they have been asked and have undertaken to do what cannot be done, and so it has happened that those who have perhaps done their work in the best manner, and have sought most zealously to prevent the admission of sewer gases into our houses, by a multiplication of pipes, traps, &c., have, as some plumbers and most scientists frankly declare, only increased the evil; for the truth seems to be, that none of these pipes and valves, whether made of stone, lead or iron, can be made for any great length of time impervious to the poisonous gases. So far as stone and brick is concerned, this is what Professor Doremus demonstrated to the Academy by several ingenious experiments. He blew out a candle through an eight-inch brick wall, and sent a jet of hydrogen gas through a very dense block of sandstone, sufficient to cause, when ignited, a steady flame. His experiments demonstrated, also, that hydrogen gas would penetrate rapidly, without pressure, the walls of an unglazed earthen vessel. Prof. Doremus also declared, on the authority of the late Prof. Draper, that gases, in their efforts to escape, would resist successfully a pressure of twenty atmospheres.

Speaking of pipes made of iron or lead, Mr. Wingate said it was only a question of time when they would become corroded, and actually perforated by the action of the gases; and he showed specimens of both iron and lead pipes thus perforated. It would be impossible to say how much time would be required to effect this result, as much must depend upon the thickness and quality of the pipes, and upon the amount and character of the gases, but sooner or later these results were inevitable. The goose-necks, upon which especial reliance must be placed to exclude the gases, were especially liable to become perforated by the erosive action of the gases.

If we had any, even approximative, means of knowing how long the pipes would last, we could,—say every 5, 10 or 15 years,—tear out and renew all our plumbing and render our houses comparatively safe; but we have not, and, from the circumstances of the case, we probably never shall have such knowledge; and we must continue, as heretofore, to wait until some unexplained sickness in the family has awakened our suspicions. In order to render plumbing perfectly safe it must last as long as our houses last.

When, from settling of the walls, or the action of the gases, or from any other of the many possible causes, including original defective plumbing, a pipe is leaking, the whole plumbing from the top of the house to the basement must be laid open for examination. Nothing less than this, said Mr. Wingate, would satisfy a good plumber; for there may be many

leaks or defects at the same time. Pouring the oil of peppermint into the pipes at the top of the house might, in case of doubt, determine that a leak existed, but it might not determine precisely where the leak was to be looked for, nor whether there might not be more than one.

When we consider that in most houses these pipes are enclosed in the brick, and plastered walls, we shall see that it is no small matter for a plumber to make a thorough and satisfactory inspection, or one which would warrant him in giving to his employer a written guarantee that everything was right.

It having been suggested that in order to render the pipes everywhere open to inspection, and to facilitate access to them in case repairs became necessary, they should pass through the rooms, enclosed in wooden cases supplied with doors, Dr. Vanderpool replied that in our narrow houses these boxes would occupy valuable room; and it might have been added, they would not be regarded as comely decorations to a suit of drawing rooms. Both to the eye and ear they would be unpleasantly suggestive of the purposes for which they were constructed.

One can easily avoid connecting his refrigerators with the city sewers; and he can generally, in building his own house secure to himself a dry cellar. He can also keep his cellar clean, well ventilated and free from decaying vegetable matter; but these are the minor sources of poisoning to which Mr. Wingate made reference. It is not so certain that rats and cats can always be prevented from depositing their remains in the air boxes or in other open and unoccupied flues.

We were assured by some of the gentlemen who engaged in the discussion, that in spite of every engineering precaution the traps would sometimes be syphoned; that they would occasionally become dry by evaporation; and finally, that if they continued to hold water, the gases would be absorbed by the water and thus make their way into the rooms of the house.

No reference was made, I believe, to drain ventilators, communicating with the out door air in front or rear of the house on the one hand, and the top of the house on the other hand; the value of which means of protection cannot be questioned; but which are far from meeting all the difficulties. A draft of air through them cannot always be ensured; and in case of a leak in the pipes, or the accidental displacement of water from the traps they afford little or no protection.

Last of all there is to be noted the accumulation and detention of foul materials in the traps themselves and above the traps, which are often highly offensive, and deleterious; for the removal of which an abundant supply of water, and an almost continuous flow is required.

Dr. Janeway called attention to another source of poisoning, not alluded to by either of the gentlemen who had spoken before, namely, the inhalation of gases into the open mouths of the water pipes which overhang the basins and closets; by which the water itself became impregnated with the gases. In evidence of the possibility of this occurrence, Dr. Janeway referred to some examples of typhoid fever occurring under his observation, which he felt quite sure were caused by drinking water thus impregnated. No remedy was suggested.

It is considered very certain by medical men that the gases generated in our sewers are by far the most frequent causes of typhoid fever; and it is almost equally certain that they are the chief sources of diphtheria, but few have suspected, however, what is pos-

sibly true, that the sewers are the channels through which many other zymotic diseases, including perhaps Asiatic cholera, may be conveyed to our families.

I myself entertain this suspicion, but I might have hesitated to express it publicly lest I should be considered an alarmist, had not the same suspicion been expressed by Dr. Janeway in the course of the discussion we are considering.

Dr. J. C. Peters said that one of the gravest difficulties we had to contend with was to be found in the large amount of badly-constructed sewers underlying the city, and for which we were especially indebted to the Tweed regime. Their imperfect condition causing obstructions and accumulations, thus favoring the development of poisonous gases. The drainage was also incomplete, owing to the fact that the sewers did not open at the ends of the piers, where the swift currents of water would purify their outlets, and increase the outward flow. For the first of these evils Dr. Peters did not suggest a remedy, but he thought the latter would be remedied in the course of the next ten years.

Prof. Doremus said, in reply to his own question, "What must we do if we have the gases in our sewers?"

If these gases are attempted to be cut off from our houses by water-traps it does no good; the gases will pass through the water. We must have chemicals in the traps which will decompose the gases; and these must be renewed daily. His experience and chemistry taught him that there was no other mode of protection.

When, however, through neglect of this precaution, or from any other cause, the gases with their poisonous germs have been admitted, and been absorbed by the furniture, the drapery and the walls, the rooms must be temporarily vacated and disinfected thoroughly by such reagents as chlorine, bromine, etc. Mr. Wingate to the same end would have the furniture of the rooms more simple, dispensing with drapery altogether.

The drains ought, moreover, to have street ventilators, to enable them to breathe their foul air into the streets rather than into the houses.

To some extent this latter mode of relief is already in operation; but diphtheria and typhoid fever continue.

This completes the proposed analysis of the paper read by Mr. Wingate, and of the ensuing discussion. It will be observed that the statement as to the nature and magnitude of the evil, as well as the possible remedies, are made by responsible men, whose reputations are well known. In some instances, indeed in most instances, they have, by inference at least, if not in words, subjected their own remedies to criticism. The criticisms of the writer are, therefore, in such cases, only intended to supplement and enforce their own.

Need I remind you in this connection how our hearts were touched when Dr. Doremus, whom we have all learned to admire no less for his social and domestic qualities than for his scientific attainments, told us that this insidious enemy to human life, entered his own home and took from him a beloved son, and prostrated another with a lingering and almost fatal sickness. He declared that he would rather have exposed them to the most fatal gases in his laboratory, than to this sewer gas, for the poisonous effects of which we have no remedy.

Is it surprising, gentlemen, that, considering the deadly nature of these gases, and the impracticability, or inefficiency of all, or nearly all of the measures for

their exclusion which were suggested, that Prof. Parker should have hesitated to accept of Mr. Wingate's opening statement, that it is "foolish" to talk of the risks to health from modern improvements, when plumbing can be made "absolutely safe," and that he should, after all that had been said, at the close of the discussion, declare emphatically that if he were to build a house he would not have it connected in any way with a sewer. He would have all the closets, drains and pipes in an annex; and this is the conclusion, it may be here said, to which many of our most wealthy citizens have already arrived. Not a few of our lately constructed and most elegant mansions have not an inch of plumbing in those portions of their buildings which are usually occupied by their families; and I have conversed at least with one very intelligent plumber who favors the same practice.

What, then, is the upshot of all this matter? If these sanitary engineers, plumbers, chemists, and hygienists, who were requested to take part in the discussion because of their acknowledged scientific attainments, experience and practical skill, have nothing more to suggest, how is the evil to be successfully met?

With all respect to the distinguished gentlemen, I must say that they have suggested nothing of any importance which is new; nothing that was not known before; nothing, indeed, which has not been tried, and which has not for one reason or another proved itself to be either impracticable or insufficient, and in many cases totally inefficient.

My reply to this question is, that, in reference to these matters, science has not kept pace with civilization; and that without concessions on the part of civilization there is at present no adequate remedy.

Says Bede, "When men lived in houses of willow, they were of oak, and when they lived in houses of oak, they were of willow."

Since his day we have had occasion to observe, that when men left the open plains, and the small hamlets, and crowded themselves into the narrow limits of cities, the ratio of sickness and death were proportionately increased. When, also, in the progress of civilization, the fire-places disappeared, with their great open throats—the best ventilators ever invented—and decorated cast iron stoves were substituted, house sanitation experienced a loss which no sanitary engineer or architect has ever repaired; and when, in obedience to the same inexorable demands of progress in luxury and æstheticism, gas was substituted for oil, and hot air, or hot steam furnaces for stoves, the hand was again moved forward another point on the dial of human life.

The means employed to light and warm, or as is often, and more correctly said to "heat" our houses, having already deprived us of a large proportion of our oxygen, the plumbers have at last rendered actually poisonous what remained, by connecting the interior of almost every room in our houses with the sewers. Said Dr. Parker, "Would a man connect a vault filled with dead bodies by pipes with the interior of his house? yet this is practically what we do with our sewers. Water is no protection from these gases; from the fatal germs which are generated in these foul places." He added, also, that he had never seen a case of diphtheria in this city until the Croton water was introduced.

Possibly nothing will so forcibly illustrate the magnitude of the evil we are considering as the fact that it has given birth to a new profession. The calamities necessarily incident to the progress of

civilization long since made it necessary that there should be a class of educated men whose duties it should be to look after the rights of citizens, and another class to attend to matters of health; and now a condition has arisen which renders necessary a new class of specialists or professional men called "sanitary engineers," who are supposed to be well informed in matters of hygiene, architecture or house construction and engineering, and who for the present seem to find plenty of occupation, and are, no doubt, performing a much needed and very useful service; but of whom it may be said, that, up to the present time, there is no evidence that they have done anything more than to mitigate the evils they have been asked to remove; and indeed there may be found many notable examples in which the best sanitary engineers have failed to effect even a mitigation.

I repeat then, that in order to render pure and innocuous the atmosphere of our houses, whether the sources of its impurity are to be found in our present systems of lighting, heating or drainage, it will be necessary first of all that civilization should make some concessions.

The term "civilization" is here used in its broad and legitimate sense, as including not only mental culture, with progress in science and art; but also the comforts, luxuries, and æsthetics of life, which are its natural and inevitable concomitants. If certain of the latter elements of civilization cannot be dispensed with, it will be found impossible, I fear, to contend successfully with typhoid fever, diphtheria and many other diseases which now contribute so largely to the increase of our mortality rates.

If we limit ourselves to the consideration of the unwholesome atmosphere of our houses,—although this does not by any means constitute the only possible or probable source of sickness and physical decay incident to civilization—the concessions demanded as a condition of the successful application of our present knowledge of the laws of hygiene are:

First. That all plumbing having any direct or indirect communication with the sewers, shall be excluded from those portions of our houses which we habitually occupy. In other words, that it shall be placed in a separate building or annex.

Second. That we return to the open fire-place, or the grate, as a means of warming our private houses.

Third. A diminished consumption of oxygen by gas burners. It is still an open question, whether we shall be able to light our dwellings with electricity; but so long as we are obliged to depend upon gas we must content ourselves with light, and not insist upon illumination.

The concessions demanded have been named in the order of their importance. The necessity for each is urgent, but the first admits of no compromise.

As has been already said, there are many other possible sources of ill health and physical decay incident to civilization, than those referred to especially in this paper.

The wholesome light of the sun is partially excluded from the apartments of wealth and luxury, because it fades the costly rugs and drapery, and offends the educated eye by its vulgar and intrusive gairishness; and not unfrequently, at large receptions, the light of the day is excluded wholly in order that the more æsthetic and kaleidoscopic effects of gas-light may be substituted, regardless of the fact that the air is thus rendered unfit for respiration. Our social habits demand that both children and adults shall devote the hours nature intended for sleep to amusements—which

amusements are rendered more intoxicating and pernicious by the prolonged respiration of heated and poisonous air. Dress makes its contribution—utility and regard for health are almost invariably subordinated to the caprice of fashion and the study of effect. Flimsy head-dresses, low necks, short sleeves, tight corsets, high heels and narrow toes do not constitute the sum total of the æsthetic requirements of civilization in matters of dress. Walking, as a means of locomotion and of exercise, is rendered difficult, and sometimes impossible. To romp, or even to move with rapidity and sharp angularity is unseemly in young ladies, and such young men as “move” in the most refined and polished circles; neglecting robust and manly outdoor exercises they pose in attitudes which demand the least possible muscular exertion, or dawdle in effeminate dissipation. Ladies do not sit, but recline in their carriages. In the “best” society there is neither muscle nor back-bone. Almost all respectable citizens ride when they might walk, and complain of the want of breath when the absence of an elevator compels them to ascend a flight of steps. Even when we travel, over-heated cars, long confinement in one position, hurried and irregular meals, dust and smoke bring us to the end of our journey weary and often sick. Railroads have enabled us to accomplish more in life than was possible when men traveled in coaches or on horse-back; but it is doubtful whether, in the shortening of human life it has effected, the loss is not greater than the gain.

All of these evils, and thousands not enumerated, are the necessary incidents to civilization; and medical men are painfully familiar with the impediments they present to the preservation of individual and public health; indeed, as has been already suggested, it was the presence of these evils chiefly, which has rendered our existence as an integral part of society necessary. Nor do I assume too much in saying that were it not for the teachings and judicious practice of medical men, the physical decay of the human race under the adverse influences of civilization would be rapid and complete.

The field which has been opened by this discussion is wide and inviting; but I must ask the Society to limit itself this evening to those matters of house sanitation which alone constituted the subjects of discussion in the February meeting.

HOSPITAL RECORDS.

PRESBYTERIAN HOSPITAL, NEW YORK.

VESICAL CALCULUS—LITHOTOMY.

SERVICE OF

C. K. BRIDDON, M.D.

A. B., æt. 34, married, a writer, was admitted to hospital March 17, 1881. Family history good. Had gonorrhœa ten years ago. Denies specific history. Six years ago had acute cystitis, lasting about a month, followed by a chronic cystitis, which has persisted ever since. Two years ago he noticed that he voided small calculi with his urine, passing then with great pain. Since this time he has passed a great many calculi (ten cupfuls he states). Has had frequent and painful micturition, pain over the bladder, down the thigh and in the head of the penis. Pain is increased after any exertion. While urinating the stream would be suddenly stopped. He is addicted to the opium habit.

March 17th.—On admission.—By examination with a Thompson's sound, a calculus about an inch in diameter was found together with a smaller one. As he had been taking tr. opii 3 ii every day he was given the same drug in smaller doses; gtts. xv t. i. d., also spts. vini. gall. 3 ss t. i. d. Has occasional vomiting and pain in the epigastrium.

March 20th.—Does not sleep well at night, and has a slight diarrhœa. Afternoon temperature, 102 1/2. Extremities cold in the morning. Given quiniæ sulphat. grs. xx at night, and grs. x in the morning.

March 26th. Feels very well to-day, has no diarrhœa. Operation by Dr. Briddon. Ether. Lateral lithotomy performed without any difficulty and two calculi removed, one about an inch in diameter and the other smaller and broken. Wound left open. Recovery from operation good. No retention, no hemorrhage, takes nourishment very well.

March 23d. Persistent vomiting and several fluid passages during the day. Ordered bismuth subnit. grs. x with morph. sulph. grs. 1-16th after each passage, and quinine sulph. grs. x night and morning.

March 27th. Condition worse than at last note. Can retain nothing in the stomach. Nourished per rectum by “Beef Peptone” 3 ij with water 3 j every two hours.

March 31st. Failing rapidly during the day. Semi-conscious, respiration irregular, pulse very weak. Died at 11:20.

CASE II. EXTERNAL HEMORRHOIDS.—M. C.—, widow, æt. 25, domestic, admitted March 30th. Family history good. Previously healthy. Had one child seven years ago, one miscarriage.

For last two years has complained of constant dragging pains in the back and a profuse mucous discharge from vagina.

On admission examination reveals internal and external hemorrhoids causing pain in the back and about the rectum. Ordered hot vaginal injections every night.

April 18th. Patient etherized and hemorrhoids ligatured and cut off.

April 20th. Had slight hemorrhage following movement of bowels, but has little pain.

April 24th. Bowels moving regularly and without pain. Discharged cured.

FORMULARY AND POINTS IN PRACTICE.

TO RESTRAIN SECRETION IN CHRONIC BRONCHIAL CATARRH, IN PHTHISIS WHEN THE CAVITIES ARE LARGE AND THE WALLS THROW OUT CONSIDERABLE PURULENT MATTER.

R Acidi Tannici.....grs. 30
Acid nit diluti..... 3 i
Tinct. lupuli..... 3 4
Infus. gentianæ.....ad 3 8
M Sig. One sixth part three times a day.

IN SEVERE HÆMOPTYSIS ESPECIALLY WHERE THE INDIVIDUAL IS WEAK AND CACHECTIC.

R Olei terebinthinæ.....min. 10-20
Mist. amygdalæ..... 3 i
Make a draught to be taken every hour.

IN PASSIVE HÆMATEMESIS.

℞ Mucilag. acaciæ.....	3	4
Sodæ bicarbonatis.....grs.	10	
Olei terebinthinæ.....min.	10	
Olei anethi.....min.	1	
Aquæ destillatæ.....ad	3	12

Make a draught to be taken thrice daily.

TO CHECK THE NIGHT SWEATS IN PHTHISIS.

℞ Acid. gallici.....grs.	4
Ext. cannabis indicæ.....grs.	½
Confectionis rosæ gallicæ.....grs.	1

Make a pill to be taken every night at bed time.

A VALUABLE ASTRINGENT IN HEMORRHAGE FROM THE LUNGS, STOMACH, INTESTINES, OR KIDNEYS.

℞ Tinct. cinnamomi.....	3	6
Acid. nitrici dil.....	3	2

M. Sig. Thirty drops in a wineglassful of water every two hours.

USEFUL IN MENORRHAGIA ESPECIALLY BUT ALSO IN OTHER VARIETIES OF PASSIVE HEMORRHAGE.

℞ Tinct. cinnamomi.....	3	2
Aquæ cinnamomi.....	3	1

Make a draught, to be taken thrice daily.

IN THE DIARRHŒA OF TUBERCULAR PHTHISIS.

℞ Tinct. krameriæ.....	3	12
Syr. papaveris.....	3	6
Infus. maticæ.....	3	8

M Sig. One tablespoonful every three hours.

A GOOD ACTIVE PURGATIVE IN HEAD AFFECTIONS AS WELL AS AT THE COMMENCEMENT OF MANY ACUTE DISEASES.

℞ Magnesiæ sulphat.....grs.	120.
Mannæ.....grs.	60.
Tinct. jalapæ.....	3 2.
Aquæ carui.....ad	3 12.

THE WHITE LAXATIVE MIXTURE IN USE AT HOSPITALS.

℞ Magnes. sulphat.....	3	1½
Magnes. carbonat.....grs.	120	
Aquæ menth. piperitæ.....	3	8

M Sig. One sixth part early every morning.

IN PAINTER'S COLIC, COPPER COLIC, ETC.

℞ Magnesæ sulphat.....	3	2
Acid. sulph. aromatici.....min.	90	
Tinct. hyoscyami.....	3	6
Infus. quassiæ.....ad	3	8

M Sig. One sixth part three times a day.

IN HABITUAL CONSTIPATION WITH FLATULENCE.

℞ Sodæ sulphatis.....	grs. 240
Acid sulph. dil	3 i.
Infus. gentianæ co.....	5 6.

M. Sig.—Three tablespoonfuls to be taken daily after luncheon or dinner.

IN CONSTIPATION FROM DEFICIENT SECRETION OF BILE.

℞ Sodæ sulphat.....	grs. 120
Succi taraxaci.....	3 1.
Decoct. taraxaci.....	3 2.

Make a draught to be taken every morning before breakfast.

SELECTIONS FROM JOURNALS.

ANOTHER CASE OF ACUTE TRAUMATIC TETANUS, TREATED SUCCESSFULLY BY CHLORAL AND BROMIDE OF POTASSIUM. BY J. H. SALTER, M.R.C.S., L.S.A., L.M., ETC., TOLLESHUNT D'ARCY, ESSEX.

Isaac Hume, aged fifty-one, laborer, married, living at Goldhanger, Essex, smashed the little finger of his right hand. It was first poulticed, then dressed with water-dressing, and seemed disposed to heal. Shortly afterwards an abscess appeared on his foot, which was likewise poulticed and healed.

About seven weeks after the accident to his finger he was attacked with pains in his neck, back, and jaw, which came on in paroxysms, not very severe, and were attributed to rheumatism. By and by the flexors of his trunk and extremities were involved and his jaw became rigid and fixed. Symptoms continued to get worse, the intervals between the pains shorter, and the jaw more closely locked.

I then saw him (the date being 22nd April, 1881) and recognizing the case to be one of tetanus, with distinct "risus" and increasing opisthotonos, I determined at once to treat him with chloral, as I did a similar case in 1875, the particulars of which appeared in the *Practitioner* for December 1876.

The pains steadily increased in severity and frequency—the average intervals between them being about twenty minutes on the first day I saw him. Lying down made them worse: the easiest posture was the erect. He always begged to be placed on his feet when he felt a spasm coming on, and to be held there during its visit. In this position, therefore, he was put on the approach of pain, whether night or day, throughout his illness. He could swallow fairly; but it more often than not induced a spasm of variable intensity. His temperature was normal throughout. His pulse, except as it responded to his gradually weakened condition, exhibited nothing worth noting.

I began by giving him steadily, chloral in ten-grain and bromide of potassium in fifteen-grain doses, every two hours, increasing the frequency of the dose as the spasms were more frequent or severe. In addition to this I usually gave him from five to ten grains of chloral hypodermically whenever I called to see him, which, during the early part of the time, was three or four times in the twenty-four hours. Those hypodermic doses quieted him much more markedly than those taken by the mouth, and the influence of the drug remained for a longer period. The bowels acted without much trouble, now and then requiring assistance by an ordinary aperient or by injection. The urine was always loaded with lithates, and scanty; perspiration being remarkably free, especially during the painful paroxysms.

He was fortunately able to swallow, in small quantities, a great deal of nourishment, consisting of strong meat broth, raw eggs, and new milk; but I withheld stimulants in the early days, reserving them until I found, by pulse indications, that they were required.

On examining his injured finger at my second visit (on 23rd May), I found the terminal phalanx loose and projecting from the wound; I removed it immediately and applied a poultice; but there was never any sign of pus, and the wound from the beginning to the end looked red, dry, and glazed, and his arm and shoulder on that side were always painful and sometimes swollen.

From April 23rd to May 11th he could not lie down, any attempt to assume the recumbent posture invariably bringing on spasms: so that he was always placed on his feet at their approach, when the flexor muscles of his trunk and extremities were as tight as a bow-string.

As the disease progressed he became exceedingly pale, thin, exhausted and ghastly-looking, the latter being heightened by the well-known "sardonic smile;" but he was of a singularly patient and uncomplaining temperament, and seldom lost hope of his ultimate recovery. After a while his legs and feet became painfully swollen—the result of position. Bathing them with warm water somewhat relieved them. What sleep he got, he got sitting up. Always after an interval, longer than common, of freedom from pain he was seized with a sharp bout of spasms.

Up to May 6th there was no marked improvement; on the other hand, the disease had not perceptibly gained on us. Sometimes he even got two or three hours free from severe pain, but then, his system having apparently become surcharged with tetanic electricity, only obtained relief by a series of violent paroxysms, one after the other, in quick succession, which left him very exhausted but free again for another interval. He always flew to his mixture intuitively, declaring he could not live without it.

On the 8th and 9th of May the pains appeared permanently lessened, especially in the upper part of his body, but they seemed to be occasionally more severe in the lower, his ham-strings being acutely painful, and the disease appeared to be passing downwards.

On May 11th (about three weeks from the commencement) he lay down in bed for the first time and opened his mouth better. The altered position relieved him greatly, and his legs soon became less swollen.

From this date he made satisfactory progress, but for many weeks was too weak to move from the house. He is now (September) following his employment as a laborer in the ordinary way.

His twenty-four hours' allowance of nourishment after the first week, during which he could swallow very little, amounted to from three to four pounds of meat made into concentrated broth; six to ten eggs; and from two to three pints of new milk; and, after the first fortnight, ten to fifteen and even twenty ounces of sound sherry, in wine whey: so that the sum total amounted to something considerable.

Between the 22d April and 12th May he took about 240 grains of bromide of potassium and 180 grains of chloral per diem—administered in doses of ten to fifteen grains sometimes every half-hour, but usually every two hours, occasionally at longer intervals. The total amount given in these twenty days was sixty drachms of chloral and eighty drachms of bromide of potassium, more or less.

There is probably nothing calling for any special remark in this case, which was hardly so severe as that I gave the notes of in 1876. Both were treated on the same lines: the endeavor being to wear out the violence of the paroxysms by the constant administration of what appears, to me, to be an antidote.

In such cases everything depends upon one's faith in the remedy and one's tenacity in its administration.—*The Practitioner.*

GUILLEMIN ON INHALATION OF MEDICATED VAPORS IN DISEASES OF THE RESPIRATORY ORGANS.

After a careful and minute study of this important therapeutic question, the author thus summarises his impressions (*Archives Med. Belges*, No. 1, July, 1881).

1. The affections of the mucous membrane of the respiratory passages may in certain cases be advantageously treated by inhalations of medicated vapors.
2. In the first stage of acute inflammation of this mucous membrane, pain, cough, and painful sensations, which are the consequence of irritation and dryness, are rapidly calmed by inhalations of warm, moist and aromatic vapors.
3. The calming action is still more decided if to the liquid, which serves for inhalation, there be added a small quantity of certain volatile calmate substances such as ether, distilled cherry-laurel water, or conium.
4. Frequently renewed inhalations of essence of turpentine, when they are administered at the commencement of the first period of inflammation, may arrest its progress.
5. The vapor of iodine exercises an irritant action on the mucous membrane of the air-passages. It induces efforts of coughing, and augments the secretion of the mucus of the air-passages. This irritating action may be utilized: (a). To diminish the swelling of the mucous membrane by causing the inflammation to pass from the first to the second stage; this indication is present especially in cases where the inflammation occupies the small bronchi; the swelling of the mucous membrane is sufficient to give rise to fear of respiratory insufficiency; (b). To diminish the viscosity of the products of morbid secretion by their admixture with the mucus, of which the vapors increase the formation; (c). To induce efforts to cough, and to disembarass the air-passages from the products which are there accumulated.
6. It is not only by its irritating properties that the vapor of iodine modifies the mucous membrane of the air-passages. Iodine, in reality, possesses the property of stopping purulent secretion, and, on the other hand, it arrests and prevents putrescence. Thus when the mucous membrane of the air-passages yields a purulent secretion, resulting either from an acute inflammation in the third stage, or from chronic inflammation, the inhalations of iodine will determine by degrees the quantity of pus, and finish in certain cases by entirely changing the nature of the secretion, which becomes completely mucous.
7. Although the essence of turpentine, in the fluid condition, is a sufficiently powerful irritant for the tissues with which it is placed in contact, inhalation of this essence is easily supported by the mucous membrane of the air-passages. It only brings on very moderate irritation, and very rarely provokes fits of coughing.
8. When the mucous membrane is affected, and yields a product of secretion, these vapors have the affect of diminishing the quantity and augmenting the consistence of this.
9. If the product of secretion be purulent, the inhalation of the essence of turpentine, continued during a sufficiently long time, progressively diminishing the quantity of pus, may, in certain cases, completely stop the secretion. The inhalations are indicated in all affections of larynx, of the trachea, and of the bronchi, when accompanied by a very copious muco-purulent secretion without viscosities. On the other hand, the use of them must be avoided whenever expectoration is diffi-

cult, in consequence of the too great viscosity of the products of secretion. 10. In cases when these products are at the same time very copious and very viscid, it is possible, by alternate inhalations of vapors of iodine and vapors of turpentine, to rapidly diminish the quantity of secretion without increasing its viscosity. The inhalation of iodine should always be used in the first instance. 11. Inhalation of essence of turpentine is indicated in hæmoptysis, and is very successful in cases of hæmoptysis of average intensity.—*Lond. Med. Gaz.*

INTERSTITIAL ABSORPTION OF THE NECK OF THE FEMUR FOLLOWING A FALL ON THE TROCHANTER MAJOR. Under the care of Mr. Jones, at the Manchester Royal Infirmary.

William D., aged 15, was readmitted from Cheadle Convalescent Hospital, October 22nd, 1881. His family history was good: there was no tendency to rheumatism in any member of the family. The patient had always enjoyed good health.

History and Condition on admission.—A little before the previous Christmas, while skating, he fell on the outer side of the right thigh. The fall was not a severe one, for he was able to continue skating for some considerable time, and afterwards to walk home, a distance of more than a mile. A week or two afterwards the injured hip became the seat of pain, which was most marked when sitting, not noticed much during walking or lying down. Without any augmentation of the pain, and with a complete absence of other symptoms; the hip gradually and almost imperceptibly grew more and more stiff, so that at the time of admission there was scarcely if any movement in the joint; the patient was unable to reach the right foot without bending the knee, and placing the right limb behind the left. When he lay in the horizontal position, the right thigh and leg were rotated outwards. The hip-joint did not permit any movement; any attempt at flexing the thigh moved the pelvis. The knee-joint on the contrary was quite movable. Accurate measurements were taken, and a comparison of the two sides gave the following results:—From anterior superior spinous process of ilium to internal malleolus, right side, $32\frac{1}{2}$ inches, left side, $33\frac{3}{4}$ inches; circumference of right thigh $17\frac{1}{2}$, of left thigh $18\frac{1}{2}$ inches. The right buttock was smaller than the left, and its fold was almost obliterated.

October 25th. The patient was placed under the influence of chloroform, and the right thigh forcibly flexed on the abdomen, and rotated outwards and inwards. Fibrous adhesions audibly gave way, and the movements of the limb were subsequently extremely free—much more so than in a healthy joint. Liston's long splint was then applied, and the limb kept in the extended position.

November 2nd. Comparative measurements of the lengths of the two limbs were again taken. The right was one inch and three-quarters shorter than the left. There was considerable thickening about the trochanter which was two inches above Nelaton's line. The base of Bryant's triangle was half an inch less on the right than on the left side. The limb was capable of flexion through a few degrees; rotation was impossible, and any attempt was painful. Eversion of the limb had now given place to slight inversion and adduction.

November 10th. For the last few days passive motion had been employed, but with negative results. The patient was allowed to get up and move about.

November 16th. Movement of rotation caused a pain which was felt on the inner side of the knee; the hip was painless. The pain in the knee was relieved by pressure.

November 17th. The right limb was found to be two inches shorter than the left. The circumference of the thigh was less by three-fourths of an inch, than at the time of admission.

November 18. The patient's mother was seen, and the lad's personal and family history inquired into; nothing was elicited which could in any degree assist in the elucidation of the symptoms. The different members of the family were quite free from any rheumatic tendency.

November 21st. Aching pain had been constantly present in the right knee for two or three days, and was compared to the sensation experienced when he had stood too long on the leg.

November 24th. The pain continued, but was worse at night.

November 28th. Chloroform was again administered, and the limb forcibly and freely moved; a more careful and detailed examination of the part was also made. When the leg was flexed and rotated inwards, a hard irregular mass could be felt behind and somewhat above the trochanter. From the position which it occupied and its behavior under the various movements of the limb, it was concluded that this mass was the head of the femur. It had lost the rounded outline, and appeared to be of an ovoid shape, with the long diameter at right angles to the remains of the neck. The thigh-bone could be rotated inwards to such an extent that, when flexed, it crossed the sound thigh about the centre. When extended, it allowed the inner margin of the foot to lie on the bed.

November 30th. Pain in the knee was still present; slight flexion of the thigh could be practised. Rigidity of the hip-joint had returned, as shown by the pelvis moving with the leg when the thigh was flexed beyond a certain degree. The patient could voluntarily invert and evert the foot slightly; he was quite unable to bring the right thigh over the left without lifting it with his hands.

December 22nd. He was discharged. He had no pain when walking; the shortening caused much inconvenience, and he was advised to wear a high-heeled boot. When the patient was in a position of rest, *i.e.*; lying on his back with the spine level on the bed, the femur was fixed at an angle of 30° with the horizontal plane. It could be moved through a space of about 10° ; beyond that the spine became curved. There was shortening to two inches, no pain or tenderness about the joint, considerable deformity, with slight wasting of the muscles of the limb. There was a depression in the groin in front, where the head of the bone should be. He could stand straight; the heel was raised. Slight rotation inwards was possible; abduction and adduction were possible.

REMARKS.—This case presents a fairly typical example of a condition which fortunately does not often follow contusion of the hip. The original injury was of a very trivial nature, and did not call for any treatment. We cannot, however, resist its causal relationship with the changes which subsequently occurred. The aching pain, commencing soon after the fall, sufficiently indicated the presence of a change which gradually and slowly proceeded; for even while the patient was under observation, shortening of the femur to the extent of an inch took place. That the shortening is due to a change in the neck of the femur is shown by the altered position and direction of the head.

The different measurements demonstrate the close proximity of the head to the trochanter, as well as an alteration in the axis of the neck. The almost exclusive appearance of interstitial absorption in the upper end of the femur still requires explanation. It appears that blows or falls on the hip can disturb the circulation in the neck of the thigh-bone to such a degree as to determine organic changes, which result in shortening of the neck and much deformity of the limb. The alteration has been mostly observed after fracture of the cervix femoris; its occurrence after contusion of the hip is mentioned, and cases of this nature are occasionally recorded. No age seems to be exempt, for among Hell's cases it was observed as early as thirteen years. In old people, a liability to reabsorption after slight causes is an undisputed fact, a knowledge of which is of considerable importance. It would be well to warn a patient (especially an aged one) who has sustained an injury to the hip, that structural alteration of the neck of the bone is within the range of possibility; otherwise the surgeon at some future time may be blamed for having overlooked a supposed fracture or dislocation. In the present case, an ability to continue at work at once excluded these accidents. If, however, the contusion had been of such a severe nature as to require rest for some time, and deformity and shortening had subsequently been detected, it is more than probable that a mistaken diagnosis would have been suspected. Interstitial absorption is not associated with any constant peculiarity of constitution. This lad presented a healthy appearance, and the attempt to detect any hereditary predisposition to disease proved fruitless. The relation between chronic rheumatic arthritis and interstitial absorption appears to be still unsettled clinically. There is an undoubted similarity between the two conditions, and the similarity may also be traced in the appearances presented by the parts which are the seat of the morbid action. In the case which is recorded above, the diseased condition had proceeded at a much faster rate than it ever does in chronic rheumatic arthritis; besides this, the deposition of bone in the soft structures in the vicinity of the affected joint, characteristic of the latter disease, was entirely absent. The diagnosis of morbus coxarius from interstitial absorption of the neck of the femur is not usually attended with much difficulty. The presence of extra-articular fibrous adhesions, which rendered motion of the hip-joint impossible without the aid of anæsthetics, introduced a difficulty in the diagnosis. The history of the case, combined with the result of the examination while under the influence of chloroform, with the absence of constitutional derangement usually attendant upon the ordinary disease of the joint, makes the diagnosis of interstitial absorption tolerably certain.—*Brit. Med. Jour.*

MEDICAL NOTES AND NEWS.

Is Sewer Gas a Fetish.—History proves that every people, in every stage of development, worships objects, from love or from fear, which turn out with advancing knowledge to be mere fetishes, as impotent for good or for evil as the wood-cut of the late General Wool which a Polynesian explorer found pasted on a pole and adored by the inhabitants of a South Sea island. In this country for the last twenty years sewer gas has been the universal object of as worshipful dread as a personal devil was in past generations. There is no ill of the human body, and scarcely any

ill of the human mind, which is not attributed in New York City to its malign and subtle influence.

But now comes the State Board of Health and publishes an averment that "no such gas as sewer gas exists, and there is absolutely no proof that the diseases which attend the admission of sewer air into a dwelling are produced by gases." We quote this averment from a report just made to the Board by Mr. Gardiner, the director of the State Survey, who is *ex officio* a member of it and is chairman of its Committee on Sewerage. To this report the Board has given its official sanction and passed resolutions adopting its argument and conclusion.

The argument is that the zymotic diseases popularly attributed to the mythical sewer gas are produced by microscopic organisms of the class called bacteria, which are developed on the walls of our brick city sewers in the combination of heat, moisture and darkness under the stimulus of the ammonia arising from decomposing sewage there present. As these sewers are used to carry off storm water besides sewage, and as "the storm water falling per hour in violent rains over an acre of closely built city land is nearly fifty times the amount of the waste water and sewage produced per hour on the same area," their usual condition is that of great caves with a mere trickling thread of sewage along their floor. But as in times of rain they are nearly full of the dilute sewage which results from combination with the storm water their walls then become coated with a film from which the bacteria are afterward developed, and then the germs of the poisonous organisms float off into the sewer air and are carried into dwellings in that air just as dust is blown into the windows. The foul gases of decomposition may or may not accompany their entrance. This theory, Mr. Gardiner reports, is now maintained by the sanitary department of the local government board in England.

This being the argument the conclusion is that conduits for draining a city of its waste water, slops and sewage should have no connection whatever with those for carrying off the storm water, and that separate pipes of comparatively small dimensions and of glazed vitrified tile should be laid for the former purpose, thereby avoiding the great wall space on which the bacteria now sprout out of the film of dilute sewage, and also avoiding a mode of structure which affords such facilities for the lodgement of a film as a brick wall does. The main sewer laid in Memphis under this "separate system," in the plan of drainage executed there since the deadly ravages of yellow fever three years ago, is only fifteen inches in diameter, and some of its branches have a diameter of only six inches.

The resolutions of the State Board of Health in support of this conclusion read as follows:—

That the costly plan of large combined sewers for carrying sewage and storm water together has proved a sanitary failure both in England and in this country, while the "separate system," when properly constructed, avoids in great measure the evils from sewer air, now so common, and is much less expensive for most towns. That the "separate system of sewers," with flushing tanks, is hereby recommended for general use in this State.—*N. Y. Herald.*

Light and Near-Sight edness.—Professor Pickering, of Harvard Observatory, points out in *Nature* that the color of gas-light has nothing to do with its painful effect upon the eyes of students and others.

To test this question he had a tin lamp-shade constructed, consisting of a tube six inches in diameter by eight in length. One end was closed by a reflector, and the other by a piece of very light blue glass. Two holes were made in the sides, through which passed the glass chimney of an Argand gas-burner. By experimenting with a shadow photometer, a position was found where the light received on a book was of the same intensity, and very similar color, to that from a window in the daytime, at a distance of about six feet. A few minutes' reading, however, was sufficient to convince him that the new light was far more trying to the eyes than an ordinary gas-flame would be, the ill-effects being due to the intense heat thrown down by the reflector. And this he thinks is the source of the whole trouble in the ordinary gas-burner. The heat radiated by the flame, the heated chimney and shade, and reflected from the printed page and all other white paper lying on the table, dries the eyes, the lids, the forehead and temples. Temporary relief may be found by bathing the face and eyes in water, but it is only temporary. The hot dry air from the lamp is also harmful, and no doubt contributes its share of injury to the vision. These evils may both in part be remedied by placing a piece of glass so as to intercept the rays about the lamp before they strike on the book or the face. But it must be placed at such a distance from the lamp as not itself to become heated.

The hotter the flame, the whiter it is, and the more light is thrown off in proportion to the heat. Hence oculists are recommending such lights as the Student's and Moderator lamps, which burn with a small, hot and very brilliant flame, as compared with that furnished by the Argand and fish-tail burners. Statistics, said Professor Pickering, show how alarmingly prevalent near-sightedness has become of late among students. Hence anything which will tend in the future to prevent this widespread defect will be a boon to mankind. He had great hopes of the electric light in this respect. In it there was the maximum of light with the minimum of heat. Its ever-varying intensity was an objection, but he thought we might look forward to the success of the light from the incandescent carbon strip, in the near future, as a remedy for "the most widespread evil that afflicts the human vision."

The Lock Hospital.—In the parish of Hackney there stood formerly an ancient hospital, or house of lepers called *Les Loques*; an obsolete French word signifying rags, whence a *lock* was formerly used as synonymous with a lazar or poor house; and hence in a periodical paper written in its favor, in 1713 (*The Tatler*, No. 17,) this place is called the *Lock Hospital*. Until 1761 this hospital was a sort of appendage to St. Bartholemew's.

An Anæsthetic Mixture.—The *Wien. Med. Zeit.* says that the Vienna mixture, under the use of which 8,000 operations have been performed without a single accident, consists of three parts of ether and one of chloroform; and Billroth's favorite mixture is composed of three parts of ether, one of chloroform, and one of alcohol.

Female Doctors in Russia.—Twelve female doctors are now officially engaged in teaching medicine to women. Thirty are in the service of the Zemstvos, and forty others serve the hospitals. Twenty-five fe-

male doctors who took part in the military operations of 1877 have been decorated, by order of the Emperor, with the order of St. Stanislas of the third class. The number of female students is steadily increasing.

Vaginal Ovariectomy.—In the March number of the *New York Medical Journal* Dr. W. H. Baker, Instructor in Gynæcology in Harvard University, relates a case in which he removed a suppurating dermoid cyst of the ovary *per vaginam*, and remarks that the success which now attends ovariectomy by abdominal incision renders the cases very few in which removal by the vagina would be the better method. He would limit it: First, to cases where the cysts are small and their contents bland, so that removal can be effected without difficulty, and without great danger of septic peritonitis from the escape of any of the fluid into the peritoneal cavity. Second, to dermoid cysts so small as to be removed through the vaginal incision without evacuation. In the case of an ovarian cyst firmly adherent in the pelvis, he believes the best operation to be that of drainage into the vagina, with subsequent destruction by suppuration or by the cautery.

Removal of the Uterus in Ovariectomy.—In the *New York Medical Journal* for March, 1882, Dr. Andrew F. Currier, House Surgeon to the Woman's Hospital, relates a case of removal of the uterus in connection with a multilocular ovarian cystoma, performed by Dr. T. Gaillard Thomas, and remarks that to remove a simple, free ovarian cyst is not a difficult operation, but that such tumors are not to be looked for in the majority of cases. From the record of more than fifty laparotomies performed at the Woman's Hospital during twelve working months, he finds only nine done for ovarian tumors unattached to surrounding viscera. In several of these, other serious complications were present. The adhesions in the remaining cases were more or less firm, involving the necessary risks of hemorrhage, septicæmia, and peritonitis. Three out of the entire number held such intimate organic relations to the uterus as to call for the removal of that viscus. In one other case the uterus was removed on account of a growth developed from it. In others the portion of sac attached to the uterus was left. The ovariectomist should be prepared to take the bold step of removing the uterus when it is called for by such complications.

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BOOK REVIEWS.

Homœopathy, What is it?—A Statement and Review of its Doctrines and Practice—By A. B. Palmer, M.D., LL.D., Professor of Pathology and Practice of Medicine in the College of Medicine and Surgery in the University of Michigan—Second Edition—Published by Geo. S. Davis, Detroit, 1881.—Price, \$1.25.

Though most of our readers are aware that homœopathy is but a name expressive of a series of propositions whose absurdity is apparent to the least intelligent, few there are who have taken enough interest in this so-called school, to critically examine its tenets. Homœopathy has been too often judged by the laity and by not a few of our professional men by its exponents rather than by its principles, if the illogical statements on which it is founded can be called principles.

It needs but a glance at the doctrines of homœopathy to convince one of their absurdity, and it is well known that those who are in name its successful votaries are they who are fully conscious that its much-vaunted principles are pure bosh shrewdly practiced under a name that has seemed to catch the popular taste for novelty.

To those who wish a plain statement of just what homœopathy is, we can commend this little book of

Dr. Palmer's. The author has made a careful study of the subject, has visited the important cities of Europe and sounded opinion there as well as in his own country as to the estimation homœopathy is held in, and he deduces the conclusion that the work of disintegration of the homœopathic system has gone on more rapidly during the past year than ever before, not only on account of its own inherent weakness but because of the general advancement of knowledge among all classes on scientific subjects.

He has found that nowhere in other countries has it any position or recognition in any government institution or in any great hospital or medical school. In the words of the author, "the expression everywhere among the members of the regular profession was that as a science homœopathy had no claims and as a practice it was a pretence and a deception."

Such a book as this will be instructive reading for the members of the New York State Medical Society who voted for the revised code of ethics, though it is to be regretted that it was not read by them before the vote was cast.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, MARCH 8, 1882.

The President, Dr. E. C. Seguin, presided. The minutes of the previous meeting were read and approved.

Dr. Peabody presented a specimen of
"HYPERTROPHY OF THE HEART WITHOUT VALVULAR LESION."

The muscular fibres of the organ contained a large amount of fat. The patient was 37 years old, and had died of chronic nephritis. The lung showed hypertrophy of the walls of the air vesicles, and was in a condition of pigmented induration.

The kidney exhibited the lesions of chronic diffuse nephritis. There was the usual pigmentation of the vessels of the liver incident to this condition of the heart.

Dr. Peabody presented a second specimen of
SARCOMA OF CEREBRUM AT THE FISSURE OF ROLANDO.

The patient was 50 years old, a native of England, married, a book-keeper. His parents died suddenly. Had had gonorrhœa once; denied syphilis; no history of rheumatism; a drinker. Early in 1881 he was very much run down in health, and had a violent spasm of the whole left extremity, losing consciousness. He gradually regained power in the affected parts. About six days ago he had a second attack of a similar nature. He had no pain in the head, no aphasia, no œdema, no loss of cutaneous sensibility, no optic symptoms. After these spasmodic attacks he would lose power of motion, but would gradually regain it. He was put on potass. iodid. and hydrarg. biniodid. He had, however, a series of attacks with occasional rigidity, passing urine and fæces unconsciously, and died.

Post-mortem.—Rigor mortis was less marked on the left side. The pia mater whitened and thickened and attached to the dura mater. There was distinct fluctuation over the right hemisphere. A tumor was found at the fissure of Rolando, which was composed of round cells, some spindle cells and fine fibrous stroma

and many blood vessels. No tumors found anywhere else.

Dr. Seguin observed that the case was a valuable contribution to localization of the motor centres. The tumor occupied a portion of the motor area.

Dr. F. N. Otis presented a specimen exhibiting THICKENING OF THE WALLS OF THE BLADDER, HYDRONEPHROSIS, DILATATION OF THE URETERS, ETC., FROM REFLEX IRRITATION.

(A full history of this case will appear in a subsequent issue).

Dr. Mary Putnam Jacobi presented the lungs of a child showing the lesions of

CONGENITAL TUBERCULOSIS.

The child was greatly emaciated. There was dullness over the upper two-thirds of the lung. On opening the chest a small cavity with a small amount of purulent matter was found at the apex of the lung, the remainder being solid. Microscopic examination showed a structure representing miliary tubercles. Any given area of lung showed an entire absence of caseous material. There was tubercular engorgement of the mesenteric glands. (Dr. Jacobi gave in detail the microscopic appearances of the lungs).

Dr. C. K. Briddon presented a specimen of FIBROUS TUMOR,

which was interesting on account of the difficulty of diagnosis. The patient, a woman *æt.* 27, married four years, the mother of three children. She had a tumor in the right iliac fossa during the second month of her last pregnancy, about the size of the fist. It was regarded as an ovarian tumor. When I examined her at the Presbyterian Hospital I found a tumor of dense consistency, mobile, and thought it ovarian. The patient was examined by a distinguished specialist, who pronounced the tumor not ovarian. It became more fixed from day to day. By some it was thought to be a sarcoma. All who saw it deemed it advisable to remove it. Operation was accordingly done. The tumor was ovoid, and measured 9 by 5 inches. It was very readily exposed, but not easily detached from the muscular fibres. On removal of the mass the peritoneum was exposed. Whether the tumor was developed in the connective tissue, I am not prepared to say. It had been examined by Drs. Satterthwaite and Porter, and pronounced a fibrous tumor.

Dr. Beverly Robinson exhibited a specimen of

GASTRIC ULCER

causing death by opening into the pancreatic artery instead of into the peritoneal cavity as was usual in gastric ulcer. The woman was 46 years old and gave a history of obscure gastric symptoms. She had been admitted to Charity Hospital, complaining of having pain in the back and profuse hemorrhage from the stomach. Two or three days after admission she had had another profuse hemorrhage and died in a state of collapse.

The heart was hypertrophied, the stomach contained six ounces of coagulated fluid and was attached to the pancreas. A large chronic ulcer $1\frac{1}{4}$ by $\frac{3}{4}$ inches was found at the cardiac end of the stomach.

Dr. W. Gill Wylie presented the

GALL BLADDER, LIVER AND KIDNEYS

of a patient who had died of morbus maculosus.

Mr. C., *æt.* 35, New York, rheumatic diathesis. No definite disease. Two weeks before death had complained of feeling heavy and bilious, took purgatives

and was well after this until two days before he died. I saw the patient Wednesday evening when he complained of pulsating stinging pain, the face was flushed and there had been free vomiting but no ecchymotic spots were visible, the heart sounds were feeble. I supposed he might be passing a gall stone. On Thursday morning when I again saw the patient the body was covered with ecchymotic spots. The patient died on that day and on post mortem the intestines were found firmly adherent to the gall bladder, which was large and tense. There were hemorrhages into the muscles, omentum, peritoneum, pericardium, etc. The blood was dark and thin and nowhere clotted. There had been no premonitory symptoms in the case indicating its gravity; no fever at any time. Death occurred from hemorrhage into the brain.

The specimen was discussed by Drs. Robinson, Satterthwaite and Peabody. Dr. Satterthwaite exhibited a specimen showing all the stages of

BOVINE TUBERCULOSIS.

The Society then went into executive session.

MEDICO-LEGAL SOCIETY—ANÆSTHETICS MEDICO-LEGALLY CONSIDERED.

A special meeting of the Medico-Legal Society was held at the rooms of the Academy of Medicine on the evening of March 8th, the President, Mr. Clark Bell, in the chair, for the purpose of discussing a paper by Dr. J. G. Johnson, of Brooklyn, which had been presented at the December meeting, and the summing up of which was as follows:—

1. Anæsthetics do stimulate the sexual functions; the anogenital region is the last to give up its sensitiveness. Charges made by females under the influence of an anæsthetic should be received as the testimony of an insane person is. It cannot be rejected; but the *corpus delicti aliunde* rule should be insisted on. Dentists or surgeons who do not protect themselves by having a third person present do not merit much sympathy.

2. Death from administration of chloroform after a felonious assault, unless the wounding was an inevitably fatal one, reduces the crime of the prisoner from murder to a felonious assault.

3. The surgeon has no right to use chloroform to detect crime against the will of the criminal.

4. The army surgeon has the right to use chloroform to detect malingerers.

5. The medical expert, notwithstanding he is sent by order of court, has no right to administer an anæsthetic against the wish of the plaintiff in a personal damage suit, to detect fraud.

6. Gross violations of the well-known rules of administering anæsthetics, life being lost thereby, will subject the violator to a trial on the charge of manslaughter.

7. A surgeon allowing an untrained medical student to administer anæsthetics, and life being thereby lost, will subject the surgeon himself to a suit for damages. What he does through his agent he does himself.

8. The physician who administers an anæsthetic should attend to that part of the work and nothing else. He should have carefully examined the heart and lungs beforehand. He should have the patient in the reclining position, with his clothes loose, so as not to interfere with respiration; should have his rat-tooth forceps, nitrite of amyl, and ammonia, and know their uses, and when to use them and artificial respiration.

9. In operations on the ano-genital region and the evulsion of the toe nail, complete loss of sensation in these parts should never be allowed, and no operation on these parts at all should be had under an anæsthetic unless by the approval of a full consultation, who have a knowledge of the dangers.

ro. Chloroform cannot be administered to a person who is asleep without waking them, by a person who is not an expert. Experts themselves, with the utmost care, fail more often than they succeed in chloroforming adults in their sleep.

Another question I should have discussed should time have permitted, is whether a physician has the right to administer anæsthetics to mitigate death agonies: Take hydrophobia for instance, when death is inevitable; when the paroxysms of pain are frightful; when the danger to the surgeon in the administration in the ordinary way is extreme. Has he any right to alleviate this suffering, when the patient may pass away suddenly from the chloroform? A few years ago, a clergyman was convicted of murder in the second degree in England. He was a missionary among the poor in London, and when he found them with cancer and other incurable diseases, and without the means to obtain necessities for their comfort, at the sick person's request he would administer a dose of morphia sufficient to carry them off, and he was transported for life as a convict for thus relieving incurable suffering. Would the physician who intentionally administered chloroform enough to a hydrophobic patient to cut short his suffering come under the same rule?

Dr. T. C. Finnell opened the discussion by referring to a paper read before the society ten years ago by the late Dr. Stephen Rogers on the subject of the use of chloroform for the purpose of facilitating the commission of robberies. The opinion, he said, gradually gained ground in the popular mind that it might be used in that manner, but the medical profession thought differently. As they knew that the administering of it could not be so easily managed, and that the operation was almost always attended with resistance on the part of the person operated upon. From a hospital experience of thirty years, he could say he had never seen anyone die from the effects of chloroform, and he concluded it was safe in the hands of a safe man. Ten years ago he abandoned chloroform and commenced using ether, as physicians appeared to think it safer.

Dr. John H. Girdner, being called upon, said: Mr President and Gentlemen:—There is one point in connection with the medico-legal relations of anæsthetics about which I wish to speak—

It is a very common thing to find accounts in the daily papers of robbers having entered the sleeping apartments of persons, administering chloroform to them, while asleep, and then taking whatever of value they may find; and even worse crimes it is alleged are committed under these circumstances.

I find a difference of opinion among members of the profession as to whether persons while asleep can be anæsthetized without being awakened by the administration of the drug; but these are only opinions, for so far as I know none are able to offer any facts to sustain their position. The only experiments which have been made to throw light on the subject were those in connection with the Smith murder trial in Jersey City a few years ago.

In that case policeman Smith was murdered by his wife's paramour, Mrs. Smith was held by the State as a *particeps criminis*. She put in the defence that she

was chloroformed while asleep and knew nothing that occurred until morning. Dr. Quimby was called as an expert to decide whether it was possible to anæsthetize persons while asleep without their being awakened.—He made three experiments and claimed to have transferred the patient each time from a natural to a chloroform sleep without his knowledge.

In each of these cases the Dr. had previously arranged with the patients to enter their rooms at a given hour to make the experiment, and the patients possibly knew that the results of these experiments would go far to decide the fate of Mrs. Smith.

Here then, I claim, was an opportunity for error to creep into the results, and which certainly detracts greatly from their scientific value.

I wish to present to the society the results of my own investigations in this direction, and I may as well begin by saying that I find myself in a position to state that no one can be placed under the influence of any anæsthetic known to science at the present, which is administered by the lungs, while asleep, without being first awakened by its administration. The experiments which I have here were made by myself and another medical gentleman who is an expert in the use of anæsthetics.

The persons on whom we experimented did not know that we intended to make any experiments.

The time was about 12 P. M., and care was taken to see that each one was sleeping soundly, breathing full, deep and regularly.

We used chloroform poured on a folded towel, held about eight inches above the face, and slowly brought it nearer.

Experiment No. 1. Was a little girl aged 12 years. At the end of about three minutes she began coughing and awoke exclaiming, "Doctor, you are giving me ether."

Exp. 2. Man 32, chloroform administered as in the previous case, at the end of three minutes he coughed, struck out with his hands, and awoke rubbing his eyes; but spoke rationally.

Exp. 3. Man 35, chloroform used as above. In about 3 minutes he coughed, struck out with his hands and awoke.

Exp. 4. Man 30. At the end of 2½ minutes he awoke coughing and striking out with his hands.

Exp. 5. Little boy, eight years, awoke coughing and struggling in about 2 minutes.

You will perceive, gentlemen, that in each of these experiments the subject awoke at the end of about three minutes. They all awoke coughing and resisting. Now when I administer ohloroform to myself, in the same manner as in these experiments, I find that at the end of about three minutes, owing to irritation of the mucous membrane of the air passages, to turgescence of the blood vessels of the face, and to the toxic effect of the drug on the nerve centers, I feel a strong desire to cough and to remove the towel for the admission of fresh air. If then, in this stage of excitement, or as some authors call it, the "fighting stage" of anæsthesia, I, when awake and capable of controlling to a certain extent the amount of chloroform which enters the lungs at each inspiration, am so discommoded by it, it is easy to see that a person who is asleep and relaxed must always be awakened by it, especially when used by the average burglar, who would not understand the simplest precautions to be observed in its administration.

Dr. W. J. Morton thought there could be no more important question to be settled as to which anæsthetic should be used, chloroform or ether? He was

fully sensible of the kind manner in which Dr. Johnson had spoken of his (the speaker's) father in connection with the introduction of ether. There were numerous authorities to show that ether was very extensively used not only in the United Kingdom but also on the Continent. Chloroform, he believed, should not be used as synonymous with anæsthetics. All physicians had admitted the superior safety of ether, which was the prevailing anæsthetic in America, and he believed the time would come when the use of chloroform would be forbidden. The deaths from chloroform in 10 years have been 110, while from ether they are 10. Chloroform is eight times more dangerous than ether. Statistics show that one death occurs from the use of chloroform in every 2,300, and from the use of ether one in every 43,000. The surgeon who uses chloroform when he can use another and safer anæsthetic should be held responsible if accident occurs. In my opinion the time is not far distant when the use of chloroform will be forbidden by law.

Dr. George M. Beard said it was generally admitted that chloroform was peculiarly applicable for and safe to be administered to young children. That had been his experience. He did not know why it was so, but it was a fact. He thought anæsthetics should never be administered by a physician without the presence of a third party, and he had found great superstition prevailing, among colored people especially, in regard to being rendered unconscious.

Mr. D. C. Riddle said, with regard to the use of anæsthetics, if physicians decided that it was right to use them in a certain class of cases, it was right to do so, and they cannot be held responsible for the consequences, providing the anæsthetic was administered in the manner recognized and sanctioned by the whole profession. In regard to the use of anæsthetics for the purpose of detecting fraud and crime, he held that if it was done against the will of any person it was not justifiable, and would render the person administering it liable to an action for unjustifiable assault. Reason was against it, for it was not certain that the person to whom it was proposed to administer the anæsthetic knew anything of the crime or fraud; second, that even if he did know, it was not certain that he would divulge his knowledge; and more important than all was, that evidence or statements so acquired could not be used in a court of justice. The case was simply subjecting a man to the risk of losing his life for the purpose of acquiring something that could not be used, and therefore the law would not countenance it. In the army it was a different thing. There it was right enough to use anæsthetics for the purpose of detecting fraud or shamming.

Dr. Edward J. Bermingham, being called upon by the chair, said, that although he had not had the pleasure of hearing Dr. Johnson's paper, there were a couple of points which had been brought out in the discussion to which he would refer. In the first place, in regard to the question of the possibility of the production of anæsthesia during sleep, sufficient evidence had not been adduced to enable us to come to a decision either one way or the other. The experiments of Dr. Quimby have been severely criticised, chiefly because the consent of the patients had been previously obtained to enter their rooms in the night and administer chloroform for the purpose of experimentation. If any other course had been adopted, it might have been followed by very disastrous consequences to the surgeon, the patient, or to both. In discussing this subject with Dr. F. H. Hamilton a short time since, he

had related two instances in which he had attempted to produce chloroform anæsthesia during sleep, but without success. The first case was that of a child upon whom he was going to operate, and, finding it asleep, he decided to make the attempt to transfer the patient from a natural sleep to anæsthesia without waking. The patient awoke at the end of a few moments, warding off with its hands the oppression caused by the vapor. In another instance he had made a similar attempt with an adult with like result.

Again, in regard to the irritation spoken of by Dr. Girdner, although it is the rule, yet I know that it does not exist in every case. I can readily place myself under the influence of chloroform in a very short time without experiencing any irritation of the respiratory tract; and several years ago, when I suffered terribly from facial neuralgia, as the only means of relief, I would, after retiring at night, moisten a napkin with chloroform, place it over my mouth and nostrils, and would become anæsthetized without experiencing the least irritation. Arguing from this, Mr. President, it seems to me that the production of anæsthesia by chloroform during sleep may be possible; but, as I said before, we have not as yet sufficient evidence on either side to come to a conclusion.

Another question is as to the relative safety of chloroform and ether. The statements which have been made here this evening by Dr. Morton are a surprise to me. He tells us that ether is the preferred anæsthetic in nearly all of the hospitals in Great Britain and Ireland, which shows that the practice in these places is changing very materially. In 1873 I visited most of the hospitals in London and Dublin, and at that time chloroform was used almost exclusively.

The fact is that medical men are too fond of administering this dangerous agent, chloroform,—they do it for the same reason as they often apply the forceps in labor, to save themselves delay and trouble, knowing full well that they are risking the patient's life, and are taking ten times as many chances of an accident as they would in administering the safer, though more unpleasant agent, ether. My own experience with chloroform has been unfortunate. I acquired the habit, as many practitioners do, of using chloroform in preference to ether, for the sake of convenience, but after having had a child $3\frac{1}{2}$ years of age die on the table, where I had placed her to do a tracheotomy, I received a shock, which set me thinking. I concluded, however, that death in this case was due to the disease and not to the chloroform. When, however, about a year later, I placed a woman about 50 on the table to do tracheotomy for obstruction to the larynx caused by a sub-lingual phlegmon, and when, before she had inhaled the chloroform for 60 seconds, life had become extinct, it opened my eyes fully to the great danger of this agent, and I have never administered it since, nor would I except in an exceptional case.

The President, Mr. Clark Bell, said that about two or three years ago, in Europe, this subject was brought before the French Society of Medical Jurisprudence, and among the various questions submitted for discussion to that society at that August meeting of 1878 were these two (as I remember them at present without reference to notes or work).

First—Is the administration of an anæsthetic within the domain of a surgeon or of a physician, or both?

Second—Should an anæsthetic ever be administered by any other person than a competent physician or surgeon?

Dr. A. Luland, of Paris, also presented at that meeting a paper on anæsthetics which was the result of an able examination and all the information he could obtain on that subject.

The propositions were discussed by the congress of delegates from several continental countries with this result: "That an anæsthetic should never be administered by any other person than a physician holding a diploma." It was also decided that an anæsthetic should never be administered without another physician being present, or in his absence a witness.

Some years ago in the history of this Society, Professor Weiss read a paper entitled "Nitrous Oxide Gas." Dr. Weiss examined the subject of anæsthetics with a great deal of research and accuracy. He stated in his paper that as a matter of experience chloroform was the most dangerous anæsthetic agent, and that it was proved to be so by statistics, which he gave, as follows: One death occurring from chloroform in every 2,873 cases; from ether, one death in 23,700; and from nitrous oxide gas, one death in every 300,000 cases.

It may be well to read one or two statements in his paper:

"The responsibilities of an administrator of an anæsthetic agent to a fellow creature rests, 1st. In the selection of patients; 2d. In the purity of the article administered; 3d. in the method of administration; 4th. In the proper attention to the recognition of warning symptoms; 5th. In having at hand proper means for resuscitation; 6th. In the timely and efficient application of such means" * * * "I would make a law forbidding the administration of any anæsthetic, except by or in the presence of a regularly graduated doctor of medicine or dental surgeon."

Dr. Stephen Rogers when he presented his paper to this society followed it by a challenge to the civilized world to produce a single authenticated case either in this country or the countries of Europe where any crime had been committed by the use of chloroform as an agent.

Dr. Rogers' paper was discussed at the meeting of the French Medical Society and I think that the French Society have come to substantially the same conclusion in regard to the question as that taken by Dr. Girdner, that chloroform cannot be administered to sleeping persons without awakening them.

It occurs to the Chair in making these statements that they may be interesting to you as the discussion progresses.

I do not pretend to give these statements very accurately, I give them as I remember them from my reading. Several gentlemen have been asked to speak and I will close my remarks by calling Mr. Miller.

Mr. Jacob F. Miller said there was not only a civil but a criminal responsibility incurred by physicians by the careless or unnecessary use of anæsthetics. If President Garfield had had chloroform administered to him and had died while under its influence the question would have been asked: What effect would that have had upon Guiteau? He held it would not have had any effect at all, for the reason that the wound was a mortal one. It had been held that it was illegal for any person to administer an anæsthetic against the will of the patient, and in all such cases the operator laid himself open to an action for assault and trespass.

Mr. Daniel Clark Briggs said: I have listened with interest to the discussion of the various questions involved in this paper. If I shall differ in some respects from my friends of either profession, such difference may incite discussion by other members, and

we may thus learn not only what the law is, but what it ought to be.

My friend Mr. Riddle, in considering one of the questions submitted in this paper, stated that laws were for the protection of society against crime. This proposition is correct. Society has the right to protect itself against crime. The object of the law is the protection of society. The trial is for the eliciting of the facts, that the law may be intelligently administered. For the discovering of the facts, society has the right to use such legitimate means as are necessary. Unless the facts are known, the law applicable thereto cannot be properly administered, and society protected. If the gentleman claims that this proposition justifies torture to obtain evidence, he claims that which is not true in fact or in law. Torture produces no evidence. Confessions or statements so obtained are not evidence, upon the same principle, that one who utters statements while asleep is not responsible for them. To illustrate my position allow me to suggest a case. A woman charges upon a man the crime of rape, and in testimony charges full penetration. The accused not only denies the fact but insists in his own testimony and by witnesses other than himself, that it was physically impossible that penetration in any degree could have been made by him. In such a case should not the court have the power to compel an examination as to the physical condition of the accused, that the law of the case may be properly applied and society protected.

I suggest one other case. A person charges that by unskillful practice by one of our surgeons that a limb has become shortened and stiffened. It is a well-known fact that persons may simulate a shortness and stiffness of the leg and deceive their most intimate friends. In such a case it would be impossible, almost, to meet this charge of unskillful practice, except by the use of anæsthetics. By its use the fraud would be detected immediately. While acting as a prosecuting officer a few years since, a case of this character came under my observation. A man was charged by indictment with having seduced a woman under a promise of marriage. Upon the trial the woman testified to the offense, and also that she was then five months advanced in pregnancy, and gave testimony to such symptoms as indicate such a condition. Besides, her general physical appearances gave striking evidence of the truthfulness of her statement as to her pregnancy. The accused met all the charges with a denial; but the jury believed the woman, and pronounced the prisoner guilty. Rather than submit to confinement in the State prison, by the urgent demand of relatives the prisoner married the woman, but refused to cohabit with her. Subsequently it was admitted by the woman that the alleged seduction and pregnancy were fabrications, and that her appearance of pregnancy was simulated.

Justice requires that the court in such a case should have power to order and enforce a proper examination of the person.

It is claimed by gentlemen in this discussion that the army surgeon should have the right to use anæsthetics to detect malingerers. What principle will justify the use of an anæsthetic in the interest of the army that will not justify its use in the administration of law for the protection of society at large? I know of no reason that will justify its use in the former case that will not apply with stronger force to the latter case.

My brother Miller submits, as a proposition of law,

that had an anæsthetic been given to President Garfield after the wound was inflicted by Guiteau, and the President had died from the anæsthetic, and afterwards, upon an examination, it had been found that the wound inflicted by Guiteau was necessarily a fatal wound, that Guiteau could have been tried and convicted of murder, notwithstanding the immediate cause of death was the anæsthetic.

This is not the law. The death must have been caused by the wound, not by the anæsthetic, to have justified a conviction of murder. Guiteau could have been convicted of a lesser crime.

Hon. Amos. G. Hull discussed the question whether physicians had the right to shorten life in case of persons suffering from hydrophobia. He held that they had. It would, however, be impossible to formulate a law on that subject which would not be liable to great abuse. So they came down to a higher law, a humane law. In the case of a person suffering from hydrophobia or cancer the higher law he had to suggest was "All things whatsoever ye would that men should do unto you do ye also unto them."

Hon. Delano C. Calvin said even in civil actions, where a great trust was involved, the persons having that trust in charge were held to a very strict accountability. Adopting that suggestion it seemed to him when the medical profession had charge of the health and life of their fellow men they occupied a position of great trust, and when it was shown that one anæsthetic was much more dangerous to use than another, it seemed to him if life was safer in the administration of ether than in the administration of chloroform, every physician who used chloroform assumed a very great responsibility and one for which he should be held to a strict accountability. He could not forbear the expression of his utter surprise that a gentleman for whom he had the greatest respect should advocate that a physician should arrogate to himself the office of their Maker and presume to shorten life. Any physician who should do so would be guilty of murder.

Mr. E. G. Davies said there are several propositions to be considered before we can say that a physician who administers an anæsthetic and fails and the patient dies is criminally liable. I cannot subscribe to the proposition that where a man uses what, even in his judgment, he considers the best remedy and fails that he then is guilty. The whole question hangs on the intent. If a man fires a pistol at another and misses him he is not guilty in the eyes of the law but he is nevertheless guilty at heart. And if he kills him the intent determines the grade of the crime. So if a man takes a knife and strikes at another he must abide the consequences of that act whatever the result be. Where a man intends to kill and does kill he has a right to be hung. But can we say that a physician, who, acting with the best intents, meets with an accident and the patient dies, is in the same condition.

And now a word in regard to the use of anæsthetics in the army, and on that subject I disagree with some of the learned persons who have spoken. We all know that a man who enlists in the army must submit to army regulation. We know that Sergeant Mason who shot at Guiteau is not being tried by civil action. We know that deserters are shot. I myself have been obliged to stand by and see them shot down for this offence. All offences are different in the army from what they are in civil life. And I think that a physician has a perfect right to administer chloroform in all cases where he thinks it will alleviate suffering or detect fraud. Chloroform has been used in the army from the time it was discovered and traitors have been

shot, although it has been left for our day to erect monuments to their memory.

Dr. Johnson, in closing the debate, said chloroform killed without warning; no other anæsthetic did. From letters he had received it appeared that many members of the medical and dental professions did not understand that they were liable to be tried for manslaughter if a patient died while under the influence of an anæsthetic which had been administered to them while in an upright and not in a recumbent position. That had been reiterated time and time again, and he did not see how in the face of that any one could escape the criminal responsibility of his own act. He thought a committee should be appointed to formulate a series of rules, and the penalties attending their violation, in regard to the administration of anæsthetics. He offered a resolution to that effect, which was adopted, and the meeting then adjourned.

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK.

SARCOMA OF LEG—AMPUTATION OF THIGH—RECOVERY.

SERVICE OF

HENRY B. SANDS, M. D.,

W. P. W., æt. 19, native of the U. S., single, a clerk, was admitted to the hospital Dec. 10th, 1880.

History—In the middle of August last, patient noticed pain in right popliteal space, which was unaccompanied by any swelling or redness. Pain constant and dull in character, and caused no disability of leg except a slight limp. Patient can not remember ever having had any injury of the knee. The pain grew gradually worse for a month, when enlargement of the whole knee joint, accompanied by tenderness or redness, was noticed. The joint was now disabled, and patient was sent to bed and kept quiet, while his physician put him on anti-rheumatic treatment. The swelling, however, increased, extending above and below the knee. Three weeks ago the tumor became very tender to pressure in certain spots, and at this time also the integument covering the tumor was of a bluish color and the knee semi-flexed. The superficial veins were dark and prominent, and the foot began to swell. He suffered from sharp spasms of pain, more severe at night. The patient cannot be ar manipulation of the joint. There was never at any time a distinct tumor, but a hard uniform swelling of the whole circumference of the knee and leg. Two days ago fluctuation was detected, and a hypodermic needle introduced, clear serum being withdrawn. There has been ever since a serous discharge from this puncture. Patient states that previous to this illness he has always been in good health, never had any venereal disorder. His mother died of phthisis; otherwise family history good.

Condition on Admission.—General condition poor, pulse feeble and rapid, body emaciated. Pain not severe when patient is not disturbed.

Examination shows right leg to be the seat of fusiform swelling extending from 6 inches above the knee to the lower third of leg. Integument tightly drawn over the tumor, which fluctuates in spots and is very tender below the knee. The greatest circumference is at the knee joint, it being 20½ inches while the sound knee measures 13½ inches. The leg and foot are swollen and cedematous. No enlargement of lymphatic glands of groin.

Urine acid, 1026, no albumen, small excess of uric acid.

Operation Dec. 11th.—Ether. Dorsal decubitus. Tumor punctured and serum withdrawn. Esmarch's bandage applied from knee to groin and elastic tourniquet placed about the limb and bandage removed. Cutaneous antero-posterior flaps made in middle third of thigh and dissected upwards. The muscles divided with circular sweep, and bone sawn through. Vessels secured with cat-gut ligatures and flaps united with silver wire. A drainage tube was carried completely through the stump and a Lister dressing applied. Lister precautions observed throughout operation.

Recovery from ether slow. Recovery from operation good, nothing in subsequent history worthy of note.

March 8th.—Stump healed with exception of ulcer size of 3 cent piece. No signs of return of the growth so patient was discharged cured.

FORMULARY AND POINTS IN PRACTICE.

IODINE BATH IN SCROFULA, CHRONIC RHEUMATISM, SECONDARY SYPHILIS, AND CERTAIN SKIN DISEASES.

℞ Iodi.....grs. 60.
Pot. iodidi..... $\frac{1}{2}$.
Liq. potass.....2.
Aquæ calidæ.....C. 30.
Mix. Sig. Bath.

SULPHUR BATHS USEFUL IN SCABIES, LEAD COLIC, PARALYSIS FROM LEAD, ETC.

℞ Potass. sulphuratæ..... $\frac{3}{4}$ 4.
Aquæ calidæ.....C. 30.
OR
Potass. sulphuratæ..... $\frac{3}{4}$ 4.
Sodæ hyposulphitæ..... $\frac{1}{2}$ 1.
Acid sulphurici..... $\frac{1}{2}$ 1.
Aquæ calidæ.....C. 30.

IRON OR OAK BARK BATHS ESPECIALLY USEFUL FOR STRUMOUS AND RICKETY CHILDREN.

℞ Ferri sulphat..... $\frac{3}{4}$ 1.
Aquæ.....C. 4.
M OR
℞ Quercus contusæ.....lb. 1.
Aquæ calidæ.....C. 2.

Mix. Boil for half an hour and add the strained decoction to three gallons of warm or tepid water. To be used every morning.

SALT WATER BATHS INDICATED IN GENERAL DEBILITY, CHRONIC RHEUMATISM, ETC.

℞ Salis marini.....lb. $\frac{1}{2}$
Aquæ tepidæ.....C. 4

Mix. Make a sponge bath to be used every morning. The surface of the body should be thoroughly rubbed with a flesh brush and coarse towels.

OR,

℞ Salis marini.....lb. 2
Magnes. sulphat..... $\frac{1}{2}$ 3
Pot. iodidi.....grs. 120
Liq. calcis chlorat..... $\frac{1}{2}$ 1
Aquæ.....C. 30
Mix.

ARSENICAL BATHS INDICATED IN RHEUMATOID ARTHRITIS, AND SKIN DISEASES.

℞ Sodæ carbonat..... $\frac{3}{4}$ 4
Sodæ arseniat.....grs. 20-36
Aquæ calidæ.....C. 30
Mix.

OR,

℞ Sodii chloridi..... $\frac{1}{2}$ 1
Sodæ sulphat..... $\frac{1}{2}$ 1
Sodæ carbonat..... $\frac{1}{2}$ 2
Sodæ arseniat.....grs. 52
Aquæ calidæ.....C. 30
Mix.

BORAX BATH INDICATED IN SOME SQUAMOUS AND OTHER IRRITABLE DISEASES OF THE SKIN.

℞ Boracis..... $\frac{1}{2}$ 4
Glycerini..... $\frac{1}{2}$ 3
Aquæ calidæ.....C. 30
Mix.

GELATINE BATH FOR ECZEMA AND OTHER IRRITABLE CUTANEOUS AFFECTIONS.

Take of gelatine or common glue one pound, dissolve in a little boiling water, and add 20 gallons of hot water to form a bath. This bath can often be rendered more efficacious by soaking in it one or two pounds of bran, confined in a muslin bag.

SELECTIONS FROM JOURNALS.

ELEPHANTIASIS OF THE PENIS AND SCROTUM. At the Mission Hospital, Kashmir. (Under the care of Mr. E. DOWNES.)

K., a Kashmiri, aged about 35, came to the Mission Hospital, with an enormous elephantiasis of the penis and scrotum. The mass reached down below his knees, and he could walk with difficulty. The penis and scrotum could not be distinguished—the two had grown into one large mass. At the lower end was a portion about the size of a man's head, separated from the rest by a sulcus; and resembling in shape and proportion the glans penis. When he passed urine, it issued from a hole, at about the centre of this portion, and large enough to admit a finger easily. A catheter passed into this orifice went easily nearly its whole length, but then met with an obstruction and gave rise to pain.

It was proposed to remove this mass, which made the patient's life insupportable; and he readily consented. A few days afterwards, the operation was performed under chloroform. Mr. Downes was assisted by the Civil Surgeon of Kashmir, Dr. Lewtas, and by Dr. Price of the Army Medical Department. All the blood was squeezed out of the mass by elastic bandages, and Esmarch's band was then applied to the base of the penis and scrotum. The mass being too heavy for a man to hold up steadily, a rope was fastened to it, and passed over a beam in the roof of the operating-theatre; the tumor was thus fixed in nearly a perpendicular direction, the patient lying in the lithotomy position. An endeavor was made to reach the urethra, to dissect the abnormal growth from the penis and testicles; but, chiefly owing to the unwieldy size of the mass of cellular tissue, it had to be abandoned. On making an incision on to the catheter, a *cul-de-sac* was reached, in which it was impossible to find the urethra, or to distinguish the parts at all. There was no loss of blood, on account of the precau-

tions taken; but a great quantity of serum drained away from the incision. It had been agreed that it would be best to remove the entire mass at the base, thus unavoidably amputating the penis and removing the testicles. This was done by dissecting away as much of the abnormal cellular tissue as was possible. A great number of enormously enlarged vessels were encountered, all of which were secured with ligatures. The mucous membrane of the urethra was stitched to the fibrous sheath of the corpora cavernosa and spongiosa. On removing the Esmarch's band, a few more vessels had to be secured; the edges of the integument were stitched; and the urethra was fixed to the skin in a convenient position. The patient recovered from the operation, and never complained of pain or difficulty in passing urine. With the exception of a little fever a week after the operation, he recovered without a bad symptom. There was a little suppuration, but not very much: the ligatures came away in from six to ten days, and the sutures were removed on the fifth day. Mr. Downes saw him last on July 11th, when the skin had united above and below the urethra; but, for a circular space of about two inches radius round the urethra, there were granulations which had nearly filled up the space, and it appeared likely that after a week or two it would completely heal. The weight of the penis and scrotum after removal, and when nearly all the serum had drained from it, was found to be fifty-two pounds; when it contained the serum and blood which it did during life, it must have weighed over sixty pounds. On dissecting the mass it was found that the testicles were slightly atrophied; the penis was normal, with the exception of the enormous amount of cellular tissue surrounding it; the glans penis was normal, and so was the meatus urinarius, but it was hidden completely by the enormous mass of cellular tissue described as resembling the glans penis: this could not have been the enlarged prepuce, for, being a Mahometan, he had been circumcised in childhood. The specimen was sent to the museum of the Medical College, Lahore.—*Brit. Med. Jour.*

GRESLON ON THE TREATMENT OF SCIATICA BY HYPODERMIC INJECTIONS OF NITRATE OF SILVER.

Dr. Greslon reports (*La France Med.*, Sept. 26, 1881) the radical cure of a case of sciatica, which had resisted all ordinary methods of treatment, by hypodermic injections of the nitrate of silver. The patient, a lady 53 years of age, was of a gouty and rheumatic diathesis. She had recently suffered from several attacks of acute articular rheumatism. Her metacarpophalangeal articulations presented the characteristic deformities of arthritis deformans. In March 1879, the patient was attacked by sciatica in the left thigh and leg. The most severe pain was experienced in the calf and at the sacro-sciatic foramen. After unsuccessfully treating the case for twelve days with sinapisms, vesicatories, and anodynes, Dr. Greslon injected five drops of a twenty-five per cent. solution of nitrate of silver into the deeper tissues of the calf, at the most painful part. The injection was attended by violet pain, and followed by the formation of an abscess, which was opened at the end of a week. A few days later, the neuralgic pains had completely ceased in the leg. Eight drops of the same solution were then injected over the sacro-sciatic foramen. No abscess ensued, but an inflammatory exudation occurred, and discharged, six days after the puncture, some sero-

sanguinolent matter. A week later, all pain had disappeared from the limb. The patient has had no relapse of the sciatica.—*Lon. Med. Rec.*

NOTES ON THE USE OF NITRO-GLYCERINE IN THE TREATMENT OF HEART DISEASE. BY W. E. GREEN, M.R.C.S., L.S.A., Sandown, Isle of Wight; Surgeon to the Isle of Wight Railway Company.

I propose to bring before you certain results obtained by me in the treatment of heart disease with a somewhat recent remedy, viz., nitro-glycerine. This is a most potent remedy, and I believe I am not overstating its merits when I say that it deserves to rank only second to digitalis in the treatment of disease of the heart.

The action of this drug, which was first noticed by Field, of Brighton, has been experimented upon by various observers, chief among whom may be mentioned Hering, Demme, Alders, Onsum, Brady, Pelikan, Thorowgood, Eulenberg, and Werber. In 1876 Dr. Lauder Brunton wrote a valuable paper in the St. Bartholomew's Hospital Reports detailing its peculiar physiological action upon animals, as tested in the Pharmacological Laboratory of that hospital. It is to Dr. William Murrell, however, that the medical profession is chiefly indebted for introducing it as being of great value in the treatment of certain diseases. From a consideration of the physiological action of this substance, and especially from the similarity existing between its general action and that of nitrite of amyl, as set forth by Dr. L. Brunton, Dr. Murrell was led to infer that it would probably be of service in the treatment of angina pectoris, and his result may be seen by a reference to his valuable paper in the *Lancet* of the earlier part of the year 1879.

I will briefly detail its mode of action and the preparation usually employed.

The solution is the form most generally used, and this is a one per cent. solution in spirits of wine: one minim is the usual dose to commence with, but in some cases even less may be given with advantage. It can either be taken in water or one drop may be placed upon the tongue. The solution is almost tasteless, but within three minutes of being taken it begins to exert its peculiar physiological properties. It paralyses the vaso-motor nerves, and so dilates the blood-vessels; the face flushes, the temples throb, the pulse becomes dicrotic and much quickened; in some cases the head aches most violently, but in others only a sense of fulness and pain across the forehead is experienced, which lessens with each recurring dose, until ultimately no unpleasant effect, but simply a warming sensation all over the body, is produced.

A feeling of nausea, or even sickness, is often caused by the earlier doses. The quantity may be gradually increased until 15 or 20 minims every four hours are given, but I have never found it necessary to administer such heroic doses. It is never wise to give more than one minim at first, for even this small quantity has produced most serious symptoms in certain individuals. The patient has fainted, and has become almost collapsed, but I am not aware that it has ever been followed by a fatal result. I have never myself seen these alarming symptoms, but in two cases have found unpleasant symptoms to succeed a first dose, both cases occurring in hysterical women. The medicine, in one case, was taken without my being consulted (the patient having seen it produce good effects in her father's case); in the other, I prescribed it for

certain nervous symptoms, but, at that time, not having had so much experience in its use, I did not like to persevere. The physiological effect of nitro-glycerine is not so rapidly produced as is that of nitrite of amyl, but it continues from four to six, or even eight hours, after which time it is often advisable to repeat it.

I have never found it produce unpleasant effects in any case where its use was plainly indicated; and each day's experience more clearly shows the cases likely to be benefited by it.

While useful in almost all cases of heart disease, I believe those in which it will be found of the greatest benefits are, 1st, angina pectoris; and 2d, weak, dilated, and fatty heart. In angina it prevents an attack by keeping the blood-vessels in a constantly dilated condition, and thus prevents the backward pressure of blood upon the heart, which is probably the cause of the agonizing pain of angina.

In weak dilated hearts it gives relief by reducing arterial tension and thus lessening the amount of work the heart has to do; the heart, consequently, gains in power by the rest so given to it. As a rule, digitalis does not agree in these cases; but if thought necessary, it may be given with increased advantage in conjunction with this drug. In several cases of dilated heart, with small, weak, quick pulse, I have seen the beats not only increased in power, but much reduced in frequency, after taking nitro-glycerine for a few days, thus plainly showing that the heart had been relieved of much of its embarrassment, and as a consequence had gained in power. I have used this drug largely during more than two years, and each week my appreciation of its value as a remedy for this class of cases increases. There are numerous other affections in which it will prove of value, but such do not come within the scope of my present paper. Bearing in mind its physiological action, it will be easy for you to select the cases in which its use is indicated.

The following are notes of a few cases which I consider are conclusive of its value, and which will, I trust, prove of interest:

Mrs. H., æt. 60. A spare, delicate, nervous woman, has frequently been under my care during the past three years, sometimes, with severe attacks of bronchitis, at others, with neuralgic pains of an ill-defined character, but more frequently in the intercostal nerves, with extensions of pain to the left shoulder; moreover, there was always a dread of something pending, though she could not define its nature. The heart, though weak in action, was sound, although palpitations were complained of after the slightest exertion.

About 2 A. M. on Nov. 11, 1879, my services were called into requisition for a most severe attack of angina pectoris. Nitrite of amyl was immediately used and a subcutaneous injection of morphia given, with the effect of freeing the patient from her attack, and inducing a sound sleep at the end of about an hour and a half.

Nov. 11, 10 A. M.—Has had seven hours sound sleep and feels better, but is dreading the approach of night and the advent of another attack, thinking she could not possibly survive it. Examination of the heart shows me that there is a soft mitral systolic murmur which is probably due to strain of the valve produced by the backward pressure of the blood at the time of the attack. One-minim doses of solution of nitro-glycerine are ordered three times a day with considerable relief, but it was difficult to get the patient to take the remedy regularly on account of the unpleasant headache it caused. Nitrite of amyl to be

kept in the house in case of need. The patient was so nervous and dreaded so much the recurrence of another attack, that she went far towards producing slight attacks upon the succeeding nights. On the 13th, therefore, she was ordered a draught of chloral and hyoscyamus at bedtime, with the result of inducing a night of sound sleep. She improved rapidly, and was allowed to go down stairs on the 24th inst. The exertion was apparently too great, for about 2.30 A. M., the next day, she had her most serious attack. The previous treatment relieved her, but a recurrence took place early on the morning of the 27th. Upon this day Dr. Coghill saw her, and suggested a night pill, containing quiniæ sulph. grs. 3, pulv. opii, gr. ½, ext. bellad. gr. ½. This was given for two nights and then had to be discontinued, owing to certain unpleasant effects produced. Each of these nights the patient had an attack. I then gave her a draught containing chloral, cinchona, and conium, at bedtime, which draught was continued until the patient was convalescent, but the chloral and conium were gradually left out without the knowledge of the patient. During the whole of this time the solution of nitro-glycerine was continued, being increased slightly on the 27th, and to m. 1¼ every four hours after the 30th in conjunction with cinchona and Virginian prune. The patient steadily improved during the month of December, but was not allowed to go down stairs until her strength was much greater. She gradually lost her dread of an impending attack, and then permitted herself to leave off the night draught of cinchona. On Jan. 1, 1880, a pill of phosphorus, reduced iron, and nux vomica, was given and continued for a month, but during this time a night dose of nitro-glycerine was given. Since Feb. 1 has daily taken two doses of nitro-glycerine combined with cinchona and Virginian prune, and the result has been most gratifying. She is now feeling better than she has done for some years; from being spare, she has become stout, and the mitral bruit has entirely disappeared. During the summer of 1880 she passed easily through a severe attack of bronchitis, and at the present time is in the enjoyment of perfect health.

Mrs. G., æt. 75, a thin, spare woman, suffers from attacks of angina pectoris. Upon March 15, 1880, she had a severe attack, for which nitro-glycerine was prescribed, with the result of giving almost immediate relief to the symptoms and a sound night's rest. Since this time the patient has continued to take a mixture containing nitro-glycerine, cinchona and Virginian prune, and there has been an entire immunity from attacks. The mixture is not taken every day, but is kept in the house, and whenever any premonitory symptoms are felt and an attack recognized to be imminent, recourse is had to it with immediate advantage. This patient, who before was in a constant suspense and misery at the anticipation of an attack, has never since required my professional services, and leads a life of comfort and happiness, having no longer any dread of her old enemy. Dec. 22, 1881,—continues in capital health, takes medicine regularly, and has gained flesh.

Mr. J. E., æt. 70, came under my care some two years ago. This patient was a spare man of active but methodical habit, and had come to reside in Sandown on account of his health, being subject to occasional faintings which evidently arose from the condition of his heart. When I first attended him, his pulse, which was full and bounding, appeared appeared to me to intermit every other beat, but a little care showed me that it was one of those rare cases

in which the heart's action was very slow; it was, in fact, only beating at the rate of thirty-four per minute. The heart's sounds were in every respect normal, and also the area of dullness. The patient told me that for some years the pulse had gradually become slower, and he had been subject to these fainting attacks, which occurred without any warning. He was recommended to carry nitrite of amyl continually with him, in case a fainting attack should occur. About 7 A.M., one cold morning in December, 1879, I was hastily summoned, and found him lying on the floor and perfectly insensible. Nitrite of amyl had been administered to him. I immediately made use of a larger quantity, but with no effect other than to show that he was still living. After this I administered one minim of nitro-glycerine in a little water. It had not been swallowed five minutes before the flush returned to the cheeks, consciousness followed, and he began to ask questions concerning the attack. It appears, the old gentleman had always been an early riser, and had not waited for a fire to be lighted to warm his bed-room, the result of which was, that the cutaneous vessels had become much contracted, thus forcing an extra amount of work upon a weak heart. He was also excited at the prospect of a political speech he was expected to make at a neighboring town that evening, which no doubt conduced to heighten the effect of the cold upon the blood-vessels. The result of this attack was to greatly strain the mitral valves, and a loud systolic bruit exists to this day. The pulse for some months before was at thirty-two, and since the attack it continues the same, but is much softer in character than before. There has been only one slight attack of fainting since. The convalescence was tedious, but appeared to be helped by digitaline and nitro-glycerine. The general health of the patient now appears as good as ever.

Mrs. P., æt. 65, first came under treatment in August, 1879. She was suffering at that time from abdominal dropsy, which appeared to be caused by some portal obstruction. She was also suffering from a pre-systolic mitral murmur, accompanied with almost incessant cough and bronchorrhœa. The heart was much dilated and pulse rarely less than 120 per minute. The dropsy was gradually overcome by tonics and purgatives, but the patient's condition had improved much when April, 1880 arrived. Digitalis appeared to disagree in all forms, until the active principle in milligramme doses was given, when improvement became more rapid. Shortly after this time I gave a mixture containing cinchona and half-minim doses of nitro-glycerine, after which the patient so much improved that she could get down stairs and even out of doors. I did not, at that time, pay much attention to the nitro-glycerine as being the cause of this, but was more inclined to attribute it to Homolle's digitaline granules, which had been taken regularly. The mixture was dropped and the perles continued throughout the summer, the patient, for her, being fairly well. About the middle of August she caught cold, the result of which was a severe attack of bronchitis. The patient could not lie down in bed, and the cough was most distressing; by the aid of diffusible stimulants this was relieved, but the heart was much weaker, the cough and bronchorrhœa excessive and exhausting. She was seen by Dr. Milner Fothergill on September 20, who, while concurring in the treatment which had been adopted, told her she had better follow the good old Cumberland fashion amongst old people, and retire to bed for the winter. This advice, though not palatable, the patient was in-

clined to adopt; she did not improve with it, but, on the contrary, got weaker, the cough was more incessant, and I was fairly puzzled what to do next, when it fortunately occurred to me that the improvement which had taken place before was after having taken the nitro-glycerine, so I determined to give her some again. At this time she was taking four milligrammes of digitaline during the twenty-four hours, one twice during the day, and two at bedtime. One of the granules at bedtime was stopped, and one minim of the 1 per cent. solution of nitro-glycerine substituted with the result of giving her a good night's rest. This dose was continued for some days and the improvement was so great that the patient was able to sit up, but not to leave her bedroom. After a few days the granules were reduced to one each night and morning, and after a month of this treatment I tried the use of nitro-glycerine alone at bedtime, and rather to my surprise found she was considerably better with this remedy—the difficulty of breathing, cough, and bronchorrhœa were greatly improved and she was soon able to come down stairs, which she occasionally did throughout the whole of the past severe winter, and at the present time is able to get out of doors and walk in the garden. The improvement in the patient's face has been most marked; the eyes, from being always bloodshot, are quite clear; the lips and cheeks, from a purple tint, have regained their natural hue, the appetite has vastly improved, the bronchorrhœa during the day has entirely ceased, and is considerably better at night. The nitro-glycerine is always taken at bedtime and is sometimes repeated during the night. The dose, although it has been taken for months, has never been increased. Altogether my patient is in a better condition of health than she has been for the past three or four years.

Bridget D., æt. 11, came under my notice about Nov. 5, 1880. She has suffered from rheumatic fever twice, and is now in a very debilitated condition. A low mitral systolic murmur exists. She was treated with quinine, iron, and digitalis with satisfactory results. On Sunday evening, Jan. 3, 1881, after playing out of doors in a very bleak wind, she was suddenly seized at bedtime with acute dyspnœa, which so alarmed her friends that they had recourse to me. My friend, Dr. Barker, saw the patient immediately and found her suffering from acute congestion of both lungs, rapid breathing, purple lips, and pale cheeks; pulse so rapid as to be uncountable, and both lungs engorged with blood. He immediately ordered a mustard jacket, &c., and returned to me saying it was an acute case of double pneumonia, and that she probably would hardly survive the hour, and suggested bleeding. Knowing the debilitated condition of the child, I suggested bleeding the patient into her own blood-vessels by dilating them with nitro-glycerine. We returned together to the case and found the patient somewhat better. The jacket had relieved the heart, but it was still beating nearly 200 times in the minute, and the lungs were still engorged. One minim of nitro-glycerine was at once given with its usual effect of dilating the blood-vessels and flushing the face, and giving relief to the apoplectic condition of the lungs, with slower action of the heart. An hour afterwards a milligramme of digitaline was given, which still further improved the power of the heart, and the patient gradually recovered. The nitro-glycerine was given every four hours combined with tincture of digitalis, and the patient made a satisfactory recovery.

My opinion of this case was that the cold air con-

tracted the cutaneous blood-vessels, thus rendering the work of the heart laborious, the weak heart failed, and engorgement of both lungs (called in some old medical works pneumonic apoplexy) followed as a natural consequence, and would rapidly have proved fatal had not Dr. Barker's mustard jacket supplied a necessary stimulus to the heart, and also to a certain extent relieved its action, by dilating those cutaneous blood-vessels which were in its immediate vicinity. This was afterwards more effectively and extensively done by means of the nitro-glycerine, and to this and to the increased power given the heart by means of the digitalis I ascribe in a great measure the satisfactory result.

I could relate numerous other cases showing the value of this remedy in heart disease, but have already trespassed too much upon the limited time at our disposal to-day; the cases cited, however, are sufficient to prove that in this new agent we have a very powerful measure in diseases of the heart. It is a remedy, moreover, which is not only palliative, but in many cases actually curative; and I think I may lay claim to having discovered its application to a much larger and more common class of cases than those originally laid down by its introducer, Dr. Murrell.—*The Practitioner*.

THE PHYSIOLOGICAL AND THERAPEUTICAL ACTION OF ERGOT.

In the March number of the *New York Medical Journal*, Dr. Etienne Evetzky, of New York, concludes the publication of his Joseph Mather Smith prize essay on ergot. Although dealing mainly with the physiological and therapeutical actions of the drug, the author gives a comprehensive account of the history of the different varieties of ergot, their botanical relations, their microscopical structure, and their chemical composition; the methods of their production, collection, preservation, and preparation for medicinal use; the relations of ergot to other remedies, etc. In comparing the action of ergot with that of a number of other excitomoters of the organic muscular tissue, an arbitrary group of which, the author thinks, ergot may be taken as the typical representative, he remarks that strychnia is most closely allied to ergot in its effects, the main difference being that strychnia acts with far greater energy on the spinal motor centres of the voluntary muscular tissue. Digitalis is distinguished by its predominant stimulating action on the heart. The chief difference between the action of ergot and that of Calabar bean lies in the early occurrence of a paretic state of the voluntary motor apparatus after doses of the latter drug that are not quite toxic. Atropia and nitrite of amyl are mentioned as antagonists to ergot. For hypodermic administration we may use the extract, the fluid extract, or sclerotic acid, diluted in water, with or without the addition of glycerine or alcohol; which latter substances, the author thinks, do not improve the solution in the least. The solution should always be clear and not too old, and should be made somewhat alkaline if the injections are particularly painful. The solution should invariably be injected into the muscular tissue, and it is well to begin with small doses. The therapeutical applications of ergot are considered under five heads: 1. Disorders of the circulation and diseases of the organs of circulation. 2. Paretic conditions of the organs composed of organic muscular tissue, the circulatory system excepted. 3. Inflammatory and other morbid enlargements and growths. 4. Abnormal secretions. 5. Symptoms re-

ferable to the nervous system, and depending chiefly upon circulatory disorders within it. In regard to contraindications to the use of ergot, it should be used with extreme caution in patients with an enfeebled heart. Pregnancy is not an absolute contraindication. The use of the drug should be suspended during menstruation, unless it is given for some special condition of that function. To avoid disturbing the digestion it is best to give the drug by the rectum or hypodermically. The remainder of the article deals with the special diseases in which ergot seems capable of effecting good results.

MERCURY AND OTHER REMEDIES IN THE TREATMENT OF SYPHILIS.

In the *New York Medical Journal* for March, 1882, Dr. George Henry Fox, Clinical Professor of Diseases of the Skin in the College of Physicians and Surgeons, New York, maintains that mercury, while undoubtedly our most valuable remedy in the medicinal treatment of syphilis, is yet an overrated drug, and is not essential to the cure of the disease. It is best administered internally rather than by inunction, by vapor baths, or by hypodermic injection. The amount usually given is unnecessarily large, and its local irritant effects should be avoided. The duration of its use should vary according to the severity of the case; no absolute rule can be laid down. Iodide of potassium, the author thinks, should not be reserved solely for the late period of the disease, for there is no stage in which either iodine or mercury is incapable of doing good. Instead of the so-called "mixed treatment," he prefers to give the two agents separately. Iodide of potassium ought not to be administered continuously for any great length of time. It does its work quickly or not at all, and when unnecessarily continued is sure to do harm. Very large doses should not be used without the very plainest indications. They are not without their value in certain cases, but iodism has doubtless often been mistaken for the manifestations of syphilis. Iron deserves to be ranked with mercury and iodide of potassium, from its effect on the anæmia that invariably accompanies the early stage of syphilis. Cod-liver oil is another remedy of great value, especially where there is a strumous taint.

IODOFORM IN GYNÆCOLOGICAL PRACTICE.

Dr. Frank P. Foster, editor of the *New York Medical Journal*, publishes in the March number of that journal some clinical notes of iodoform in gynæcological practice, especially in pelvic peritonitis and cellulitis of a chronic form. The cases are classified according to the abnormalities ascertained to be present: 1. Cases in which inflammatory action was supposed to exist, or to have existed, but in which the uterus was freely movable without pain. 2. Cases in which the mobility of the uterus was but slightly if at all impaired, but in which motion of the organ was painful. 3. Impaired mobility of the uterus, with little or no pain on removing it. 4. Mobility of the uterus decidedly impaired, with pain on removing it. 5. Uterus nearly or quite immovable, with little or no pain in attempting to move it. 6. Uterus nearly or quite fixed, with decided pain on attempting to move it. 7. Cases of palpable inflammatory deposit. The most prompt and satisfactory results were obtained in the last group of cases—those of palpable pelvic exudation. Such cases, however, do better, according to

the author's experience, under the more usual methods of treatment than those in which the exudation is not capable of detection by palpation, but is inferred to be present from conditions that can scarcely be explained on any other theory. But, while such is the case, it is quite as true, he remarks, that we now and then meet with bulky exudations that prove utterly rebellious to treatment. A good deal depends, no doubt, upon whether the deposit is of recent or of remote formation; and this question is not always easy to settle in the cases of patients whose past history we know nothing beyond what we may be able to elicit by questioning them. Taking the seven groups together, it seems to him that the patients progressed more satisfactorily, on the whole, than they would have done without the use of iodoform. It is true, he adds, that in the great majority of them the use of vaginal injections of hot water was prescribed, but it is no less a moral certainty that in many instances they were neglected by the patients. Their proper use being assured, he would esteem the three great remedies for chronic extra-uterine pelvic inflammation in the following order: (1) hot water, (2) iodoform, (3) galvanism. As to the best method of using iodoform in such cases, his preference is for its application to the upper part of the vagina, and his practice is to tampon the whole vaginal canal with wicking. This prevents the application from being washed away with the discharge, and the tampon is often of great service by its mechanical action—steadyng the uterus, sometimes exerting a gentle, even distension upon the deposit, and perhaps inducing muscular contraction. These tampons are almost always borne without pain or discomfort, and, from the fact that iodoform is an antiseptic, they may be retained for several days. His custom is, however, to direct their removal at the end of thirty-six hours. Not the least of their merits is that they effectually shut in the abominable odor of the drug. Used in this way, he has never known iodoform to betray the patient by its odor, although its taste is sometimes complained of immediately, showing that the substance occasionally makes its way into the uterine canal, or else is absorbed by the vagina more promptly than we are accustomed to expect in the case of medicaments introduced into that passage. For occasional use, as an anodyne; in acute cases, in which the patients are not likely to be asked embarrassing questions by strangers, and in which, as well as in cases of vulvar hyperæsthesia, it is an object to avoid meddling with the genital canal; also with patients who can not have continuous treatment by the physician himself, the employment of rectal suppositories is a valuable resource.

MEDICAL NOTES AND NEWS.

Malarial Germs.—M. A. Laveran has found, in the blood of patients suffering from malarial poisoning, parasitic organisms, very definite in form and most remarkable in character; motionless, cylindrical curved bodies, transparent and of delicate outlines, curved at the extremities; transparent spherical forms provided with fine filaments in rapid movement, which he believes to be animalcules; and spherical or irregular bodies, which appeared to be the "cadaveric" stage of these, all marked with pigment-granules. He has also detected peculiar conditions in the blood itself. During the year that has passed since he first discovered these elements, M. Laveran has examined the blood in

192 patients affected with various symptoms of malarial disease, and has found the organisms in 180 of them, and he has convinced himself by numerous and repeated observations that they are not found in the blood of persons suffering from diseases that are not of malarial origin. In general, the parasitic bodies were found in the blood only at certain times, a little before and at the moment of the accession of the fever; and they rapidly disappeared under the influence of a quinine treatment. The addition of a minute quantity of a dilute solution of sulphate of quinine to a drop of blood sufficed to destroy the organisms. M. Laveran believes that the absence of the organisms in most of the cases (only twelve in the whole 192) in which he failed to find them was due to the patients having undergone a course of treatment with quinine.

Miasmatic Pneumonia.—Penkert has published in the *Berl. Klin. Woch. (Jour. de Med. et de Chir. Prat., Feb. 1882)* the following account of an epidemic of pneumonia attacking forty-two persons out of a little village of 700 inhabitants in the space of two months, from March 11th to May 14th. The twelve first attacked were children attending the same school. The village consisted of a single steep street, at the bottom of which stood the school-house, opposite the new cemetery, and separated from it by a little lake; the two latter were in a line northwest from the school-house. At the time of the outbreak, and for some days previously, the wind had been northwest, the level of the subsoil water was very high, most of the cellars of the lower part of the village were flooded, and, to judge by the level of the lake, the very porous soil of the new cemetery should have been saturated. Finally, the temperature, which had been low, rose to 45 deg. Fahr. The author believes these conditions favored the development of the miasmatic germs from the fermenting detritus in the soil of the cemetery, and that the northwest wind carrying these germs swept over only one house in the village—the school-house—and it was there that the first twelve cases occurred. Four other patients were suspected of catching it indirectly, while twenty-eight acquired it by direct contagion. After the Easter vacation, the children who returned to school remained free. Of the forty-two cases, two died. The duration of the disease never exceeded eight days. The hepatisation involved the right lower lobe sixteen times, the left lower lobe fifteen times, and once the left apex. The onset was always sudden, without warning, and the general phenomena were those of acute pneumonia.—*Lond. Med. Rec.*

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SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, MARCH 22, 1882.

The President Dr. E. C. Seguin presided.

The minutes of the previous meeting were read and approved.

Dr. Gerster presented a patient with

ANEURISM OF THE LEFT COMMON CAROTID

which had been cured by ligation of the common carotid.

The patient, male, æt. 46, a carpenter by trade. Seven weeks ago a small pulsating swelling appeared on the left side of the neck. About eight weeks ago began to lose flesh and run down rapidly. Dr. Gerster saw him and advised immediate operation. This the patient did not have done at that time, but returned in four weeks, when the swelling had increased from the size of a pigeon's egg to that of a goose egg. Operation was done at the German Hospital March 2d. The wound healed by first intention. Dr. Gerster called attention to an accident of the operation, namely, piercing the wall of the artery with an artery needle while lifting the artery to ligate it. The artery had to be tied on both sides of the punc-

ture. At the present time the aneurism was filled and pulsation had entirely ceased.

Dr. Seguin inquired as to the nervous symptoms resulting from ligation of the artery. Dr. Gerster responded that the only one was profuse diaphoresis, which was controlled by belladonna. Dr. Seguin also asked if it was not looked upon as unjustifiable to ligate after the age of 45 on account of liability to atheroma of some vessels of the circle of Willis. Dr. Gerster replied that it was, but in some cases, as in the one exhibited, the only chance for the patient was in operation.

Dr. Peabody presented a specimen of

CARCINOMA OF THE LARYNX AND PHARYNX.

The patient was unmarried, no occupation. Suffered from great difficulty in swallowing. The rima glottidis was decreased to one-eighth its natural size, and there was very marked œdema of the glottis. The dyspnœa was so severe that tracheotomy was done. The patient died 34 hours after operation.

At the autopsy were found irregular ulcerations on the left side of the throat involving pharynx and larynx. There was a thick coat of membrane over the pharynx. The central diameter of the neoplasm was $\frac{5}{8}$ inches. It proved to be ordinary carcinoma.

Dr. Peabody presented a second specimen of

LARGE ANEURISM OF THE HEART

which had destroyed the wall of the left ventricle. The patient æt. 50 U. S. married, custom inspector. Had been a drinker but was for a long time preceding death abstemious. Three weeks ago he noticed œdema of the feet, some ascites, and dyspnœa. Urine 1019, and large amount of albumen and large and small hyaline casts. Became cyanotic and died suddenly. Autopsy: Body large and fat. Œdema of lower extremities. No fluid in thorax. Heart enormous; right ventricle dilated. Capsule adherent to left kidney. Stomach and intestines congested. Liver pigmented. Brain anæmic and atheroma of arteries.

Dr. Gerster presented

HEAD AND PORTION OF DIATHESIS OF THE HUMERUS

of a child of eight months of age. The part presented having been removed by exsection. The child's father died of phthisis, the grandmother was under treatment for old syphilis. The child had contracted inflammation of the left shoulder joint, and five fistulous openings formed. Very soon after operation the child began to improve, the fistulæ closed, the wound healed by first intention and now spontaneous abduction of the arm to an angle of 28 degrees was possible, and the general condition was much improved.

Dr. Gerster also presented three other specimens of bones of elbow joint exsected during the last eight weeks.

The first was a child who fell striking the joint. There was pain and tenderness over the joint. The family physician put the joint in a splint but the case went on from bad to worse. The principal symptoms which established the diagnosis were functional disability, constitutional disturbance and the contour of the joint. These symptoms were accompanied by fever, loss of appetite and malaise. Dr. Gerster advised early operation as promising better results than late. Five weeks after the injury exsection of the olecranon was done. The soft tissues of the joints, the whole capsule and ligaments were transformed

into a gelatinous mass. The wound healed by first intention.

The second case, man *æt.* 22, had operation done nine months after injury. There was chronic synovitis of the fungous character. Some of the fascia and periosteum wounded by the operation subsequently necrosed which rendered the progress of the case less rapid than in the other cases.

Third case, man *æt.* 26. The cause of the joint trouble was also an injury. A few days after the injury he suffered from pain in the joint and went home to New Haven. The joint swelled and he was put under treatment for rheumatism by his physician. He subsequently developed typhoid symptoms so that he was said to have typhoid fever. This went on for six weeks when he presented himself for treatment at the German Dispensary. The humerus was thickened to six times its natural size while the soft integuments had wasted away. There was osteo-myelitis with central necrosis. Operation was done eight weeks ago. An incision was made three inches above the place where the musculo-spiral nerve crosses the humerus. In the middle of the bone there was no marrow, but in its place sanguinous material. A large sequestrum was found and in the upper part of the humerus a cavity containing pus. There was considerable reaction the first two weeks after operation. The wound closed by first intention. In operating Esmarch's bandage had been used and though the pressure was not excessive it caused anæsthesia and paralysis of the parts constricted. Dr. Gerster had used Esmarch's bandage in many operations but had never had paralysis follow from pressure.

In conclusion he stated that he believed that diagnosis and surgical interference was delayed too long in diseases of the joint, and maintained that if there were disability of the joint, rigidity of the muscles about the joint, this is absolute evidence of chronic inflammation, and fistulæ and contour were confirmatory evidence. The sooner exsection of diseased parts was done, the better the after results were.

Dr. Gibney remarked that the rigidity of muscles alluded to depended on lesion of the spinal cord, and was amenable to treatment. He believed exsection should not be done in children, as they get well with a more useful joint without it.

Dr. Gerster replied that he would only exsect the joint in children under twelve where life was threatened.

Dr. Seguin remarked that he had seen a case of paralysis from pressure, the patient recovering in two weeks. He did not regard the paralysis in Dr. Gerster's case as permanent.

The Society then went into executive session.

LECTURES.

CLINICAL REMARKS ON A CASE OF OVAR-IOTOMY.

BY

PAUL F. MUNDE, M.D.,

Clinical Lecturer on Diseases of Women, College of Physicians and Surgeons, New York.

GENTLEMEN: I take pleasure in showing you to-day the tumor removed from the woman operated on Saturday last at the Private Hospital, in Thirty-first street. Some of you were present, and all of you

will probably remember the case, as she was shown to the class several weeks ago.

She is 45 years old, and was very much debilitated. When presented at the clinic I told you my reasons for diagnosing multilocular ovarian tumor, although it was possible that it might be a fibro-cystic tumor of the uterus. The only way to make the diagnosis more certain was to aspirate the tumor, and this you know I am not in favor of doing, both because it may set up inflammation in the cyst itself and may cause extravasation into the peritoneal cavity and peritonitis. I had, however, strong reasons for suspecting the tumor to be ovarian. The uterus was only $2\frac{1}{2}$ inches long; the tumor was all in front of the uterus, and had grown rapidly. The appearance of the patient also was markedly cachectic, more so than would be accounted for by a fibrous tumor of the uterus.

On the morning of the operation the patient's bowels were freely moved, and quiniæ grs. xv. with ext. opii gr. j. were given. Just before operation, to render etherization more easily borne, 30 grains of bromide of potash given.

Professor Lusk, who assisted me at the operation, feeling the tumor, advised that aspiration be done before operation was decided upon, but I had fully made up my mind to operate feeling very confident of the character of the tumor. After etherization, however, aspiration was done and a thin opaque fluid was withdrawn which told us nothing but that the tumor was not all solid. I made an incision 4 inches in length, dividing layer after layer of the abdominal tissues but vainly looking for the linea alba, which I may say is rarely hit during this operation. While searching for the linea alba I came upon a glistening membrane, which I incised horizontally and a colloid fluid gushed out. This fluid was from the peritoneal cavity, the cyst, as I afterwards found, having ruptured. There were no recti muscles, for complete diastasis had taken place and only the sheath remained in the median line. I enlarged the wound and sweeping a thick sound around the tumor found several adhesions. I then introduced Spencer Wells's trocar into the tumor in different places and drew off some fluid, and made an incision into the tumor, tearing the central mass with my fingers to facilitate the escape of the fluid contents, taking care that this colloid material should not get into the peritoneal cavity. Eight quarts of fluid were discharged, which greatly reduced the size of the tumor, and I was now able to draw it out from the wound, when I discovered that it was attached to the bladder, the omentum, and abdominal walls. These adhesions were tied off with silk ligatures and when detached entirely I was able to see what gratified me very much, that the tumor was attached to the broad ligament by a pedicle no thicker than my thumb. I put on a temporary clamp and under it a permanent silk ligature and divided the pedicle between the two, subsequently cauterizing the stump with Paquelin's thermo-cautery, and dropping it into the abdominal cavity. The tumor with contents weighed 34 lbs.

Dr. Homans of Boston, who has been a very successful ovariologist, uses both clamp and ligature, some operators using only the one, though it is safer to take all possible precautions against danger.

I found on examining the tumor that there had been a perforation of a small cyst on the posterior aspect of tumor, and hence the fluid in the peritoneal cavity. I may say in passing, that it is very unusual for the cysts to rupture, and when they do it is regarded as involving great danger to the patient from peritonitis.

The abdominal cavity, after the tumor was removed, was thoroughly cleansed by means of sponges soaked in carbolized water, and was closed by silk sutures. About 15 to 20 deep and superficial sutures in all were put in, taking care to include the peritoneum in the former. The wound was covered by linen smeared with carbolized vaseline, and over this carbolized oiled silk, carbolized absorbent cotton, all fastened down by strips of adhesive plaster, more cotton, and a bandage over all. Ten drops of Magendie's solution were then administered and also brandy hypodermically, as the pulse was feeble, and I feared collapse. Since the operation the temperature rose only once, on the evening of the second day, to $100\frac{3}{4}^{\circ}$. The pulse to 102° . The average has been pulse 84, temp. 98° . The bowels have not been moved since operation and no attempt in this direction will be made until about the tenth day. A rectal suppository of quinine grs. 10, assafoetida grs. 10, and opium grs. i. was introduced on several evenings and $\frac{1}{4}$ glass of milk and 1 oz. of brandy ordered every two hours. It is well to keep the stomach quiet for one or two days after operation. From the 10th to the 15th day alternate stitches are taken out so as to guard against the possibility of the wound gaping. The patient will be allowed to get up on the 14th to the 16th day, firmly bandaged, and she will be obliged to wear an abdominal supporter for a year to come.

There are three points of interest about this case. First. The diagnosis. Second. The rupture of the cyst and extravasation. And third. The adhesion to the bladder. In these cases I wish to impress upon you that diagnosis is the all-important question before deciding on the treatment. Dr. Munde here again emphasized the danger of tapping these tumors for diagnosis and alluded to the opinions and recorded cases of Lawson Tait, Keith, Thomas, Goodell and others, and in concluding his remarks on the case stated that the one rule was "to make a diagnosis certain and only operate in cases likely to give a good result." In this respect large multilocular tumors often offer quite as good chances (as shown in the present instance) as single monocysts or cysts of the broad ligament (as seen in the last successful case operated on by him).

ULCER OF THE STOMACH—FIBROUS THICKENING OF THE STOMACH.

A CLINICAL LECTURE.

BY

ALONZO CLARK, M. D.,

Professor of Practice of Medicine College of Physicians and Surgeons New York, Visiting Physician Bellevue Hospital, Consulting Physician St. Luke's and St. Mary's Hospitals, etc., etc.

CASE I. History.—Patient, female, complains of inability to retain food. Has lived entirely on milk diet for past six months. Two years ago she vomited a large quantity of blood. A week ago she again vomited about two quarts of blood. Is obliged to lie upon her face. Patient vomits food once in a while and cannot take cold drinks.

The history tends to the opinion that there is either ulcer or carcinoma of the stomach. The hemorrhage which she speaks of may possibly be due to hepatic disease but her countenance does not indicate such. For in persons who have disease of the liver there is almost always some stain of bile on the face. If the pylorus is the seat of obstructive disease the vomiting almost always occurs after a meal.

Examination reveals nothing unnatural. My fingers are over the position of the pylorus. The liver appears rather small. Bleeding from the stomach will occur from three causes. First. Inability of blood to circulate freely through the liver, and congestion of the mucous membrane of the stomach, together with the mucous membrane of the intestines. Second. Ulcer breaking into an artery. Third. Carcinomatous disease. I do not think she has the latter because I do not find any hardness. We can also exclude the former because, although the liver dulness is diminished to three inches instead of being four and a half, extending from the sixth rib to the free border, her countenance does not indicate any serious hepatic disease. Putting all things together I think it is safe to say that she has one or more ulcers of the stomach; that at times the ulcer breaks through a vessel of appreciable dimensions and causes a hemorrhage. When the hemorrhage has extended to a certain point the vessel gets plugged up with a clot and she has no more until the same or another vessel is opened again.

Treatment.—I have no faith in the attempt to treat these ulcers by swallowing any astringent or other kind of medicine except those which build up the system. The nitrate of silver has been given where the ulcer was suspected, but I do not think it has any power whatever. It mixes with the material in the stomach, and is so diluted that its activity is almost entirely destroyed. The great drawback to this patient is that she cannot take food enough. I should be inclined to give her 15–20 grs. of pepsin to assist digestion, and depend upon the building up of the system for the healing of the ulcer. I should advise her to take laxatives, for she takes so little food that there is but little refuse, and consequently little stimulus for the muscular action of the intestines to produce movement. Beyond this I should advise nothing but the chocolate iron lozenges, which contain $2\frac{1}{2}$ grs. of the protocarbonate of iron. The advantage of this form of iron preparation is, that the chocolate renders the iron entirely tasteless and is very agreeable to take.

CASE II. History.—Male, occupation barber. Has been sick six months. Vomits after meals. Sometimes vomiting ceases for a few days or a week. He has never vomited blood. Has had a lump in his chest about three or four months.

I feel a hard, resisting body about the stomach, extending in a lateral direction about three and a half inches and downwards to the umbilicus. The tumor moves on inspiration up and down. It is a little nodulated. We do not get much resonance through it. This is a tumor either of the omentum or stomach. Its great movability would lead me to suppose that it is in the omentum; but it ascends so high that, along with the vomiting, I am inclined to regard it as belonging to the stomach. It is not carcinoma, but a fibrous thickening of the anterior walls of the stomach. The size of the stomach is not remarkably diminished. He can take two cups of milk at a time. This fibrous thickening occurs more frequently than malignant disease of the stomach. It will sometimes go on until the stomach walls become an inch in thickness, and frequently you see three layers of the new deposit—one in the mucous membrane, another in the connective tissue, and a thickening of the peritoneal covering of the stomach. In regard to the prognosis of a disease of this sort, it is just as bad for the individual as if it were a cancer. It goes on to ulceration; and you may sometimes see a stomach the mucous membrane and

connective tissue of which are honeycombed through ulceration, and though the stomach contents do not get into the peritoneum, they wear out the individual by impaired digestion and weakness. When formed to such an extent as here, it is as certain to produce death as if it were a malignant disease. I infer that it is a fibrous thickening, because a cancer is almost never so large.

There is no encouragement to be given with reference to the favorable issue of this disease, and the patient will probably continue to vomit as long as he lives, and very likely may vomit some blood in the end, or after the ulcerations get to be troublesome. He must be nourished by injections, as the stomach will not receive any food.

ORIGINAL ARTICLES.

ENCYSTED STONE IN THE BLADDER— MEDIAN LITHOTOMY.

BY

F. N. OTIS, M.D.

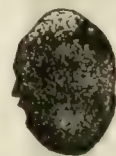
Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons, N. Y. Visiting Surgeon Charity Hospital, Consulting Surgeon St. Elizabeth's Hospital, Etc., Etc.

J. C., miner, 41, Scranton. Sent by Dr. M. J. Williamson of Hyde Park, Pa. When about 23 years of age had what appears to have been passage of calculus from the kidney to the bladder. He had had an acute urethritis some time previously, lasting severely about three months. He had no further trouble up to about eight years ago when he had an attack of pain in the kidneys and loins lasting more or less acutely for ten weeks. This was accompanied by retraction of the testicles and penis, and frequent desire to urinate. During this time he passed three calculi through the urethra, two about the size of a pea and one smaller. No further trouble for two years, when he had what was said to have been an attack of inflammation of the bladder and kidneys, and had much red sediment in his urine. He was examined for stone with negative results. Following this he had complete retention of urine which was relieved by the passage of a large silver catheter which was followed by quite a profuse hemorrhage. Passing under other surgical care he was again examined; no stone was found but he was said to have a tumor at the neck of the bladder and stricture of the urethra. For this last he was treated by divulsion, and the subsequent passage of sounds. He says he had some relief to urination in the passage of a large stream, but the frequency and pain continued, and about 10 months ago, he began to find that when he had partially emptied his bladder, something would suddenly drop down in his bladder and stop his urine, and this has continued to be the case every time he attempts to urinate. Urinated about once in fifteen or twenty minutes when he was at work, but a couple of weeks ago he gave up work entirely and since then his intervals have increased to an hour or more. Has suffered much with pain in the loins and back, extending also down the groin.

At my clinique at the College of Physicians and Surgeons, March 2d, 1882, he was examined for stone in the bladder, with negative results. Subsequently, at my office, he was very critically and thoroughly re-examined, and, during the process, was placed on his head and shaken, and

every means available used to dislodge any possible stone secreted in a sacculus within the bladder, or over the pubis or behind the prostate, but none could afterwards be detected by search with the metallic sound of Thompson. The prostate was found somewhat enlarged, very hard and slightly protuberant on the right side. His case was again presented to the class on Thursday, March 9th, with the opinion that the difficulty was caused either by a polypoid growth within the bladder or by an encysted stone, and that an exploratory operation as for median lithotomy was justifiable. Examination of the urine proved it to be loaded with pus, but gave no evidence of any organic disease of the kidneys.

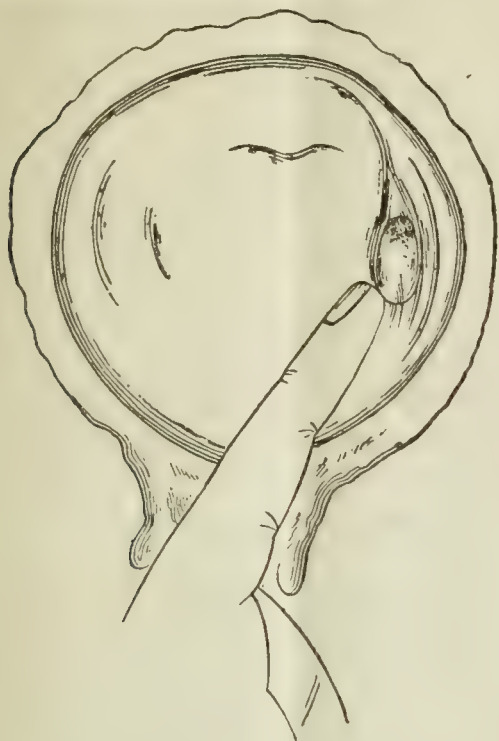
Operation March 10th, at 2 P. M. at 241 W. 36th st. Present and assisting Dr. L. B. Bangs, Dr. Vermilye, Dr. B. W. Palmer, Dr. M. J. Williams from Hyde Park, Pa., who sent the patient to me (with an opinion that an encysted stone would be found), and eight physicians and students invited from the College of Physicians and Surgeons. The median operation for stone was performed and the opening enlarged with Dolbeau's dilator. I then passed my finger into the prostatic urethra and examined the gland carefully with my left forefinger aided by a finger of the right hand in the rectum. Nothing abnormal was discovered at this point. I passed my finger well into the bladder and examined it carefully in every direction, first on the patient's left side with my left forefinger and then on the right with my right. All was smooth and presented nothing abnormal. Dr. Bangs and Dr. Williams in turn examined most carefully with the same result. A searcher was then introduced and careful exploration was made. This failed to discover anything like a stone or anything else abnormal. Again passed in my left forefinger and when at the utmost depth, perhaps a quarter of an inch deeper than previously inserted, the end of it came into slight contact with a velvety body about the size and shape apparently of a small bean. I then passed in a pair of narrow-bladed forceps and seized a soft mass, twisted it gently around, and as it still held, disengaged the forceps and again introduced the finger. The mass could no longer be reached. Passed finger of opposite hand and swept the other side of bladder and found in the bas-fond a distinct foreign body with soft covering. I then passed in a pair of duck-billed forceps and at the first attempt drew out a compact clot of blood. On the second, another clot in which was imbedded an oval stone $\frac{3}{4}$ inch in length, $\frac{1}{2}$ inch in width, $\frac{3}{8}$ inch in thickness. Apparently $\frac{1}{6}$ of an inch only had been uncovered at apex, the rest had evidently been encysted. A distinct line marked the exposed portion, which was smooth, while the remainder was rough. The stone was apparently of a mixed char-



acter. The accompanying wood-cut taken from a photograph of the stone shows very clearly the small smooth surface at the apex when it was exposed, and the remainder, dark-colored and rough, indicating the encysted portion. Twice during the preliminary examinations a slight click had been recognized as if from contact with stone, but as it could not be repeated it was thought to have been some

accidental sound outside the bladder, and as this occurred each time on the left side of the bladder, the source of this slight evidence of stone was readily explained.

The following diagram fairly represents the relative size, position and form of the sacculated or encysted stone. The entire operation occupied about half an



hour. On recovering from the effects of the ether the patient expressed himself as quite free from pain—he passed a quiet night, his urine passing through a soft catheter which had been introduced into the bladder through the perineal incision and tied in immediately subsequent to the operation. There was not at any time either rise of pulse or increase of temperature. On the third day the catheter was removed; on the fourth a part of the urine passed through the penis. Up to this time, March 15th, the urethra, which easily permitted a staff No. 26 to pass through it into the bladder, at the time of operation, had not been critically examined. To ascertain if any obstruction, which would interfere with the prompt healing of the perineal opening, was present, the urethra was examined with the urethrometer as far as the bulb. It proved to have an easy capacity of 34+throughout, with the exception of a contraction at the orifice and extending back for $\frac{1}{2}$ inch of 8 m. This was divided, and a 34+solid sound was passed without the least force through the entire urethra and well into the bladder. At this point I would like to emphasize the importance to be attached to securing complete freedom from contractions in the urethra anterior to any incision into the urethra, either for division of stricture or extraction of stone from the bladder. Failure to secure perfect freedom from obstruction throughout, including the orifice, will tend to delay the closure of the perineal opening, and in occasional cases, result in a perineal fistula.

March 17th, just one week from the date of the operation cited above, the patient was in first-rate condition, not having at any time since the removal of the stone any untoward symptom. He has passed all his urine through the penis, since the 15th and is up

and about his room, with a promise of being able to return to his home in the country within the coming week.

Sunday March 19th, patient called at my office and a 33 solid sound was passed easily through the urethra and well into the bladder.

Monday March 20th, The external wound almost completely healed—Patient passing urine free from pus, once in five or six hours—left for home this morning apparently well in every respect—a little less than ten days from the date of operation.

COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK. DERMATOLOGICAL CLINIC OF PROF. GEORGE H. FOX. SECOND QUARTERLY REPORT (FEMALE DIVISION)

BY

GEO. THOS. JACKSON, M. D.,

Clinical Assistant.

The following are notes upon some of the more interesting cases which have come to the clinic during the three months ending February 27th, 1882:

CASE 362. *Eczema infantile*. Dec. 19th, 1881. Andrew K., æt. 1½ years. Family history good. Up to the time of teething, the ninth month, the child was healthy and gave the mother no trouble. Since then he has been cross and fretful. He was nursed for twelve months. Since weaning he has had everything that the family had to eat. He is active and lively. Appetite fair; bowels constipated; has occasional attacks of vomiting; sleeps pretty well, but is restless.

About four months ago the eruption began on chin. It is a typical pustular eczema located upon chin, the whole of which is covered with thick crusts. There is a small circumscribed patch of pustular eczema on both cheeks, and upon left foot.

Treatment.—The mother was directed to remove the crusts by soaking them with olive oil, and after their thorough removal to apply ungt. zinci oxid. by spreading it thickly upon old linen and binding it upon the chin. The same to cheeks and foot. Internally, potass. acetat., dose gr. v. t.i.d. in solution. Regulate diet, confining it to meat soups, milk with and without bread, oatmeal, eggs, &c.; and stopping tea, coffee, beer, spirits, candy, cake, &c., either at meals or between them.

CASE 367. *Eczema infantile*. January 9th, 1882. Louis P., æt. 3½ months. Family history good. The child appears well nourished. He nurses and is given the breast whenever he cries; besides this he has about one-quarter of a cup of undiluted milk during the day. His appetite is good; bowels regular; he vomits occasionally; sleep is restless.

The eruption, which began three months ago, has the character of a pustular eczema with thick crusts, which, on being removed, leave a moist surface. It is located upon both cheeks, forehead and occiput.

Treatment.—Remove crusts by soaking them with olive oil, and apply ungt. zinci oxid. as in previous case, directing the mother to make a mask of white flannel, with holes for eyes, nose and mouth, and with this to retain the cloths spread with the ointment. Regulate the time of feeding so that the breast is given only at stated times, beginning with intervals of one and one-half hours, and working up gradually till three hours intervene between the nursings.

CASE 368. *Eczema et phtheiriasis capitis*. January 9th, 1882. Jas. G., æt. 4 years. Family history good. Up to three weeks ago the child was in good condition. His general health is good; he is lively and well nourished; appetite, bowels and digestion in good order. His diet, as usual in these cases, is bad. He is given everything that the family have, and eats a good deal of meat and sugar.

The eruption began three weeks ago upon the occiput, where pediculi abound. In a large number of cases occipital eczema is due to the irritation caused by these animals. The eruption in this case is of the papulo-pustular variety, and is found on the occiput and on the hands and legs.

Treatment.—For the pediculi soak the head with kerosene. For the eczema ungt. zinci oxid. and diet as in previous cases.

CASE 392. *Eczema capitis*. February 20th, 1882. Eva B., æt. 3 years. One and a half years ago child had inflammation of lungs, and since has had many attacks. Bowels regular; appetite good; sleeps pretty well; digestion good, as far as could be made out. Tongue clean. The child has four meals a day, with bread and butter between times, and is given tea and coffee. Three months ago eruption appeared on ear and spread over head. The mother was given "a white salve by the doctor," and as long as it was used the eruption did not show itself.

The eruption is located upon left ear and cheek, eyebrows and scalp.

Treatment as before.

CASE 385. *Eczema squamosum of palms*.—Feb'y, '82.—Mrs. B.—, æt. 27; married. The patient says that she has had eczema of different parts of the body since she was three years of age, generally becoming better in summer and winter, and worse in spring and fall. She suffers from pyrosis, and bowels move only twice a week. Urine normal. Has had three children. Has only menstruated twice in five years. On palms there are patches of dry scaly eczema.

Treatment.—Ungt. diachyle; rubber gloves; sal. Rochelle internally.

CASE 366. *Syphiloderma tuberculosum*.—Jan'y 9, '82. Mrs. O.—, æt. 36; German. Her husband, she says, is healthy, with clean skin. For past eight years she has had headaches every week. Eight years ago she had a severe sore throat for some five weeks. Two years ago a reddish eruption appeared on outside of hand and arm, from which it spread. She denies having had sore eyes, rheumatism, alopecia, &c. She has never been pregnant.

She is well nourished; a brunette; her tongue is coated. The headaches still come every week. She tires quickly from walking. Appetite poor; bowels constipated; sleep restless; menstruation regular.

Two years ago, after subsidence of the eruption mentioned above, the present lesions appeared. These consist in irregularly circular patches upon the right palm, left shoulder, and right knee the centre of which are composed of dark red, shining, infiltrated tissue, the circumferences of thick raised greenish crusts, and the edges of tubercles, the latter not being distinct on the palm.

Treatment.—Mercury and iodide of potash in syrup of sarsaparilla co. Locally, a 10 % oleate of mercury. Jan'y 16th.—The oleate had irritated skin too much, and was stopped, the mixed treatment being continued. Feb'y 20th.—Patient has steadily improved, the tendency to scaling and the infiltration being almost gone. To-day the patient complains that the

medicine during the past week has made her sick at the stomach. Stopped the mercury and gave her potass. iodid., a saturated aqueous solution of salt being given in a half tumblerful of Vichy water; dose, gr. xv. t. i. d.

CASE 381. *Syphilitic Ulcer*.—Feb'y 6, '82.—Jas. D.—, æt. 4½. Boy's mother came to us last November with a tubercular syphiloderma, probably in the second year after syphilitic infection (see case reported MED. GAZ. Jan'y 7, '82, fol. 7, case 352). Mother states that the child has always been delicate. When 1½ years old a lump came under chin, which broke; no disease of the mouth at the time. When a little baby, had aphthæ, with a "scalding" on nates at the same time. Appetite good; bowels regular.

The child preceding this one is 17 months older and perfectly healthy. The child following this one was two years younger, and died at one year and five months.

About two weeks ago mother noticed a "blister" upon dorsum of child's left foot over base of little toe, which spread. To-day we find at the same location an oval, punched out ulcer about one inch in diameter, with dirty, yellow, offensive discharge, and red, thickened edges. The skin over forehead is very thin, and the veins show plainly. The corners of the child's mouth are puckered, and upon the palmar surface of left thumb there is a scaly patch.

Treatment.—Small doses of mercury, the bichloride being given.

CASE 369. *Rosacea*.—January 26, 1882. Bella M., æt. 35, single. Patient says that her mother and brother had similar eruption. Her general health is good. Her face has always flushed easily. Her complexion is sallow. Tongue coated; appetite good; bowels regular; does not complain of any digestive trouble; sleeps well; menstruation regular and painless.

The eruption began about one year ago, and has not been well since. It becomes worse when she is nervous. It is located upon both cheeks, chin and forehead, forming distinct, markedly hyperæmic patches, with uneven surfaces, studded with large papulo-pustules.

Treatment.—Local application of sapo viridis and alcohol, equal parts. Internally, Scott's emulsion of cod-liver oil.

CASE 390. *Rosacea*.—February 20, 1882. Kate G., æt. 40, married, German. Has had thirteen children. Drinks beer regularly, but no wine or spirits. Bowels regular; tongue slightly coated. She tires easily.

The disease began three years ago on chin. Every three months she thinks that the face becomes worse. The lesions are located on chin and nose, the cheeks and forehead being free. The affected parts are very hyperæmic, and there are many hard papules.

Treatment.—Locally, ol. cajeput. Internally, rhubarb and soda.

February 27.—Improved. Repeat ol. cajeput on one side, and on the other an ointment of hg. chlor. mit. 3; hg. ammon. 2, and vaseline 20.

CASE 370. *Lupus vulgaris*.—Jan. 23rd. 1882.—Martha G. æt. 65, married. General health good, appetite good, bowels constipated, tongue slightly coated; some pyrosis; sleeps well.

Four years ago she first had a lupus patch on the side of the nose, which healed up after a short time under treatment. About one year ago it appeared again on the left side of the nose and has been growing larger ever since. The lesion is located upon the

bridge of the nose on the left side, is oval in form, about the size of a silver quarter, and consists of a thin crust in the middle and a red and thickened edge. On raising the crust an ulcerating surface is exposed.

Treatment.—The patient was directed to remove the crust and to apply powdered sulphate of zinc. Jan. 30th.—The sore is now clean, and has taken on a healthier action. The zinc was suspended, and the ulcer filled with iodoform, and covered with absorbent cotton made air tight and adherent by flexible collodion. Feby. 10th.—The dressing, which had adhered nicely, was to-day removed and the ulcer was found to be almost healed. The dressing was repeated. Feby. 14th.—Upon removing the dressing the ulcer was found to be entirely healed. The patient was directed to use vaseline.

CASE 373.—Jan. 23d, 1882. *Lichen pilaris* and *Pityriasis Capitis*.—Fannie McD.,—æt. 22, single. The patient has had epilepsy for past three or four years, the attacks coming now at intervals of three or four months. For these she is taking bromide of potash. For a number of years she has been troubled with dyspepsia. She has a good deal of headache and tires easily. Tongue is coated brown; appetite fair; bowels constipated; considerable pain after eating; sleep heavy and dull; menstruation regular but very painful.

For four years her skin has been rough and scaly. At present there is abundant pityriasis of the scalp. On passing the hand over the extensor surfaces of the extremities, they are felt to be rough; inspection shows that they are studded all over with minute whitish elevations about the roots of the hair, and that the skin while normal in color is scurfy.

Treatment.—She was directed to take a hot bath every night, and while in the bath to use as a shampoo to head and body equal parts of *sapo viridis* and alcohol. Upon leaving the bath vaseline was to be rubbed into the affected parts.

CASE 378.—*Psoriasis*.—Jan. 30th, 1882, Lizzie W.,—æt. 11.—Child is anæmic and has been so for past year. Tongue clean; appetite poor; bowels regular; has a good deal of pain after eating; sleeps well.

Six months ago eruption began upon the knees and elbows.

The lesions are located upon both legs, anterior and posterior surfaces, below knees and upon them, and upon right elbow; they consist of roundish patches about the size of a ten cent piece, which are covered with the thick white scales peculiar to psoriasis.

Treatment.—Internally, \mathcal{R} sol Fowlerii 2 parts. Aq. cinnamom. 20 parts. Dose half a drachm t. i. d.; and locally ac. chrysophan. pur. covered with collodion, on one leg, on the rest of cajeput.—Feb. 7th, Improved. Repeat.

HOSPITAL RECORDS.

PRESBYTERIAN HOSPITAL NEW YORK.

STRICTURE OF ŒSOPHAGUS—ISCHIO-RECTAL ABSCESS).

SERVICE OF

C. K. BRIDDON, M. D.

CASE I.—*Stricture of Œsophagus (Epithelioma)*.—M. ., æt. 40; native of Ireland; married; housewife; admitted Feb'y 20, '82. Family and previous history negative.

Present History.—About six months ago patient first began to have difficulty in deglutition; this has gradually increased, but she has been able to swallow solid food until two months ago; since that time she has been able to swallow all liquid food until four days ago, when it became impossible for her to swallow at all.

Suffers from paroxysms of coughing, with mucopurulent expectoration.

On Admission.—Emaciated; aphonia almost complete; paroxysmal hawking cough, with mucopurulent expectoration. Dysphagia marked. General condition very poor. Cannot swallow anything, even smallest quantity of liquors.

Physical Examination.—Moist rales over almost whole of right lung. Small œsophageal bougie detects obstruction 11 inches from the mouth. Very small œsophageal tube passed into stomach and $\frac{3}{4}$ viij. milk and $\frac{3}{4}$ j. spts. vini gal. and one egg given. Cough and distress controlled by hypodermic administration of morph. Cold wet cloths to abdomen. Allowed to hold ice in mouth.

Feb. 23rd.—Failing. Rales extending. Cough and dyspnœa extreme. Owing to distress the feeding by œsophageal tube was omitted.

Feb. 25th.—Œdema of lungs for past 12 hours. Died at 12 midnight.

CASE II.—*Ischio Rectal Abscess*.—R. L., single, æt. 18, waiter. About three days ago began to have pain in ischio-rectal region, most painful on movement from the bowels.

On Admission.—Circumscribed, hard tender spots about two inches in diameter just external and to left of anus. Deep fluctuation. No pus discernible in fœces.

Feb. 23rd.—Free incision made with curved bistoury and $\frac{3}{4}$ ii fetid pus evacuated. Careful exploration with probe and finger both in cavity of abscess and per rectum fails to discover any communication into the gut. No hemorrhage of any account. Cavity three inches deep stuffed with carbolized plug.

March 5th.—Plug removed to-day for third time. Cavity filling up rapidly, granulation rather pale. Balsam Peru added to other dressing.

March 13th.—All healed. Discharged cured.

FORMULARY AND POINTS IN PRACTICE.

IN OBSTINATE DIARRHŒA.

\mathcal{R} Cupri sulphat.
Extract opii.....a a grs $\frac{1}{4}$
Extract gentianæ.....q. s.
Make a pill. To be taken three or four times a day.

IN CHRONIC BRONCHITIS WITH PROFUSE EXPECTORATION.

\mathcal{R} Tinct. scillæ.....3 $\frac{1}{2}$ -2
Acid. sulph. aromatici.....3 i
Liq. morph. hydrochlorat.....min. 30
Infus. cascarillæ ad..... $\frac{3}{4}$ 8
Mix. One-sixth part three times a day.

IN THE CATARRH OF INFANTS WHERE THE SECRETION FROM THE BRONCHIAL TUBES IS EXCESSIVE.

\mathcal{R} Aluminis.....gr. 30
Syrupi rhœados.....3 3
Aquæad. $\frac{3}{4}$ 2
M. Sig. One teaspoonful every 2 or 3 hours.

AN EXCELLENT REMEDY FOR THE RELIEF OF NIGHT SWEATS IN PHTHISIS AND OTHER EXHAUSTING DISEASES.

- ℞ Zinci oxidi.....grs. 12
 Extract. conii *vel* hyoscyami.....grs. 18.
 Make a mass. Divide into six pills and order one to be taken every night at bed-time.

ENEMA TO CHECK THE PURGING IN TYPHOID FEVER.

- ℞ Olei terebinthinæ.....min. 30
 Tinct. kino.....3 2
 Extract. opii fl.....min. 10-25
 Mucilag. amyli.....℥ 2
 Make an enema.

IN PASSIVE HEMORRHAGE.

- ℞ Aluminis.....grs. 100
 Syrup. rhæados.....3 6
 Infus. rosæ acidi.....ad ℥ 8
 Mix. Sig—Two tablespoonfuls every six hours.

ASTRINGENT IN SEVERE HÆMOPTYSIS.

- ℞ Plumbi. acetat.....grs. 5-10
 Extract opii.....grs. $\frac{1}{4}$ - $\frac{1}{2}$
 Confect. rosæ gallicæ sufficient to make two pills.
 To be taken every two or three hours with the following draught, viz.:
 ℞ Acid. acet. dil.....3 2
 Aquæ cinnamomi.....3 6

ACID BATH USEFUL IN CASES OF INACTIVE LIVER.

- ℞ Acid. nitrici.....3 12
 Acid hydrochlorici.....℥ 1-3
 Aquæ calidæ.....C. 30
 Mix.—To be prepared in a wooden bath. The patient should remain in from ten to twenty minutes.

SELECTIONS FROM JOURNALS.

SELECTIONS FROM CLINICAL LECTURES, DELIVERED AT THE LONDON HOSPITAL. BY JONATHAN HUTCHINSON, F.R.C.S.

PAPILLARY GROWTHS IN THE LEGS PRECEDING CANCER.

We had, some time ago, through the kindness of Dr. Stephen Mackenzie, several opportunities of seeing a man who has had some very peculiar growths on the lower part of one leg. There are several patches of a papillary growth close together, and almost confluent, a quarter of an inch or more in height. On their surface, the papillary outgrowths are covered by a dirty scab; but if we detach or break this, you can easily separate the wart-like growths from each other, and put them apart in low rows, like standing corn. They do not readily bleed, and the skin from which they grow is somewhat thickened. The main patch is over the shin, in front of the lower third of the leg, and is nearly as large as the palm of the hand; but near it are several much smaller ones. The first stage of the condition is a thickened and rough purple, not unlike a spot of psoriasis, but, with more evidence of growth. The patient is a man near 50, and he has had the condition for two or three years. It gives him no trouble. He has no enlarged glands.

I do not think that there can be much hesitation in considering that the disease as a variety of papilloma which, if not actually cancerous at present, is in a fair

way to become so. At any time we might find the glands enlarged, or that the patch had begun to ulcerate. It is mainly in the absence of any ulceration that the picture of epithelioma is as yet incomplete. There is no telling how long or how short may be the period during which its appearance will be delayed. I have urged the man to at once submit to radical treatment, that is, to have the growth freely destroyed by chloride of zinc paste.

Dr. Mackenzie's patient shows an extreme condition of what, in lesser forms, I have often seen before. An old man, aged 74, came to us at the Hospital for Skin-Diseases, last week, who had exactly the same thing, but in smaller areas and with less elevation. They had been present two years, and, excepting that they itched excessively, gave him no trouble. In him, one of the patches was at the back of the leg; most of them, however, being in the usual position—over the shin. I will ask you to note, in connection with this fact, that the patches are almost always multiple—a chief one and several smaller near to it. Although I ask you to believe that this disease is really a close ally of cancer, yet I do not know that I can quote any complete case in which I have watched patches which began as I have described, and progressed to an undoubtedly cancerous termination. But I have seen several which were cancerous, in which there was good reason to believe that the beginning had been like them. It is only in the legs of aged people that we see such growths; and the liability to them seems to begin at the cancerous time of life. Often some local irritation, eczema, etc., precedes their formation. Not unfrequently, during periods of some years, the patches remain without warty or papillary outgrowth, simply hard rough patches, well circumscribed, and showing on the surface the little points or buds from which future growth is to take place. In this stage they resemble condylomata, excepting in their hardness and roughness. Often, however, they are not round, but in long streaks and very irregular. Probably they are, for the skin of the leg, what the rodent cancer is for the upper part of the face—the form of malignant action which it is most prone to take on. I have not often seen them on other parts of the body.

ON THE PECULIAR CONDITIONS ASSUMED BY MALIGNANT DISEASE OF THE SKIN IN DIFFERENT REGIONS.

You are aware that it is a doctrine upon which I often insist, that certain differences in the clinical characters of malignant disease of the skin are to be observed in relation with the different surface regions of the body. The upper part of the face grows rodent cancer; the lips, ears, prepuce, and vulva, a form of common epithelial cancer, which rapidly causes gland disease; the scrotum, the soot-wart, which, after perhaps a long duration, becomes epithelial cancer of the common type; on the legs, as we have just seen, a hard dry papillary growth often precedes cancerous action, and the latter is usually slow and for long, without gland-mischief. I wish now to ask your attention to certain peculiarities of malignant ulceration of the skin of the abdomen. I have at present in my recollection four or five cases, in which cancer of the skin of the middle of the trunk showed conditions of which I have never seen the exact parallel elsewhere. In all, the ulceration progressed slowly during many years, caused but little pain, and produced no gland-disease. In these features, you will say that it resembles rodent ulcer of the face; but the sores produced did not look exactly like rodent ulcer. The amount of induration in the borders and base are

far greater, the destruction as a rule, deeper, and above all, at no part nor in any case was the well known sinous roll of superficial induration simulated. It would appear that the subcutaneous cellular tissue is involved much sooner and more extensively than in rodent ulcer. There is little or no tendency to healing, which is the superficial form of rodent ulcer we so often see; nor, I believe, is the earliest stage of the disease like that of rodent. Although, however, I insist on these minor differences, it is to be admitted that the disease is, after all, the same, modified only by difference of place. This, indeed, is my assertion. I do not recollect to have ever seen the common type of epithelial cancer (wart-growing and causing gland-disease early) on the skin of the chest or abdomen. I exempt the umbilicus from this remark, for here the ordinary type may occur. Well marked rodent ulcer, as denoted by its curled, semi-transparent, hard edge, may now and then occur on the middle of the chest, but I have never seen it on any other part of the trunk. The disease of which I speak is most intractable, and, as far as I have observed, recurs immediately after removal. I treated, twenty years ago, a woman aged 50, with a sore of this kind in the middle of her back. I was sanguine, and she was patient, and I think it was freely cut out twice, and three or four times most liberally destroyed with chloride of zinc paste, but without the slightest benefit. As soon as the sore was nearly healed, it recurred. Almost at the same time, I had under care an elderly gentleman who had an enormous malignant ulcer on the side of the chest, which had been gradually spreading for ten years or more. He was cachectic from the discharge and bleeding, but had no gland-disease; more recently I saw a gentleman from Birmingham, a patient of Mr. Horatio Wood's, who had an ulcer a foot long, and so deep that a fist might have been put into it at any part, and which yet did not prevent him from attending to his professional duties. It had existed for many years, and was supposed to have begun in a mole or nœvus near the navel. He was fifty-seven years of age, and in fair health, although the discharge was profuse, and there were frequent hemorrhages.

At present, I have under observation an old gentleman, aged 70, in whom, a little above the cleft of the nates, there is on one side a patch of the size of a halfpenny, which might at first sight be mistaken for psoriasis. When you touch it, however, it is found to be exceedingly hard, much more so than psoriasis ever becomes. It is not ulcerated as yet, but it has attained its present size in less than six months, and already near to it are some smaller patches, which look as if they might develop in the same way. I much fear that the disease is malignant, and this suspicion had been entertained by high authorities before I saw the patient.

ON FRACTURE OF THE PATELLA: THE CAUSE OF DISPLACEMENT OF THE FRAGMENTS, AND THE MEANS OF REMEDYING IT.

Most of you are, I doubt not, aware that I hold definitely, respecting fracture of the patella, that the separation of the fragments is not caused by the muscles. Repeated observations have convinced me that it is always caused by, and in proportion with, the effusion into the joint. If there be no effusion, there is no separation. The muscle is not a piece of India-rubber to contract, and remain contracted, as soon as one end is loosened. It is as easily capable of relaxation as it is of contraction, and, when the limb is at rest, it is always relaxed. When relaxed, there is no reason why the upper fragment of the broken bone

should not come easily down to the other; and, in point of fact, in cases where there is no effusion, it does do so. I have demonstrated this repeatedly. You may then clear your minds of all misconceptions as to spasm of the muscle being the cause of persisting separation. Such spasm may, of course, cause separation at the moment of the accident; but, as soon as the limb is at rest in bed, its agency ends. I repeat, you will always find the difficulty of approximation in proportion to the amount of swelling. This fact kept in mind, the means of treatment will be evident. Get rid of the effusion as quickly as possible. The effusion may be of blood, or it may be of synovia, or perhaps, most commonly, of a mixture of the two. If it occurs immediately after the injury, then it is probably blood; and these cases are the most difficult to treat, for blood is more slow of absorption than synovia. The treatment is, however, the same for both, and consists in the vigorous use of cold. The ice-bag sedulously applied, or a spirit lotion so freely used, that evaporation is constantly going on, are the best measures. You must not be content, unless the skin over the whole part of the knee be kept quite cold. It is of great importance that absorption should be rapid and complete. If you can get rid of the swelling in a week or ten days, you will have a good chance of bony union, or of union so close that it is equivalent to bony. I believe that we get bony union in nearly half our cases. Our measures are, then, ice for a week or ten days; then oblique strips of plaster, which fix the fragments, and catch in notches in the splint. We avoid all complicated forms of apparatus, and hold, respecting Malgaigne's hooks and some similar contrivances, that they are barbarous and dangerous. The limb is, of course, always extended, from first to last, on a long and broad back splint, with a thick cushion and side notches. The limb is kept a little elevated—not with any design of relaxing muscle, but because the knee-joint permits slight overextension, which is attained by elevating the leg. By this means, the lower fragment passes a little higher up than it would otherwise do. When, at the end of ten days, you have brought the fragments together, cover the whole joint with bandages, and never touch the bone again until six weeks are accomplished. If you have it uncovered, some zealous and inquiring dresser is almost sure to examine the bone to see if it be uniting, and, by such examination, he prevents the progress of union. You must leave it in faith, and even at the end of the six weeks must still be very careful, and on no account make lateral movements. The union is still weak, and will easily break down. Be content if you find the fragments close. At the end of six weeks or two months, we usually allow the patient to get up, but he is always provided with a patellar apparatus before doing so. Note that the object of this apparatus is not to hold the fragments together, which it could not do, but to prevent flexion of the knee, which would drag away the lower fragment. It also serves a secondary purpose, of giving lateral support to the joint. If an apparatus be not at hand, a gum-and-chalk or plaster-of-Paris case will serve the purpose quite as well. I usually advise our patients to wear the apparatus for six months; and then, if the knee feel strong, to throw it aside. Although we aim at bony union, and, I believe, often obtain it, yet I am by no means an enthusiast as to its advantages. It curiously happens that those who have fibrous, or even ligamentous union, not unfrequently walk better than those in whom it is close. This I have proved by examination of many patients, at long intervals after the

accident; and it is a very strong reason for declining to resort to any mode of treatment involving risk. A curious and unexpected result, to which I often ask your attention, is, that the quadriceps muscle usually undergoes, during the six weeks' rest, very decided atrophy, sometimes attended by a certain degree of contraction. This, in cases in which the bone is closely united, much limits the movements of the joint. I well recollect one man, whom we treated with great care, and in whose bone ossific union occurred. Two years later, he fell and broke the same bone again. His surgeon, on the second occasion, was not so successful as I had been; and when, a year later, I had an opportunity of examining the joint, I found considerable separation, the union being only by ligament. To my chagrin, however, the man stated that the second accident had enabled him to walk much more easily, for, during the interval between the two accidents, his knee had always felt stiff and awkward.—*Brit. Med. Jour.*

LIVING DEATH-GERMS.

So far as the researches of Pasteur on pebrine are concerned, we have not yet seen the way to any means of safety from the contagious diseases which affect human beings. We cannot kill all diseased persons in order that we may get rid of the disease-germs within them.

Even more remarkable than his investigation of the silkworm disease was Pasteur's investigation of the disease known as splenic fever, which affects horses, cattle, and sheep on the Continent. In the rapidity of its action this disease (known also as "anthrax," and "charbon") resembles the black plague. In bad cases death ensues in the course of twenty-four hours. In less severe cases the creature attacked suffers greatly, and retains the traces of the attack during the rest of its life. It is stated that between the years 1867 and 1870 no less than 56,000 deaths occurred among horses, cattle, and sheep in the district of Novgorod, in Russia, while 568 human beings perished, to whom the disease had been somehow communicated. In France the disease is very prevalent, and many proprietors have been ruined by the entire destruction of their flocks and herds. It is said that a malady which occurs among the woolsorters at Bradford (often proving fatal) is a modification of anthrax communicated by the wool of sheep which have suffered from splenic fever.

In 1850 MM. Rayer and Devaine discovered minute transparent rodlike bodies in the blood of animals which had suffered from this disease. Koch, a German physician, then scarcely known, showed that these objects are of a fungoid nature, and traced the various stages of their existence. Cohn obtained similar results, as did Ewart in England. The growth of the disease-producing rods, as studied under microscopic examination, is as follows: First, germs of extreme minuteness are seen in the form of simple tubes with transverse divisions; next, minute dots appear, which enlarge into egg-shaped bodies lying in rows within the tubes; lastly, the rods break up, freeing the ovoid germs. It has been shown that "the minutest drop of the fluid containing these germs, if conveyed into another portion of cultivated fluid, initiates the same process of growth and reproduction; and this may be repeated many times without any impairment of the potency of the germs, which, when introduced by inoculation into the bodies of rabbits, guinea-pigs and mice, develop in them all the charac-

teristic phenomena of splenic fever, "Koch further ascertained," continues Dr. Carpenter, from whom the above passage is quoted, "that the blood of animals that succumbed to this disease might be dried and kept for four years, and might even be pulverized into dust, without losing its power of infection."

Pasteur's first steps in inquiring into this disease were characterized by the same keenness of judgment which he displayed in investigating *pebrine*. He ascertained that "charbon" would often appear in its most malignant form among sheep feeding in seemingly healthy pastures, where there were no known causes of infection. He found on inquiry that animals which years before had died in those regions had been buried ten or twelve feet below the surface, so that it seemed obvious they could have had nothing to do with the reappearance of the malady. But in inquiries in such cases as these, Pasteur has taught us that what obviously cannot be has an unfortunately perplexing fashion of turning out to be precisely what is. He quickly became persuaded that in some way the germs of the disease supposed to be buried out of the way three or four yards beneath the soil reached the surface and originated fresh attacks of the "charbon" pestilence. He found in earth-worms—those creatures which Darwin has recently shown to be such important workers in the earth's crust—the cause of the trouble. He was ridiculed, of course. But he has a troublesome way of turning ridicule upon those who laugh at him. Collecting worms from pastures where the disease had reappeared, "he made an extract of the contents of their alimentary canals, and found that the inoculation of rabbits and guinea-pigs with this extract gave them the severest form of 'charbon,' due to the multiplication in their circulating current of the deadly anthrax-bacillus" (this is the pleasing way science has of describing the disease-germs), "with which their blood was found after death to be loaded."

Professor B. Sanderson, discovered another way in which "anthrax" has been communicated. He found that herds affected with it had been fed with brewers' grains supplied from a common source, "and on examining microscopically a sample of these grains, they were seen to be swarming with the deadly bacillus, which, when once it has found its way among them, grows and multiplies with extraordinary rapidity."

But now comes the point which renders this inquiry important to ourselves. The poison germs are small, visible only in the microscope, but they are fungoid, and the laws of their growth and development are as determinable (with suitable care) as the laws of the growth and development of the monarchs of a forest. Now whatever lives and grows and produces creatures after its own kind, whether animal or vegetable can be cultivated. With due care and watchfulness it may be altered in type and character, just as the wild plants of the hedgerow may be altered into plants producing the flowers and fruits of our gardens and hothouses.

It has been by Pasteur that the conditions of the mitigation of the poison by culture have been most completely determined; so that the disease produced by the inoculation of his "cultivated" virus may be rendered so trivial as to be scarcely worth notice. His method consists in cultivating the bacillus in meat-juice or chicken-broth, to which access of air is permitted while dust is excluded; and then allowing a certain time to elapse before it is made use of in inoculation experiments. If the period does not exceed two months the potency of the bacillus is little dimin-

ished; but if the interval be extended to three or four months, it is found that though animals inoculated with the organism take the disease, they have it in a milder form, and a considerable proportion recover; whilst if the time be still further prolonged, say to eight months, the disease produced by it is so mild as not to be at all serious, the inoculated animals speedily regaining perfect health and vigor."

Now, if we consider what has been done in this case we shall recognize the probability, if not the absolute promise, of protection being obtained against some of the most terrible of the diseases which affect the human race.

ARTIFICIAL RESPIRATION IN STILL-BORN CHILDREN. MEDIASTINAL EMPHYSEMA AND PNEUMOTHORAX IN CONNECTION WITH TRACHEOTOMY: AN EXPERIMENTAL INQUIRY. Read before the Royal Medical and Chirurgical Society. By FRANCIS HENRY CHAMPNEYS, M.A., M.B.

The observations were made on twenty-six still-born children who had never breathed, the subjects of experiments with regard to artificial respiration (*Med.-Chir. Trans.*, vol. lxiv, 1881). The method of experiment consisted in connecting a tube filled with water, by means of a flexible tube, to a cannula tied into the trachea, and using the various manipulative methods of artificial respiration. In one case, the tube was filled with mercury. A table was given showing the methods employed, the maximum inspiratory effect produced (in inches of water measured in the V-tube), and the necropsy. The subjects available for the inquiry were twenty-one in number. Mediastinal emphysema occurred in seven, or one-third of the whole number. Pneumothorax occurred in five out of these seven cases, but in no other. In three cases, it was found in the right pleural sac, in one in the left, in one in both. In no case did the rupture occur into the better expanded side of the chest. Colored injection was found to be drawn from the region of the wound down to the trachea (left unopened) into the anterior mediastinum. The explanation offered was that, in case of obstruction of the air-passages (as by the weight of a column of fluid), the air followed the route of least resistance. If rupture occurred from the mediastinum into the pleural sac, the less expanded side was the side usually chosen. It was, however, pointed out that a thickened pleura overlying a less expanded lung might determine rupture into the other or better expanded pleura. Mediastinal emphysema was shown to have specifically followed Schultze's method of artificial respiration, which was sudden in its action. Reference was made to necropsies after tracheotomy at St. Bartholomew's and the Children's Hospitals. Pneumothorax was shown to be a secondary consequence of mediastinal emphysema. Emphysema of the neck was shown to be due to opposite conditions, but these observations probably explained its occurrence during labor. The following practical conclusions were drawn. 1. Emphysema of the anterior mediastinum occurs in a certain number of tracheotomies. 2. It is often associated with pneumothorax, to which it stands in a causal relation, and pneumothorax may be the cause of death after tracheotomy. 3. The air is most likely to burst into that pleura of which the lung is the less expanded. On the other hand, pneumothorax of course helps to collapse the lung. 4. The

route selected by the air is the space beneath the deep cervical fascia. 5. Emphysema of the anterior mediastinum may or may not be associated with emphysema of the neck; but their causes are different, and the conditions of their production are opposite. 6. The conditions favoring the production of mediastinal emphysema are, division of the deep cervical fascia, obstruction to the air-passages, and inspiratory efforts. 7. The dangerous period during tracheotomy is the interval between the division of the deep cervical fascia and the efficient introduction of the tube. 8. The deep cervical fascia should on no account be raised from the trachea; the incision in it should not be longer than necessary in the direction of the sternum, and this should be particularly remembered during inspiratory efforts. 9. It will probably be found that the frequency of occurrence of emphysema of the anterior mediastinum depends much on the skill of the operator, especially in inserting the tube. 10. If artificial respiration should prove necessary, the tissues should be kept in apposition with the trachea, and any manipulations performed steadily and without jerks. 11. Schultze's method (which is otherwise unsuitable for the above purpose) is especially prone to produce emphysema of the anterior mediastinum. 12. These observations illustrate the fact that, apart from the question of tracheotomy, the inspiratory force of the thorax should be remembered in all operations near the root of the neck, and in the case of all collections of pus beneath the deep cervical fascia. In these cases, quiet respiration is essential for the safety of the patient; and vomiting, which begins with a sudden inspiration, is dangerous. 13. These observations may serve to illustrate the production of emphysema of the neck, etc., during labor.—*Brit. Med. Jour.*

ON THE GREAT FREQUENCY OF CARDIAC MURMURS IN THE PUERPERAL STATE: BEING THE RESULT OF WORK AT THE GENERAL LYING-IN HOSPITAL.—By ANGEL MONEY, M. D., (Communicated by DR. JOHN WILLIAMS.)

The observations were made last year (February to end of July), on 111 consecutive cases. Murmurs were heard in 84 cases, or about 75 per cent. The great majority of the murmurs were situate over the right heart. There were two cases of undoubted structural disease. The patients who had a murmur, for the most part, did not suffer from symptoms referable to the heart. The time of the murmurs was invariably systolic. The murmurs were divided into three sorts. The first (resembling an ordinary endocardial murmur) was most numerous; was of blowing character, soft, usually low or medium pitched, fairly long, and heard with almost every cardiac beat; it presented but little variation during the course of its existence. The number of these was 51; 36 were loudest over the tricuspid area; 8 over the mitral area; 6 over the pulmonary; 1 over the aortic. By tricuspid area, was meant the fourth left space just a little to the left of the left edge of the sternum. The murmur was conducted to a variable extent. The duration of the murmur was variable. Most commonly, the murmur was first heard a day or so after delivery. The mechanism of the murmur was discussed. The most novel and interesting, the "tricuspid" murmur, was believed not to be due to tricuspid regurgitation. No definite conclusion was come to as to the mode of production. The second kind (friction like) was almost absolutely

non-conducted, was heard over a very small area just above and to left of the ensiform cartilage. The murmur seemed superficial, was high pitched and stiff in quality; and was not audible with every cardiac beat. This sort was heard 29 times. The mechanism was probably endocardial friction. Its site would about correspond to the "white patch" which might be seen on the front of the right ventricle. The third kind of murmur, the least numerous, the most "capricious," was remarkable for its loudness, was very inconstant, *i. e.*, not heard with every cardiac beat, and was very transitory. Its area of audition was remarkably limited; it was most frequently heard over one or other base of the heart; it commonly went with an excited action of the heart associated with pyrexia or mental emotion. Besides pyrexia, excitement, and anæmia, this murmur was sometimes associated with *rales* in the chest and with a cough, but no sputa. The quality of the sound varied. In many cases it resembled the sound evolved when a piece of silk tightly stretched was scratched with the nail; or like the sound heard when pressure was made on the carotid in anæmic cases. Sometimes the sibilant *rale* was almost exactly imitated. The murmur was in all cases heard when the breathing was stopped. The mechanism of this murmur was discussed. The murmur was heard 16 times. The mode of generation of murmurs was regarded as very puzzling. All the murmurs of the second and third kinds, and the majority of the first kind, were temporary phenomena. Murmurs in the puerperal state were (for the most part) not indicative of the appearance of serious cardiac lesions. It came out as the result of observations; that the first cardiac sound was relatively loud over the right heart; that the pulmonary second sound was markedly accented; that the sensation communicated to the stethoscope was stronger than natural over the right heart. It was inferred that the right heart acted robustly during the puerperal state; and that the tension in the pulmonary artery was increased. Which of these factors preceded the other, or whether they appear simultaneously, was not answered. Attention was directed in every case to the occurrence of rheumatism in any shape; also to the quality of the blood; to the urine, body-heat, age, civil state, number of pregnancies. As a broad statement, it could be said that such observations were of negative value in the question of the mechanism of the murmurs. The murmurs explained or were to be explained by the normal cardiac and circulatory conditions which were believed to exist during the puerperal state.—Dr. John Williams had had many opportunities of witnessing Dr. Money's observations at the Lying-in Hospital. They were made with great care, and all doubtful cases were excluded. When the investigation was begun, no one supposed that murmurs would be found to such an extent as had been discovered. The explanation of their production was difficult. Some were very probably produced in the cavity of the right ventricle.—*Brit. ed. Jour.*

MEDICAL NOTES AND NEWS.

M. de Quatrefages affirms that M. de Lacerda, a Brazilian, has an antidote against the bite of serpents. Several members of the Medical Section of the Académie des Sciences propose that the discovery should be communicated to the Minister of Agriculture. As a preliminary step, a commission of inquiry is named—MM. Pasteur, Fremy, Quatrefages, Vulpian, Gosse-

lin, Bouley. The remedy is hypodermic injections of permanganate of potash on the seat of the bite, and wherever there is œdema.

The Municipal Council of Paris has revived the question opened by M. Bourneville last year, as to cremating the remains of bodies used for anatomical purposes at Clamart, and the practical school of anatomy. This is a question of some importance, as, during the year 1870, 3,675 bodies were sent to these two establishments. The then Minister for Home Affairs replied to the appeal made to him, that the existing state of the law did not allow him to authorize cremation. The new Prefect of the Seine will, it is stated, make a fresh representation to the minister on the subject.

Ataxy and Sewing Machines.—M. Octave Guelliott publishes, in the *Union Médicale*, an interesting paper on two cases of locomotor ataxy in women employed in working at sewing machines. In women predisposed to hysteria, working at the sewing machine seems to be, in certain cases, the occasional cause of the appearance of locomotor ataxy. The symptoms commence in the lower limbs, and follow an ascending progression. Lightning pains appear in the form of shooting pains, and traverse the limbs from below upwards. Improvement occurs when the patient rests, and may last a long time. Working at the machine by means of a treadle probably acts chiefly by the concussion, which is diffused throughout the spinal cord. Therefore, the continuous movement of the treadle is dangerous to the workwomen; and endeavors should be made to replace, in sewing machines, the foot-movement by some other mechanical motor power.

Headaches in Children.—Dr. Day read a paper on this subject before the Harveian Society. He alluded to the two great factors of headache from a pathological point of view, *viz.*, cerebral anæmia and cerebral hyperæmia. Attention was directed to the fact that the amount of blood in the brain was influenced by the fulness of the ventricles, the subarachnoid spaces, and the lymphatic spaces or sheaths surrounding the cerebral blood-vessels. Dr. Day said that habitual headaches in children indicated an irritable and exhausted brain; and if intellectual exertion were carried too far in such cases, mischief was likely to ensue. It seemed extraordinary that educated men who had the care of young persons should not see this danger in the anæmia produced by overstudy, the irritability and excitability of manner, and the impossibility of concentration necessary to the accomplishment of any undertaking. If intellectual exertion were carried beyond a certain point, the brain became anæmic, fatigued, and the nutrition in the ganglion-cells of the cortex became impaired, diseased, or in some way altered from health. The author referred to neuralgic or one-sided headache, which he said was more common in children than was generally supposed; it was not unfrequent in those of the neurosical temperament, whose nervous system was easily exhausted, and in those reduced by long and exhausting illness, bad food, and other causes. He had known headache in connection with chorea and dental caries. He next spoke of congestive, toxæmic, and organic headaches.—*Brit. Med. Jour.*

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EDITORIAL.

THE NIGHT MEDICAL SERVICE.

An Assemblyman has introduced at Albany a proposition for amending the Night Medical Service. It is proposed that lists of the registered physicians who are willing to answer night calls shall be posted in all hotels and drug stores as well as at police stations, and that the physicians may be called by any person without the intervention of the police. This change removes at once the Doctor's guarantee. As the law stands at present, if the patient is unable to pay, the Doctor may look to the city for remuneration; if the law were changed as proposed, the physician would again be often left to receive the thanks of his patient instead of the fee he is entitled to.

The meddlesome efforts that are being made to amend this service are turned we think in a direction which will interfere with its efficiency. Before the matter got as far as Albany it was endeavored to enlist the aid and sanction of the Medical Societies but both the Academy of Medicine and the County Medical Society virtually refused to indorse the changes proposed.

If it is desired to improve the service, these aspiring conservers of the Doctor's interest might devote

their now misspent energies to securing some recognition of the arduous services of the superintendent of the service who fulfils the duties of this office without remuneration. This is manifestly unjust and should be remedied.

There is a class of men who either on account of fancied grievances or with a transparent desire for notoriety, seek to overturn and pull down, without building better; who are in fact, image breakers or obstructionists. To this class we would say, let well enough alone.

BOOK REVIEWS.

Diseases of Women, including their Pathology, Causation, Symptoms, Diagnosis and Treatment. A Manual for Students and Practitioners. By Arthur W. Edis, M.D., London, F.R.C.P., M.R.C.S., Assistant Obstetric Physician to the Middlesex Hospital, Consulting Obstetric Physician to the City Provident Dispensary, late Vice-President of the Obstetrical Society of London, late Physician to the British Lying-in Hospital. With one hundred and forty-eight illustrations. Published by Henry C. Lea's Son & Co., Philadelphia. 1882.

It is seldom that we have read a book which fulfils so perfectly the purpose for which it is designed as the treatise before us. To present to the student and junior practitioner such an account of the diseases incidental to women as will prove a reliable, practical clinical guide, to enable those who from lack of time or opportunity during their student career, have neglected to make themselves familiar with this subject, to repair the omission has been the aim of the author.

This promise the book fulfils in the happiest manner. The story of the pathology, causation, symptoms, diagnosis and treatment of diseases of women is here so simply, so plainly, so graphically told, that the student cannot but read the book with the zest born of the consciousness that he is being constantly instructed, and will turn to it with increasing satisfaction when in practice he is baffled with the perplexities of diagnosis and the futility of highly commended treatment.

The illustrations are not numerous or elaborate, nor have they been inserted for pictorial effect. They are for the most part simple outline sketches which have the rather rare virtue of conveying a very accurate conception of the idea they are intended to illustrate.

Judged by the standard of practical utility and adaptability to the wants of those who are unfamiliar with the diseases of women and yet are called upon to treat them, this manual must be deemed a most valuable addition to the "working library" of the medical man.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK COUNTY MEDICAL SOCIETY, MARCH 27TH, 1882.

The President, Dr. F. R. Sturgis, presided. The minutes of the previous meeting were read and approved.

The paper of the evening, entitled
"OBLIQUITY OF THE PELVIS AND ITS TREATMENT,"

was read by its author, Dr. Charles F. Stillman, and discussed by Drs. Sayre, Roberts, Green, and others.

Dr. Stillman discussed in detail the pathology and etiology of obliquity of the pelvis, insisting on the necessity of recognizing this distortion as a primary condition, and treating it as such. He then described an apparatus he had devised for overcoming obliquity of the pelvis, and illustrated its application on the living subject, in conclusion citing the history of patients treated by this apparatus successfully.

The brace consisted of two segments, one for the pelvis, one for the thorax with extension joints, appropriate shoulder and hip straps, and permitting all necessary motion. It was so arranged as to secure any desired degree of elastic power without pushing the segments apart. It was light, comfortable, and above all effective in accomplishing the purposes for which it was designed.

If contraction of the muscles inducing the distortion was so marked that the weight of the limb was not sufficient to overcome it, a special apparatus to accomplish this end must be applied. The amount of flexion depended on the nature and duration of the case. Dr. Stillman believed that tenotomy permanently weakened the divided muscles, and that it was better first to exhaust mechanical means in the endeavor to make the weaker muscles equal the stronger, than by surgical interference to make the stronger equal the weaker.

He in conclusion exhibited two cases. *Case I.*—Boy æt. 15, healthy previous to January, 1876. At that time, when nine years old, had an attack of diphtheria, followed by paralysis and wasting of the left limb. The limb was shorter than its fellow, and on consulting his physician he was ordered to wear a high-heeled shoe on the affected side. This, however, only served to increase the deformity. The movements of the joints were normal, and there was no pain in the joints. The thigh was three and a-half inches less in circumference than on the sound side, the leg two and a-half, and there was two inches shortening. Dr. Stillman alluded to the difficulty in these paralytic cases of restoring nervous tone to the part. Surgeons were accustomed to order high-heeled shoes for such patients, not appreciating the fact that the curvature must be first reduced. *Case II.* was one of ankylosis of the hip-joint from gonorrhœal rheumatism. In both of these cases the apparatus described had been of marked service.

Dr. L. A. Sayre took exception to the views advanced in the paper. He would not regard the obliquity of the pelvis as a primary condition to which treatment should be directed. By equalizing the limbs the lateral curvature was instantaneously cured and sacro-lumbar curvature in the same way. Ankylosis could not be relieved except by making extension in the proper direction before any splint was put on. The kind of splint was not of so great importance. It was the principle which must be constantly borne in mind. If the complication producing the distortion were cured the distortion would correct itself.

Dr. Roberts said that he was very much pleased with the mechanical ingenuity displayed, but he considered the instrument faulty in carrying out the object for which it was intended. The zones were much too narrow to form a firm basis for mechanical force. The extension secured seemed all that could be desired. The apparatus could be improved by combining with it elastic tension. Dr. Roberts here illustrated a method of correcting sacro-lumbar curvature by a simple attachment to the ordinary plaster jacket. There were certain cases in which there was a lateral tilt; these could all be treated by a simple plan. A piece of perforated tin six inches long should be fixed

in the upper third of the back of the jacket and on this a steel plate soldered to which is attached a ring. A ring is also attached to foot and these two connected by an elastic band which is buttoned to the stocking. By this simple means, which is also adapted for cases of spinal curvature in which the belly projects abnormally, the muscles soon gain strength and lateral tilt is corrected.

Dr. Green said he had come to hear and see, not to discuss the paper. He had often noticed that there had been certain conditions about the back in hip joint disease which were remedied by the appliances in use. Very many cases of hip joint disease regarded as cured were not cured, the muscular contractility of the opposite side was not restored. The cases presented had interested him because they had been under his own observation. The question of obliquity of the pelvis and its cure by parallelism of the shoulders had not been presented to the profession before and deserved more consideration. Dr. Stillman had said in the paper all he (Dr. Green) wanted to say on this subject.

Dr. Stillman closed the discussion. The society then adjourned.

ORIGINAL ARTICLES.

ON THE PREVENTION OF VENEREAL DISEASES BY LEGISLATION.*

BY

ALBERT L. GIBON, A. M., M. D.,

Medical Director U. S. Navy.

MR. PRESIDENT AND GENTLEMEN: I shall attempt very briefly to suggest a scheme which has occurred to myself and my co-workers in the American Public Health Association, as a feasible method for limiting the spread of venereal diseases.

An exceptional experience first attracted my own attention to the ravages that are occasioned by venereal diseases. About thirteen years ago I became resident in the Eastern Hemisphere in a foreign community of which the majority were men unmarried or parted from their wives, but maintaining sexual relations with the women of the country. One third of the naval force on that station was poisoned by a disease which not only disabled them for duty entailing expense upon the government for their maintenance, return home, and subsequent care in Naval Hospitals until their final discharge, but unfitted them as members of even the humble class of society to which they belonged, husbands with whom no wife could safely consort, fathers who could bequeath only misery to their children. I had already learned to recognize syphilis as the one great deteriorating influence operating in every quarter of the world, on the personnel of the service to which I am attached. One man in every ten in the navy of the United States since 1873 has been disabled by some form of venereal disease, and one-tenth of the whole appropriation for the care of the sick has been consumed in the treatment of this class of preventable maladies. Nor is the percentage less in our army and in the naval and military services of other nations.

During the year just ended at least every sixth or

*Abstract of a paper read before the Medico-legal Society April 5th, 1882.

seventh man in the United States Navy every tenth and in the United States Army, among the negro troops, every seventh, and one in every four of the merchant sailors presenting themselves for treatment at United States Marine Hospitals and Dispensaries is affected with some form of venereal complaint.

The following table exhibits in juxtaposition the latest official reports of our own and foreign governments, respecting the prevalence of venereal disease among their naval and military establishments :

Service.	Year.	Force.	Total Sick from All Causes	No. of Cases of Venereal Disease.	Per 1,000 Of Force.	Of Sick.	Percent. of Syphilitic to Venereal.
American Navy.....	1880	9,003	13,387	1,330	147	99	42
American Merchant Service 1880-81.....	80-81		32,614	7,068		244	68
American Army (white)..	80-81	1,160	37,408	1,987	94	53	49
American Army (negro)..	80-81	2,344	4,650	345	147	98	67
British Navy.....	1879	44,745	40,976	6,274	140	125	41
British Army at Home..	1878	101,129		17,698	175		58
North-German Navy....	80-81	9,855	13,536	1,529	155	1113	42
Austrian Navy.....	80-81	7,664	7,919	867	113	109	49

The proportion of syphilitic to other venereal affections among the women of St. Petersburg is much greater, according to Schperk, among those not subject to disciplinary control or supervision.

In civil life estimates based upon the returns of charitable institutions give the alarming number of five to one as the proportion of private to public cases.

Dr. J. W. White, of Philadelphia, estimates that not less than fifty thousand people of all classes in that city are at one time affected by syphilis. The legitimate extension of these figures to the whole country develops an approximate aggregate of not less than two millions of the population at this moment suffering from complaints of venereal origin. The pseudo-moralist exclaims "Let them suffer the consequences of their sin," and if the sinner alone could be consumed in the fire he has kindled, there might be some pretext for the merciless doom, but the fire scorches and withers the innocent with the guilty. Many are innocent children and pure women, and it is for these helpless beings I invoke your active interference.

Six years ago, when I first took part in the deliberations of the American Public Health Association, I at once remarked that while every other enemy of the public health was arraigned and sentenced, not one voice was raised in denunciation of this arch fiend; and when I suggested that, of all sanitary bodies, this was the one whose duty it was to take action, I was urged not to offend the susceptibilities of the religious world by obtruding so unsavory a topic.

That our profession have not been more active in averting the dangers of this disease is because of the onerous nature of the practitioner's duties. As he grows older, too, the experiences of his youth fade in his recollection, and the lessening ardor of his own passions causes him to ignore the fierce play of those about him. He forgets the covert indiscretions of the boy on whom puberty has burst like the sunrise. His children attain maturity, and are still children in his sight.

No argument is required to convince an audience of this character of the fearful sapping of the vital strength of the nation which must result from the wholesale infection of its youth. No shallow sophistry and parade of platitudes will excuse the indifference of educated men to this great evil.

If it were possible to do away with prostitution, the piping voices that are protesting against the recognition of its existence might be listened to, but the

scarlet token in the window is still an ensign of the strange woman in every land, as when Rahab, the harlot, displayed it, and Tamar, who sat in the open place and enticed the fathers of Israel, will be sitting there when our grandsons shall themselves have grandsons. While praying fervently for millennial purity, it is the evil of to-day with which we have to deal. Popes, Emperors, and Kings have attempted the suppression of prostitution, and when all the powers of army, church, and State have failed, what can a few, however earnest, men and women hope to accomplish by moral suasion. There is scarcely a country in Europe in which the experiment of crushing it out has not been tried, but wherever the scarlet woman has been driven from her den, she has found lodgement in the homes of the people. While the moralist preaches the sanitarian must act. The sources of preventable disease whatever they are must be assailed.

(Dr. Gihon next gave an elaborate resume of the sources of acquiring syphilis by mediate contagion, quoting from the literature of this subject and illustrating by a narration of authentic cases the dangers of mediate contagion in manifold ways. Then refuting the idea that his descriptions were colored by fancy he narrates a case, reported to the Philadelphia County Medical Society by Dr. White, of a young English girl he was called to see in a house of prostitution, who had been plying her trade two or three weeks, receiving on account of her personal attraction, an average of six men during each 24 hours, and in whom he found a small painless sore at the posterior commissure of the vulva, and a few enlarged inguinal glands, and who did not follow the advice to abstain from intercourse. The sore healed, but six weeks later constitutional symptoms manifested themselves. Four young men came under his professional observation, all of them infected by this girl, all had indurated sores and constitutional syphilis, one of these infected the mistress of a friend and presumably the friend, the woman giving birth to a syphilitic child, a second syphilitized his wife, and a third fell into the hands of quacks and became a wreck. In the words of Dr. White, "It would be idle to speculate about the possible extent of the damage inflicted upon this community by this one woman. One thing, however, is certain, and that is, if by any means that sore could have been discovered within a day or two of its appearance, and that woman forcibly and peremptorily isolated, and kept so while she suffered from contagious lesions, most if not all of these endless and ever-widening series of evils could have been prevented." Dr. Gihon then continues: "Can that creed, or dogma, or religion hope to outlast its fanatical pretenders, which stays the hand outstretched to lift even an erring woman from the slough into which she has fallen, or holds back the youth from plunging headlong into it, which extenuates indifference or antagonism to whatever might have saved the life of a single human being.

What can we do to cripple this hydra? In eleven years according to the official statement of the Surgeon General of the Navy the amount of venereal disease on the Asiatic station has fallen from 425³ per thousand to 112¹ due to the examination of prostitutes practiced at Hong Kong and in Japan, and the seclusion of infected women in Lock Hospitals.

The working of the Contagious Diseases Acts in the Plymouth and Devonport districts, which includes a radius of ten miles from Plymouth and also from Dartmouth, has shown, that in fifteen years, in a single district, notwithstanding the normal growth of popula-

tion during that times, and the considerable territorial extension of the district during the last ten years of the period, that the effect of these acts has been to lower the number of inmates of houses of ill fame from 3,220 to 665, a reduction of eighty-two per cent. the number of prostitutes from 1,770 to 427, a diminution of seventy-six per cent. of brothel keepers from 579 to 108 or eighty-two per cent. and of children living in brothels from 662 to 124 or eighty-two per cent. and in this connection it will be observed that while the number of keeper's children has been reduced eighty-four per cent. that of the offspring of the women themselves has only fallen seventy-one, showing a relative increase in the proportion of child bearing women, itself an evidence of physical improvement. Finally instead of 209 females servants living in bawdy-houses in 1865, there were but six in 1880, and instead of 120 male dependants upon this nefarious occupation as pimps, crimps, and whore house bullies, there were but two.

In 1860 there were 369 cases of venereal disease, 183 of which were syphilis, among every thousand men in the British Army at home, while in 1878 there were only 133 per thousand of which 61 were syphilitics, at the stations protected by legislation, where the diseases were originally more rife. The diminution in the ratio of syphilis at stations protected by the contagious diseases acts has been almost double (76—41) that at places where there were no such regulations. Like testimony comes to us from another quarter of the world. What has occurred in Europe, Japan, and India has also resulted in America, the Lock Hospital system has resulted in a decided diminution of disease.

Medical officers of all nationalities, who have had professional cognizance of these diseases in every quarter of the world, are unanimous in approval of restrictive legislation.

So long as a class of women live by the wages of prostitution, they should be considered as offenders against society and public morality, whom it is proper to place under surveillance, and this involves systematic inspection and control, both of which are of great importance not only for the prevention of disease of which this unfortunate class are the propagators, but for the diminution and detection of other crimes of which they are often the abettors. Legal inspection in their case is also humane and expedient as affording them the means of escape from the peril of their miserable lives.

I ask your attention to the propositions we have submitted to the American Public Health Association, and which has received its endorsement, contemplating the classing of venereal disease with other contagious affections and its restriction by means precisely similar. Our conclusions were formulated in this resolution:

Resolved, That the American Public Health Association earnestly recommends the Municipal and State Boards of Health to urge upon the legislative bodies of this country the enactment of a law constituting it a criminal offence to knowingly communicate by any direct or indirect means a contagious disease, such as small pox, scarlet fever, or venereal disease, and giving to said State Boards of Health and to the State and Municipal officials under their control the same power in the prevention, detection, suppression, and gratuitous treatment of venereal affections which they now possess in the case of small pox, and other contagious diseases.

By direction of the Association, with a view to securing uniformity in legislation in the several States,

the Committee has been instructed to prepare draughts of a State law and Municipal ordinance calculated to secure these results, on which labor it is now engaged and in which purpose, gentlemen of the Medico-Legal Society, I have come to solicit your counsel and co-operation.

The following is the act reported to the American Public Health Association, by John Morris, M. D., of Baltimore, Md., on behalf of the Committee on prevention of venereal diseases.

AN ACT ENTITLED AN ACT TO PREVENT THE SPREAD OF CONTAGIOUS DISEASES.

ARTICLE I.—Be it enacted by the — of the — That any person within the limits of the state, who shall knowingly communicate or be instrumental in communicating by any direct or indirect means, a contagious disease such as small-pox, scarlet-fever, or venereal disease, shall be deemed guilty of misdemeanor and shall be subject upon conviction in any of the circuit courts of the counties of this state, or in the criminal court of the city of — to a punishment of six months imprisonment in the — of the state of —.

ARTICLE II.—*Be it further enacted*, That if any person being the owner or occupier of any house, room, or place, within the limits of this state having reasonable cause to believe any person therein to be affected with a contagious disease and fails to make that fact known to the proper health authorities he or she shall be deemed guilty of a misdemeanor and on summary conviction in one of the circuit courts of this state or in the criminal court of the city of — shall be liable to a penalty not exceeding one hundred dollars, or at the discretion of the judges of the circuit court of the state or of the judge of said criminal court be imprisoned in the county jail of the county in which conviction takes place, or in the city jail of — for any term not exceeding six months.

ARTICLE III.—*And be it further enacted*, That the State Board of Health with the approval of the Governor and the Health Board of the city of — with the approval of the mayor of said city shall have power to institute and carry out all suitable means to prevent the spread of diseases of a contagious character and may if deemed advisable remove to proper hospitals selected by them all persons suffering from contagious diseases, who neglecting proper precautions, imperil the health of the community.

ARTICLE IV.—*And be it further enacted*, That this act shall go into effect on the first day of —

DR. HAMMOND'S QUOTATIONS.

BY

THOMAS RYERSON, A.M., M.D.,

of Newton, N. J.

Fellow of the American Academy of Medicine, Fellow of the Medical Society of New Jersey.

Soon after the appearance in the December number of the *North American Review* of the symposium relative to the surgical treatment of the late President, contributed by Doctors Hammond, Ashhurst, jr., Sims and Hogden, I prepared a review of it, confining myself, however, principally to the article of Dr. Hammond, which advocated the views of a very small minority of the profession. This review attempted to deal with the whole article, both with the assertions

of its author and his method of supporting his views by quotations from received authorities.

But it proved impossible to bring this review within the limits afforded by the *MEDICAL GAZETTE*, where, on account of the very wide circulation of that journal, I desired it to appear. Since then I have been informed, by good authority, that a review of the symposium is about to be included in a thorough discussion of the whole subject of the President's case by an able writer, thoroughly competent and fully informed.

I propose, therefore, at this time simply to examine his style of quotation. He lays principal stress upon two points, viz., that the wound was not necessarily mortal, and that it was not as thoroughly probed as it might and ought to have been within the first forty-eight hours. Hence, he says, resulted erroneous treatment, based on ignorance of the direction and extent of the wound—ignorance which was unpardonable in view of the so-called plain principles of surgery asserted by himself, and based upon imperfect quotations from others. Hence, says he, resulted a septic condition, and thence thrombosis or embolism of the heart (which, however, can be demonstrated not to have existed), and this, he says (and not the traumatic aneurism which the autopsy demonstrated and he denies), caused the lamented President's death.

As to his quotations in proof that the wound was not necessarily mortal. I will admit that with the facts that were before him he probably dealt justly with the case of gun shot wound of the spine which Dr. Hamilton exhibited in the New York Pathological Society, which was then thought to be of the body of a lumbar vertebra, and to be upon the high road to recovery. But the man was borne upon the pension rolls and died without an autopsy being had. This was in the days of biennial examination of pensioners, and therefore the man probably died from his wound. And besides; the pension office records show that the examining surgeons did not think the body of the vertebra to be wounded.

The case introduced from Jobert de Lamballe's treatise on gun shot wounds, published in Paris in 1833, I happen to know from inspection is incorrectly represented. Lamballe does in effect advise (page 123) against considering such wounds as necessarily mortal, and he cites a case that fell under his eye in the Hospital Saint Louis, of which he was an *interne*, in the days of Richerand. Doctor Hammond quotes him as follows:—"The man had a fracture of the lumbar region and complete paralysis * * * but he was almost entirely cured." Lamballe does not say this. He says " * * * the patient left the hospital after a long time it is true, but approaching a complete cure. His gait was still halting, but yet he could use his legs; though it is certain that results of this kind are very uncommon." He probably left the hospital as Hamilton's man left the pathological society, to be borne on the pension rolls, until he was borne to his long home.

Dr. Hammond, quoting from the treatise on gunshot wounds by Surgeon-General Longmore of the British Army (page 76), makes him to say: "Balls have been known to pass through the bodies of the vertebrae and apparent cure follow." But he omits what Longmore immediately adds—"But as such patients in military practice, are usually invalidated out of the service as soon as they have left the hospital, no opportunity is afforded for observing the consequences which ultimately ensue." So with Lamballe's and with Hamilton's case. But we can trace the latter to pro-

bable death; the former was lost to view like Longmore's. Longmore had good reasons to doubt the ultimate recovery of such cases. For he had previously said (on page 75) what Hammond does not quote, as follows: "In the Surgical History of the Crimean Campaign twenty-seven cases are noted where vertebrae were fractured, eight being without apparent lesion of the spinal cord, and nineteen with evident lesion. Of these, twenty-five died, and two, in which the fractures were confined to the processes of the vertebrae, survived to be invalidated." He says on the same page, that only six subjects of spinal gun-shot wounds, received in the Indian mutiny, survived to reach England; two were wounds of the sacrum, and the remainder only of the spinous processes of the vertebrae. But the most significant fact in Longmore's book is that whilst he devotes a large proportionate space to the treatment of gun-shot wounds of all other regions, he is absolutely silent as to the therapeutics of spinal wounds.

The quotation from Prof. Lidell, who during our war had charge of Stanton General Hospital at Washington (See *Am. Jour. of Med. Sciences* for Oct., 1864), is incorrect and misleading. Dr. Hammond says: "Lidell, one of the most distinguished of our military surgeons, during the late civil war, states that of ten cases of gun-shot fractures of the bodies of the vertebrae, without injury to the cord, our recovered." He would thus have us believe that Lidell was giving results, as from "our late civil war." But Lidell expressly states in the sentence from which Hammond draws the foregoing (page 317), that he is speaking of the experience of the Crimean Campaign; and further, he does not say "four recovered," and there stop, but that "*four recovered*, so far as to be invalidated." And further; only three lines below, Lidell continues, still regarding the Crimean war: "All the fractures of the vertebrae were promptly fatal, except two among officers and two among the men, all of which were either fractures of the transverse processes of the neck, or the spinous processes only." These were doubtless the very cases Longmore speaks of, the four which Lidell had also just before said "survived so far as to be invalidated."

Why did not Dr. Hammond go directly to our own "Medical and Surgical History of the War of the Rebellion"? First: "Circular No. 6, War Department, Surgeon General's Office, Washington, Nov. 1, 1865: Lippincott & Co., Philadelphia, 1866," (pages 20, 21,) says, regarding gunshot wounds of the back and spine: "In this class have been included the fractures of the vertebral column which were *not complicated with wounds of the chest or abdominal cavity*." (The italics are mine.) "Of 187 recorded cases of gunshot fractures of the vertebrae, all but seven proved fatal. Six of these were fractures of the transverse or spinous apophyses. The seventh was that of a soldier wounded . . . in 1863, by a musket ball which fractured the spinous process of the fourth lumbar vertebra and penetrated to the vertebral canal. The ball and fragments of bone were extracted at a Nashville Hospital. The patient was transferred . . . finally, on July 26th, 1864, to Quincy, Illinois. The last report states that he was likely to recover." Here we lose his history, just where Lamballe and Hamilton and Longmore lost their cases, leaving all of them invalids. We trace Hamilton's through the pension office to the grave. And there is nowhere a case recorded within my knowledge, of final recovery of gunshot wound affecting the bodies of both a dorsal and lumbar vertebra just at the solar plexus and semilunar ganglion,

nor even of any case of fracture of a vertebral body. In the table on page 452 of the Medical and Surgical History of our War, Surgical Volume, Part I, which sums up 642 cases of all kinds of wounds, slight or severe, of the spine, according to regions, and gives a ratio of fatality for the whole of 55.5 per cent., only three cases of wounds of the dorsal and lumbar region combined are given, and these were all fatal.

So much for the authorities Dr. Hammond has quoted that such a wound as the President's was not necessarily mortal. He equally fails to sustain by quotations his other assertion that the wound was improperly probed.

Want of space forbids the reproduction of his citations from Longmore and Gross, in regard to early and thorough probing, with the patient in the position in which he received the wound. In this case that would have required the placing of a man, who was thought to be dying from shock, in an erect posture. He quotes from pages 52 and 53 of Longmore. But he ignores what Longmore further says on page 55, viz.: "The above directions for examining wounds apply more particularly to such as penetrate the extremities or extend superficially in other parts of the body; where a missile has entered any of the important cavities, search for it is not to be made, but the surgeon's attention is to be directed to other matters of more vital importance." The President's wound was followed into the abdomen, and then left in order to attend to the, vitally important matter of tiding over the "shock."

Dr. Hammond then introduces a passage from page 351 of the 1st vol., 5th edition, of Gross's Surgery, but in such a way as totally to misrepresent what that distinguished surgeon teaches regarding such a case as that of the lamented Garfield. For on page 394 Gross further says:—"No sensible person ever thinks of searching for a ball in any of the large cavities of the body; such a procedure would be sure greatly to increase the dangers of the accident, and cannot be too pointedly condemned."

Lamballe was in Dr. Hammond's hands, and quoted on the point of mortality; and he says on page 209, in regard to penetrating abdominal wounds;—"A ball should be regarded as lost, whenever it is beyond the aperture of entrance." Again, on the same page, speaking of a ball within the abdominal cavity;—"It is important never to introduce a sound into the wound, to ascertain its position, because grave inconveniences might result—thus recent adhesions might be broken up, or probably a clot closing an opening into a blood vessel."

I close with a citation from page 100 of Longmore, which of course ought to have been known to Hammond:—"In the general treatment of penetrating wounds of the abdomen by gunshot, the surgeon can do little more than to soothe and relieve the patient by the administration of opiates, and to treat the symptoms of inflammation, when they arise, on the same principles as in all other cases."

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK.

INGUINAL HERNIA—HEATON'S OPERATION.

SERVICE OF

ROBERT F. WEIR, M. D.

A. D. V., æt. 45, native of Holland, single, a waiter, admitted to Hospital March 26th.

About three months ago patient noticed a pain in

right inguinal region, while lifting or walking. Subsequently a small tumor appeared, which has never caused much inconvenience. The tumor has never occupied the scrotum. The patient cannot assign any exciting cause.

Admission.—In right inguinal region is seen and felt a small tumor, size of a small hen's egg, occupying the canal, giving cough impulse, resonance on percussion, and easily returned to abdominal cavity. Inguinal canal very large.

March 30th.—Heaton's operation performed, the following solution being used:

R Fld. Ext. quer. alb. 3 ss
Alcohol absolut.
Squibb's ether. aa 3 j
Morphia sulph. grs. ij

April 2d.—Thickening can be felt in inguinal canal.

April 8th.—Patient has a small encysted hydrocele of the cord on the right side, which has existed for twenty-five years. This morning it was tapped with a hypodermic syringe and a small amount of tr. iodini injected.

Microscopical examination shows the fluid to contain many spermatozoa.

April 14th.—No return of hernia and canal is well filled up. Discharged cured.

COLLEGE OF PHYSICIANS AND SURGEONS— CLINICAL COMMENTS ON EPITHELIOMA OF LIP—HYPERTROPHY OF THYROID GLAND—NECROSIS OF THUMB—SUBLIN- GUAL CYST—PHIMOSIS IN THE AGED.

BY

ROBERT F. WEIR, M.D.

Attending Surgeon New York and Bellevue Hospital, Etc., Etc.

CASE I.—Epithelioma of the Lip—when not to operate. The patient has been subjected to two operations, the last being performed in August 1881, at the Roosevelt Hospital. The cancer was first removed by an elliptical incision. The wound healed promptly. In the second operation a portion of the jaw was taken away, but the recurrence was prompt. There is now an ulceration extending along the floor of the mouth in the median line but it does not markedly involve the glands under the jaw. On the inner aspect of the bone running well up the ramus we can feel considerable swelling, which indicates that the whole of the periosteum is involved in this trouble.

This man, gentlemen, affords a text upon which it is worth while to dwell for a few minutes. The tendency in the surgical mind at the present day is to believe that we can in a certain few cases get rid of and cure cancer. Dr. Gross of Philadelphia, demonstrated pretty clearly with respect to cancer of the breast that about one out of every ten or eleven might expect after a thorough operation to have life prolonged beyond eight or ten years. Paget has stated that a prolongation of life beyond this period might be considered as a cure of cancer. The prolongation of life to be expected in epithelioma of the lip is much greater than that enunciated for the breast. Volkmann has presented a number of cases of extirpated cancer of in which he has been able to bring about what he claims to be a cure. When we meet with tumors of the throat which are apparently movable it is often difficult to remove them satisfactorily owing to their deep attachments and hence recurrence is often met with here. To afford a respite or to be

able to talk of a cure in these and like cases it is necessary to cut freely and beyond the ordinary limits of the new growth.

CASE II.—*Enlargement of Thyroid Gland.*—Female, æt. 30, has had a swelling in the neck, for past four years. Has had three children. She thinks this swelling came on during gestation of the first child.

You observe, gentlemen, as she swallows that the tumor rises. This shows that the tumor is connected with the trachea or larynx. It in fact is a central goitre or bronchocele. The cause of this has been assigned to living in the depth of valleys and drinking snow water. The absence of sulphates in the water has been attributed by some to be the cause. In reality we know very little about its causation. This enlargement is either due to a simple hypertrophy of the gland or to the formation of cysts in the substance of the gland. Where the median portion is involved it is not so apt to increase to a large size. This mass has an elastic feeling and from the absence of pain I believe it to be a general glandular hypertrophy and is a growth which does not demand for its relief a surgical operation, but can be relieved by means of substances injected into it. The Germans are very prone to inject into a glandular bronchocele the tincture of iodine. Fluoric acid has been administered successfully by the mouth and also by injection by Troakes of London. I have had an encouraging experience with the tincture of iodine. Carbolic acid has been used but it sets up an inflammatory action and sometimes gives rise to poisonous effects. Then it makes a fibrous hardening along the side of the puncture that remains for an indefinite period of time. Occasionally tumors situated centrally like this are presented in young children. Such a one of large size was removed about two years ago at the Roosevelt Hospital, which was as usual attached to the trachea, causing considerable bleeding when the final point which held it to the deep tissues was divided. It is a question whether it is due to the tumor itself pressing upon the recurrent laryngeal nerve or to atrophy and collapse of the trachea itself, that reflex symptoms of dyspnoea show themselves occasionally. The latter view must be held in mind in manipulating or in operations on goitres. Should failure occur by the treatment by injections and should the patient be annoyed by pain or by the deformity the tumor can be removed. Arsenic topically and internally is only to be recommended in carcinomatous or sarcomatous tumors.

CASE III.—*Necrosis of the Thumb.*—Patient last November had a swelling of the last phalanx of his thumb. It was red and painful. A poultice was then applied until the swelling opened and discharged. Since then the opening has healed and the finger contracted in consequence of the inflammation which occurred, and which resulted in a necrosis and disappearance of most of the bone. It is inadvisable to amputate a finger when the distal extremity is in a state of necrosis. It often happens that an incision made early saves the bone, or if the bone is removed early that it is reproduced from the saved periosteum. This is rare, however. The same rule applies to a necrosis of the second phalanx. Here, in a second case, we have an inflammation of slow progress which had resulted in marked flexion of the finger, with partial dislocation of the damaged joint. Two things can be done here: Either divide the flexor tendon or excise the joint itself. If you excise one or both joint ends, you can sometimes get the fingers straightened and occasionally secure a useful false joint at that point. I think this is a case

eminently suitable for such a procedure. This has been satisfactorily accomplished a number of times by Dr. Post of this city.

CASE IV.—*Sublingual Cyst or Ranula.*—The patient, a female, æt. 25, has been annoyed for the last two months by a swelling that appears frequently in the mouth on the left side. It stays there several days, and discharges a thick clear fluid. It then fills up again from the floor of the mouth. On opening the mouth and having her raise her tongue, I see to one side of the frænum a slight projection at the outlet of Wharton's duct. I run my finger along the course of the duct to ascertain the cause of this obstruction. For these mucous tumors in this region may be due to closure of the ducts of the sublingual or submaxillary gland or to the gland of Rivini. It can sometimes arise in the bursa of the geniohyoid muscle or the bursa of Fleischmann. The fluid found in this bursal cyst is much thinner than that obtained from a salivary obstruction, but the peculiarity is, that it will come on with great rapidity and disappear with equal rapidity. The cause of obstruction in the glandular variety is sometimes a calculus of carbonate of lime, formed in the substance of the gland probably from some slight inflammatory action, and which attains sometimes the size of a large pea and gives rise to a good deal of pain, acting just like a calculus in other parts of the body. Sometimes these ducts are plugged up by foreign material, as a wire or bristle of a tooth brush, which excites inflammatory action. Had this woman presented herself when the tumor was present, we could determine better what was to be done. I feel carefully along the course of the ducts. The treatment is either to inject tincture of iodine or to take out a little piece of the projecting wall by raising it up with a tenaculum and snipping off a portion with curved scissors.

CASE V.—*Phimosis in the Aged.*—Patient is 58 years old and has a recent phimosis following several attacks of balanitis. A commencing phimosis in a man of advanced years without venereal lesion is not very rare. It occurs from a variety of causes. The most common cause in such a person is inflammation. He is annoyed by a great deal of itching under his foreskin from the accumulation of irritable secretions, which is not unfrequent in a gouty subject. In addition to the gouty diathesis, diabetes, or sometimes a neglect of cleanliness, cause the parts to become inflamed and to thicken until at last you have a phimosis resulting, which aggravates the trouble by preventing the parts from being properly washed. The treatment consists in making a dorsal incision and splitting the prepuce; then to prevent further trouble it is advisable to dust the parts with tannin once or twice a week. You may use a saturated solution of boracic acid or a solution of carbolic acid 1 to 40 over the parts, to bathe the parts after previous cleansing.

CORRESPONDENCE.

THE DE QUINCY HOME, FORT
WASHINGTON, NEW YORK CITY,
MARCH, 19, 1882.

To the Editor of the MEDICAL GAZETTE:

DEAR SIR—In a late number of your valuable journal I notice amongst the Book Reviews a notice of a work by one F. Heman Hubbard on the opium, alcohol, chloral, chloroform, bromide and kindred habits, that

is so manifestly incorrect and calculated to mislead that I beg of you sufficient space to state some of the truths in the matter. Your reviewer must have been in a great hurry and simply glanced through the work, for from cover to cover it is filled with the veriest trash and is wholly unworthy of a place in medical literature. Glaring errors in grammar and spelling on the part of a medical writer are sometimes excusable, if the author presents matter new and important, or his work shows the result of extended research. This book has no such excuse. Not only is the subject matter void of anything new, barren of all original research, not even stating facts well known at the present day, but he avoids all reference to the work of others, leads the unsophisticated reader to believe that he is a pioneer in this special field, makes statements that are in some instances loose and in others wholly incorrect and is ungrammatical to the highest degree.

Thus at p. 3 (introductory) we find him saying: "By the first decided effects of the drug the nerve's periphery is played upon," &c. "Nerve's periphery" is a favorite expression with this author, occurring many times throughout the book. At page 5 we see, "The opium superinduces a thickened state of the fibrin and brings about an accumulation of effete matter, which renders functional action through the medulla oblongata slow and laborious, and creates a demand for water by drying the mucous coats of the mouth until the constituent parts of the blood are made normal again by the free consumption of water," &c. This sentence speaks for itself.

Quite in keeping with this is the statement at p. 6, that the habitual use of opium drives the victim to either idiocy or death, also that during the eruptive fevers the habitue's desire for opium is in no way diminished. This is far from being the truth. At p. 8 he speaks of the sudden death of an habitue from *valvular insufficiency caused by sudden shock*, while at p. 10 he tells us that "The internal organs of secretion are contracted." At p. 11, he speaks of *pruitus* of the nose and lips. At p. 13, while comparing the physiological effects of opium and alcohol he makes no mention whatever of the interesting experiments of B. W. Richardson, of London, England, upon this point. At p. 16, we find *abcess* for abscess and *cicatix* for cicatrices and the expression "abcesses become indolent and are slow to heal, often exciting atrophy of the muscles to follow."

At p. 85 he makes the following statement that in the face of Levenstein's experiments and the well known theory of Pfluger is simply absurd and finds its basis in the authors prolific imagination: "The action and influence exerted by opium over the menstrual functions are rich in physiological suggestions. The woman consuming twenty grains of morphia per day will menstruate once in eight months on an average. Yet she is susceptible of impregnation with the same degree of certainty as are women free from the habit, a fact which demonstrates an interesting truth. No catamenial fluid is discharged, yet the ovules, or germ cells, present themselves with unvarying regularity, proving by their ability to become fecundated, that it is a normal manifestation." Whereas, the fact is that impregnation without menstruation, in these cases, is extremely rare, and abortion in any case is the rule, while total sterility is present in 95 per cent. of all cases where the drug has been used for any length of time. At p. 96, we learn that "the vomiting of phthisis denotes peripheral irritation of the nerves." At p. 111, we find "*squamaus* crusts."

The chapter on opium smoking is filled with errors,

and conclusively proves that he is not at all familiar with the subject.

In the chapter on "The Hypodermic administration of Morphia" no mention, save an incorrect description of what follows the puncture of a vein, is made of the not uncommon accidents and sudden deaths incident to this manner of using the drug.

His chapters on the chloral, chloroform, bromide and hashisch habits are woefully incomplete and his suggestions for their treatment as well as that of the opium habit, is quite old and without the merit of the more recent plans of treatment.

His definition of delirium tremens and his remarks on alcohol are so crude and incomplete as to shame a first year student. Here, too, he wholly ignores the labors of others, no reference whatever being made to the literature of the subject.

At p. 161 we find "*pertusions*" and "*sluffing* ulcers" spoken of.

At p. 202 the following absurdity finds space;—"While not possessing the active powers to produce evil results that bromide of potassium has when habitually used, chloral hydrate is in a peculiar manner treacherous," etc.

At p. 204 a similarly absurd statement is made with regard to chloral insanity.

At p. 256 we find him speaking of drugs that "by their tonic action give tone to the liver and spleen, *keeping their secretions relaxed*." We would like to know what he refers to as the secretion of the spleen—melancholy, after Shakespeare?

At p. 257 and elsewhere we find amyl nitrite spoken of as nitrate of amyle and at p. 250, the word anai-phrodisiac.

The proper treatment of chloroform collapse and opium narcosis find no place in his pages.

I have thus pointed out many errors but in reality only the more prominent ones. Unless it was to please his enemy (after the wish of Job) no one who reads this work and knows anything about the subject can find an excuse for its having been written. The only use to which it could be put with advantage, would be as a convenient exercise book for schools, the scholars finding abundant opportunity to convert errors of grammar into fair English and correct misspelled words.

Very respectfully yours,
H. H. KANE M. D.,

FORMULARY AND POINTS IN PRACTICE.

A VALUABLE CAUSTIC.

Take half a fluid ounce of sulphuric acid and saturate it with sulphate of zinc previously dried and powdered.

Sir James Y. Simpson recommended that this caustic should be used by dipping a pen in it and then drawing lines across the tumor so as to eat through the skin in a few minutes. The fissures thus made are to be filled with the paste, renewing the scratching and caustic every day or two. In this way five to eight days may suffice for the removal of a good-sized tumor. By this combination we can penetrate deeply, also without hardening the parts and without fear of producing hemorrhage.

IODINE PAINT VERY USEFUL IN MANY CHRONIC PAINS.

- R Iodini.....grs. 40
 Pot. iodidi.....grs. 30
 Spts. vini rectificat..... $\frac{3}{4}$ 1
 Mix. To be applied with a camel's hair pencil.

Two or three applications of the following at intervals of eight or ten days will frequently effect a cure in ringworm:

- R Iodini.....grs. 120
 Olei petrolei albi..... $\frac{3}{4}$ 1
 Mix. To be applied with a firm brush.

Croton oil liniment to produce rubefaction and a pustular eruption where counter irritation is required for the relief of diseases of internal organs:

- R Olei crotonis.....min. 30
 Olei olivæ..... $\frac{3}{4}$ 2
 Mix for a liniment.

DIAPHORETIC IN SEVERE CATARRH WITH SORE THROAT.

- R Potass. nitratis.....grs. 60
 Vel potass. citratis.....grs. 120
 Vini ipecacuanhæ..... $\frac{3}{4}$ 2
 Syrup hemidesmi..... $\frac{3}{4}$ 1
 Decoct. hordei.....ad O 1
 Mix. One small teaspoonful to be taken every two or three hours.

IN PNEUMONIA AND MANY OTHER ACUTE INFLAMMATIONS.

- R Potass. nitratis.....grs. 120
 Liq. amm. acetat.....3 18
 Spt. ammon. aromat.....3 3
 Tinct. aconiti.....min. 30
 Aquæ.....ad $\frac{3}{4}$ 8
 Mix. One sixth part every four or six hours.

AN IMPROVEMENT ON THE ORDINARY DOVER'S POWDER.

- R Pulv. opi.....
 Pulv. ipecacuanhæ.....aa gr. 1
 Potass nitrate.....grs 8

Make a powder to be taken at bed time when indicated.

SELECTIONS FROM JOURNALS.

BULL ON THE OPERATIVE TREATMENT OF DISEASES OF THE LUNGS.

Dr. Edward Bull of Christiania has published in the *Nordiskt Medicin. Arkiv*, Band xiii, Haft 3, an interesting contribution to the literature of surgical interference in certain diseases of the lung. He is convinced that in this matter medicine will gain much from surgery, when sufficient material has been collected to allow rules to be laid down as to the conditions in which the operation should be performed. He relates two cases which came under his care in the hospital at Christiania.

The first case was one of gangrene of the lung in a female servant aged 23. In November, 1880, she had putrid bronchitis; and, in the middle of December, infiltration limited to the anterior part of the upper lobe of the left lung. She was admitted on December 30th. On January 2d, 1881, there was tenderness without redness or swelling, limited to a circumscribed spot in the fourth intercostal space, outside the nipple.

On the 4th, effusion in the lower and posterior part of the left pleura commenced, and steadily increased. An exploratory puncture made on the 8th in the fifth intercostal space yielded serum, containing a considerable quantity of blood and numerous round cells. On January 19th, the pleural effusion had greatly diminished. Anteriorly, the percussion-sound was dull from the lower edge of the second left rib to the fifth, between the sternum and the axilla. Strong percussion over the tender spot yielded a cracked-pot sound, accompanied by gurgling. The sputa were gangrenous. An exploratory puncture over the tender spot gave exit to a sanguineo-purulent offensive fluid; while a puncture below the left angle of the scapula yielded clear yellow serum—the product of the pleural effusion.

The case was thus one of circumscribed gangrene of the upper lobe of the left lung, lying very near the thoracic wall, with coincident pleuritic effusion; the two being completely separated by pleural adhesions. On January 20th, there was infiltration around the point in front where the puncture had been made; and the skin of the left side of the chest as far as the neck was œdematous. On the 24th, an incision 3 centimetres (1.2 inches) long was made, and behind the nipple was found a cavity containing two or three tablespoonfuls of foetid pus. The base of this cavity was formed by the fourth and in part by the third and fifth intercostal spaces; and, at the bottom of the cavity, the beat of the heart could be observed. An incision 1 centimetre long was made with a blunt forceps in the fourth intercostal space, just outside the apex of the heart; and through this opening broken up spongy tissue could be felt with the finger. The part was carefully washed out with carbolized water, and a drainage-tube was inserted. In the evening, there was some hæmoptysis. After this, the patient's condition improved rapidly for some days; the sputa were diminished in quantity, and inodorous; the discharge from the wound was slight. Then followed again some hæmoptysis, with considerable pyrexia, and infiltration in the posterior part of the left lung, and the sputa again became foetid. In the middle of February, she was convalescent; and, after remaining at rest in the country through the summer, returned to her duty in good health in the autumn.

In contrast to this case, Dr. Bull relates the following. A woman, aged 54, of feeble constitution, had, on April 2nd, 1881, pleuro-pneumonia of the lower lobe of the right lung; and, on the 6th, there was infiltration of the upper lobe of the left lung. On the 13th, the sputa began to be foetid. Doubtful physical signs of a cavity in the anterior part of the upper lobe of the left lung were developed. In the night of May 10th, the patient awoke suddenly with a feeling of suffocation, and, after expectorating a large quantity of foetid pus, rapidly died. At the necropsy, the left lung was found to be adherent to the pleura through its whole extent. Immediately beneath the pleura, separated from it only by a thin layer of lung-tissue, was found a cavity between the first and third intercostal spaces, containing foetid sanguinolent pus. An abundant quantity of the same substance was also found in the pharynx, larynx, trachea, and large bronchi. Dr. Bull remarks that an operation would have been easily performed in this case, and would at least have prolonged life for some time. The layers of the pleura were adherent, and the abscess was comparatively superficial. The question of operating was discussed; but there appeared to be no immediate danger, and the diagnosis was

somewhat obscure; the abscess-cavity, which was nearly full, giving no distinct signs. An exploratory puncture would have aided the diagnosis, and would have been made if the patient had not unexpectedly died.

The literature of the subject, Dr. Bull remarks, is as yet very scanty. Even in such recent works as Ziemssen's *Handbuch der Speciellen Pathol. und Ther.*, Gerhardt's *Handbuch der Kinderkrankheiten*, and Leyden on Pulmonary Gangrene and Pulmonary Abscess in Volkmann's *Sammlung Klinischer Vorträge*, there is no mention of the possibility of operative treatment of diseases of the lung. A Polish author, L. Radek, has described the case of a man, aged 44, who was brought into hospital suffering severely from dyspnoea. Two large communicating abscesses were found in the neighborhood of the right nipple. When pressure was made on them, the dyspnoea was increased and pus was expectorated. The case was, however, believed to be one of empyema communicating with a bronchus. An incision was made, and a large quantity of pus escaped; the cavity was washed out with carbolic acid. Relief followed for twelve hours; but, after this, acute pleuritis of the left side set in, and the patient soon died. The necropsy showed that there was no empyema, but a large abscess of the lung.

Dr. Bull refers also to the papers on operative treatment of diseases of the lung published in English medical journals by Dr. Theodore Williams, Dr. Cayley, M. Johnson C. Smith, Dr. Douglas Powell, and Mr. Lyell. [Connected with these is also the case of Dr. Fenger. See *London Medical Record*, Aug. 15, 1881.]

The author makes the following comments on the artificial puncture of a pulmonary fistula. The pathological changes in the lung which may indicate such an operation, are cavities of all kinds; such as limited gangrenous foci, pulmonary abscesses, phthisical and bronchiectatic caverns. The first two may be completely healed if the loss of substance be not too great and if the remaining parts of the lung be sound or capable of healing; with large cavities, a permanent fistula perhaps cannot be always avoided. Life may be preserved for a long time in cases of considerable gangrene and of large pulmonary abscesses in many cases, where a pus-secreting permanent cavity is periodically emptied by coughing. It must, however, be distinctly better for these patients that the cavity should have an opening of discharge through the chest-wall, and that the air-passage should remain free; the constantly threatening decomposition of the contents of the cavity can thus be best obviated. Both gangrene and abscess of the lung may indeed heal without operation; but Dr. Bull is of opinion that an operation should be performed whenever possible. Delay only reduces the patient's strength, and favors the extension of the local disease. Even if death should at last follow the operation, it would still be a palliative measure.

Phthisical and bronchiectatic cavities are probably less often amenable to surgical treatment, and the indications for operation are much more difficult. As in such cases there are usually several cavities, and, in addition, a progressive constitutional disturbance, one or two openings in the chest-wall can scarcely be of much advantage; it is only in single large cavities with stagnating contents, the evacuation of which by coughing distresses the patient, that an operation can be of use. In cases of phthisical cavity, a permanent fistulous opening must be expected; in bronchiectasis, the operation may be followed by obliteration of the cavity and radical cure.

In order that pulmonary cavities may be capable of being operated on, they must, Dr. Bull says, be superficial; the situation of deeply seated cavities cannot be determined with sufficient accuracy, and they cannot be reached without danger. Adhesion of the pleura over the cavity is evidently of the greatest importance; but it may be difficult to ascertain whether such adhesion exists. [Fenger and Hollister recommend the introduction of a needle as a means of diagnosis; if there be adhesions, it is unaffected by respiration; if no adhesion exist, it is moved synchronously with the breathing.] If the disease be not running a very rapid course adhesion may be waited for. When the course of the disease is rapid, especially in gangrene, the surgeon must expect to find the pleural cavity open. Dr. Bull does not find in this an absolute contra-indication to operation when danger to life is imminent. He advises that in such cases an opening should be made in the chest-wall over the cavity; if adhesions be altogether wanting, pneumothorax follows; and if then the gangrenous cavity burst into the pleural sac, a counter-opening must be made, and the case treated as one of empyema. If there be pleural adhesions, but not over the cavity, a canula may perhaps be introduced into the diseased portion of lung and allowed to remain there; if this fail, the case must be managed on the principles of operation for empyema.

When the pleura is adherent, the operation is simple. An exploratory puncture is usually free from danger; in cases where a cavity is distended with fluid, puncture is absolutely necessary; in empty cavities, the aspiration-syringe will draw off gases, perhaps having a fœtid odor. When adhesion is absent, or where its presence is uncertain, and there is no danger in delay, an attempt may be made to produce adhesions by perforating the chest-wall with caustics.

Rigorous antiseptic proceedings during operation appear to Dr. Bull unnecessary, inasmuch as it is not possible to prevent the air of the room from entering through the air-passages. Irrigation of the cavity must be done very carefully, so as not to produce either irritation or hæmorrhage. Caution is also necessary in the use of drainage-tubes, especially in gangrene of the lung, where frequently there is no special cavity, but only a mass of more or less broken up lung-tissue. In chronic phthisical caverns and abscesses, on the other hand, there is generally a cavity into which the drainage-tube may be inserted. Resection of a rib may be sometimes necessary in order to render falling in of the chest-wall possible; just as in empyema.

Dr. Bull believes that the time is not distant, when the formation of an artificial fistulous opening will be regarded as a legitimate, though rarely indicated, operation in diseases of the lung.—*London Med Rec.*

DIVORCE AND MENTAL ALIENATION.

MM. Blanche, Charcot and Legrand du Saulle have been heard by the commission on divorce now sitting in Paris, for the purpose of recording their opinion on the question whether insanity should rank amongst the reasons for divorce. A writer in the *Gazette Hebdomadaire* for February 17th, who signs himself "A. D.," states that they answered the question in the negative sense, with some reservations; which, however, he does not specify. The writer approves of this conclusion, and goes on to state his reasons as follows: The most general consideration to be brought into relief is, that insanity is a disease; and that no disease, even impotence, is a reason for dissolution of marriage. The lunatic is a man suffering in his moral

and intellectual health, as others suffer in their physical health. He deserves the same or even greater care; only there may be need to take precautions against the effects of his mental loss of balance; for which, however, there is no need either of divorce or separation. In the second place, chronic insanity, although often incurable, is not necessarily so; and it would be difficult to imagine a more cruel and unjust situation than for a married person to return to the domestic hearth after an unexpected recovery, and to find the other party to the contract in the bonds of a fresh marriage. The form of dementia known in France as *folie circulaire* frequently yields these surprises; and we are told that M. Blanche cited a remarkable example before the commission, in which the insanity had lasted sixteen years. General paralysis, it is true, is incurable; but it will not be denied that it may show such long and complete remissions that the most experienced practitioners may be inclined to consider them definitive; and that, in any case, the patient must be restored to his or her family. As to those cases in which the mischief makes almost continuous progress, and distinctly authorizes a fatal prognosis, M. Charcot is stated to have laid down the dictum that the only conduct to be prescribed to families is to redouble every possible attention, and to have patience. As to epilepsy, nothing is more common, especially in young persons, than to meet with it limited to one or two attacks, never to show itself again. It is these cases specially which Foville thought were connected with the eruption of the large molars or wisdom teeth. There are epilepsies from worms; and the author cites the case of a librarian in whom the attacks entirely disappeared during the twelve or fifteen years he lived after evacuating a tænia. The writer of the article, whence we take these considerations on an interesting and important social question, points out that it is by no means uncommon to meet with persons sufficiently wanting in the moral sense to speculate by marriage on the diseased condition of their fellow-creatures. Those affections which are slow in presenting their true character, but are not unfrequently recognizable in their early stages, as phthisis and insanity, are particularly adapted to this kind of calculation. The prospect of divorce would be yet another encouragement, and so much the more tempting, so far as regards dementia, that it would be much more easy to accomplish an act of spoliation in the case of a person of weak intellect after marriage.—*Brit. Med. Jour.*

HOURLY CONTRACTION OF THE UTERUS TREATED WITH NITRITE OF AMYL. BY FANCOURT BARNES, M.D., M.R.C.P.

I was called, at ten o'clock in the morning on February 28th last, by one of the midwives of the Royal Maternity Charity, to a patient with retained placenta. On my arrival, I found that the patient, a secundipara, aged 22, had been delivered naturally at three o'clock in the morning of a living female child. The midwife stated that she sent for me, because she had been unable to deliver the placenta. On examination I found that the umbilical cord had been separated from the placenta. The external os uteri was quite dilated, as was the cervical cavity; but the os internum and the circle of muscular fibres above it, called Bandl's ring, the chief seat of hourly contraction, were firmly contracted, and only admitted a finger, by which the placenta could be felt in the uterus. I now learned that the midwife, hoping to accelerate the third stage

of labor, had given the patient a dose of ergot as soon as the child was born. I found it impossible to get my hand into the uterus to deliver the placenta. Bearing in mind the remarkable power which nitrite of amyl possesses in relaxing tension in the blood-vessels, I determined to test its action on the uterine spasm. The patient had three drops of the nitrite of amyl given her on a handkerchief to inhale, by Mr. Lingard. During the inhalation, the ring of muscular fibres round the os internum, which had been so rigid as to be absolutely undilatable, steadily yielded, until I could pass the whole hand into the uterus and detach the placenta, which was universally adherent. There was no hemorrhage whatever, and the placenta itself presented a remarkably exsanguine appearance. On referring to the third edition of my father's work on *Obstetric Operations*, I found the following: "We possess in ergot a great, a dangerous power of augmenting the force of the uterus. We want an agent endowed with the opposite effect, that will control and suppress uterine action. I consulted Dr. Richardson on this point. He tells me the desired power exists in the nitrite of amyl. Three minims of this added to one drachm of ether taken by inhalation is the form he recommends. It does not produce unconsciousness; but it is an anæsthetic as well as a sedative of muscular action. It is the antidote or opposite force to ergot. In it we have the desiderated 'epochontic agent.'" In the case in question, the drug certainly acted admirably. It relaxed the irregular contraction of the uterus, and acted as a sedative and anæsthetic without producing unconsciousness. The case is also instructive as an example of the dangers which may result from the administration of ergot before the expulsion of the placenta. The tetanic action was no doubt increased by the fraction which had been made on the cord. It is well known that ergot, when given before the birth of the child, may cause its death. I believe this results from the blood being squeezed out of the placenta by the uterus. Although in cases of irregular contraction of the uterus that organ is firmly contracted, the contraction does not separate the placenta. On the contrary, in the cases I have seen, the placenta has been firmly adherent, as it was in this case. I am not aware that nitrite of amyl has been used to relax uterine spasm before. In it we possess, I think, a new and trustworthy addition to the resources at command for overcoming spasmodic or trismic contractions, which will not always yield to other remedies.—*Brit. Med. Jour.*

ON THE EARLY TREATMENT OF PROSTATIC OBSTRUCTION.* By REGINALD HARRISON, F.R.C.S.

It may be generally stated that, of males who have passed fifty-five years of age, about one-third sooner or later have enlargement of the prostate; of these, about one-half suffer therefrom, though, so long as micturition is efficiently and painlessly performed, there are seldom grounds for complaint.

It is exceedingly interesting, as indicating how relief may be afforded, to analyze the cases where the prostate is large but does not obstruct. There are at least two conditions explanatory of non-interference with micturition under these circumstances: first, where the hypertrophy is towards the rectum and the relations of the prostatic urethra are not altered; and, second, where the hypertrophied gland is lobulated,

* Abstract of paper read at the Medical Society of London.

and channels are left between the masses, along which urine flows without interruption. A careful consideration of these conditions has suggested that they are capable of artificial production to an useful extent.

The teaching of the present day is, however, to the effect that mechanical treatment is not to be employed until either retention occurs or the bladder becomes inflamed; then such means may be resorted to. It may be asked, why the same treatment should not be applied as in the case of urethral stricture? The objection generally advanced is, that irritation will be produced. There is, however, no evidence in support of this objection. On the contrary, the prostate is about the most long suffering organ in the body, and though it is subjected to a great variety of mechanical expedients, in lithotomy and other operations, it rarely becomes inflamed. It may just as well be said that, because strictures are found occasionally to be exceedingly irritable, treatment must be postponed until retention of urine or cystitis is provoked. But if intolerance to early mechanical treatment be proved, it is only postponing the day until the necessity becomes greater and the difficulty more apparent. If there be danger of irritating the prostate, it is none the less because its size is larger.

With the view of obtaining similar conditions to those occurring naturally in large prostates, where there is no interference with micturition, I have adopted a mode of treatment with specially-adapted bougies. The instruments are gum-elastic, two to four inches longer in the stem than usual, with an expanded portion an inch from the tip, which is made to enter the bladder. In this way the prostatic urethra is subjected to pressure on the insertion and withdrawal of the instrument.

As a rule, if dilatation be not too rapidly proceeded with, no irritation is aroused. On the contrary, greater toleration of urine follows, owing to the ease and completeness with which the bladder is then emptied.

In a few persons it becomes necessary to establish a state of instrumental toleration, the frequency for doing this, as a rule, depending more on the manipulator than on the instrument. In some individuals intolerance of urethral interference is entirely due to the conditions of the urine. Such sensitiveness has been traced to the presence of uric acid in unnatural quantities and form. On the correction of this, patients previously intolerant of instruments have been found capable of undergoing the necessary mechanical treatment with the greatest advantage.

In advocating the early treatment of prostatic obstruction by the means referred to, I would say that I have already sufficient proof of its efficacy. I have ascertained that the regular use of the dilators is capable of so moulding the enlargement as to prevent obstruction. Cases are under my observation where the symptoms indicated that an impediment to micturition was commencing to form. Such patients in this way have regained the power they were beginning to lose. In bringing forward my views on the subject, I do so with the feeling that little has been done yet towards preventing the progressive development of a condition which is often followed by very distressing, and sometimes embarrassing, results—results of which we are aware, and which we desire to palliate, though we have hitherto been helpless in preventing them.—*Brit. Med. Jour.*

DIAGNOSTIC AND OPERATIVE DIFFICULTIES IN OVARIOTOMY.

Prof. Engelmann, of St. Louis, contributes an able paper with the above title to the April number of the *American Journal of the Medical Sciences* with the account of two cases. He emphasizes the following points as of practical importance in securing successful results:

1. Enter the peritoneum at the upper angle of the abdominal incision, mindful of the safety of an enlarged bladder.

2. Endeavor to secure deep and firm union of the abdominal incision by carefully and closely placed sutures during the operation, and proper support for months after.

3. Ligate all bleeding points, use the finest braided silk, cut short, and drop at once.

4. Avoid routine Listerism, and especially the carbolic acid spray over the hands of the operator and into the abdominal cavity. Cleanliness, not carbolic acid, is necessary. Keep sponges clean and warm, but *not* carbolized; avoid carbolic acid about the peritoneum and open surfaces. Ligatures, sutures, and instruments should be clean, but not carbolized.

5. Late operations are the scourge of surgeon and patient. If an operation is indicated, operate early, as the patient's chances decrease with the growth of the tumor, and the failing of health.

THE ABORTIVE TREATMENT OF BUBOES WITH CARBOLIC ACID.

Dr. Morse K. Taylor, U. S. Army, in the April number of the *American Journal of the Medical Sciences*, publishes a paper on the abortive treatment of buboes by injections of carbolic acid.

He reports twenty cases in which he certainly obtained remarkably successful results, and he states that within the last seven years he has treated nearly one hundred and fifty cases of various forms of lymphadenitis, arising from specific and non-specific causes; and, where he saw the cases before the formation of pus was well established, he had not failed to arrest the process immediately, and allay the pain in a few minutes. His method is to inject from ten to forty minims of a solution, containing eight or ten grains to the ounce, directly into the interior of the inflamed gland.

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EDITORIAL.

THE NEW YORK ACADEMY OF MEDICINE AND THE REVISED CODE OF THE STATE MEDICAL SOCIETY.

At a recent meeting of the Academy of Medicine when the subject of the report of the delegates lately accredited to the State Medical Society was announced as in order by the President, Dr. Austin Flint immediately arose, and made a few brief remarks, in reference to the history and functions of the Academy in which he spoke particularly of the harmony which had characterized its meetings, the value of its scientific reports and its remarkable financial success. He then proceeded to state that in his opinion this was greatly due to the care which the Academy had hitherto exercised in the exclusion from its debates of all matters calculated to have a disturbing influence; to which class of matters the subject now proposed to be brought before the Academy especially belonged. He thought that this subject might be properly left with the County Medical Society. He therefore moved that the consideration of the subject be indefinitely postponed.

The motion was seconded and carried unanimously.

Whether this action on the part of the Academy was judicious or not, we do not now propose to discuss. It will be sufficient for our purpose to say that a large number of the older and more representative members of the Academy had assembled apparently for the purpose of taking part in the discussion; and that such gentlemen as were known to have been most active in the recent State Society legislation were present also, prepared no doubt to defend their conduct. Many of these gentlemen retired immediately upon the announcement that no action would be taken. The unanimity of the vote can only be taken as an acquiescence in the seeming advice of the President by whom apparently the action was prearranged, that a subject calculated to create discord should not be permitted to embarrass or hinder the usefulness of the Academy. It may be taken also as a testimony of the high respect entertained for the President under whose auspices and prudent management the Academy has rapidly grown to its present condition. It may be a question, however, which we do not pretend to answer, whether the Academy, one of the oldest and most conservative societies in the United States, was not in duty bound to a certain degree of self abnegation in view of the public good; and whether it had a right, therefore, to thus summarily relieve itself of responsibility in this matter. The relations of the County Medical Societies to the State Society are no closer than those of the Academy of Medicine. By the original act of organization of the State Society, in 1806, Delegates were permitted to be sent "by County Medical Societies, certain Medical Colleges, and by the New York Academy of Medicine." We propose, however, at present, only to consider briefly the recent action of the State Medical Society.

The question whether a code of ethics is at the present day necessary or useful, is scarcely the subject which was fully considered by the State Medical Society. It is true that some gentlemen would have preferred its entire abolition to its mutilation; but in our judgment neither the one course nor the other were advisable. In the profession of Divinity rules or canons have always existed rendering what we term a code of ethics unnecessary. There is, perhaps, no religious sect or denomination in which the officiating clergy are permitted to hold heretical doctrines without exposure to reproof, suspension, or expulsion. In the profession of Law, the code of ethics is also rendered unnecessary, by the legal authority conferred upon the judges of the various courts to disbar any member whose conduct in the management of a case is unbecoming a gentleman. Also the Bar Association, recently organized in this State, although not having formally adopted a code of ethics, practically enforces an unwritten code by claiming the right to take cognizance of irregular and ungentlemanly conduct among its members. The Medical Profession, in the absence of any such restraints as those mentioned in the professions of Law and Divinity, many years ago adopted a code of ethics for the purpose of restraining the conduct of such men as may enter its ranks, without that previous training in morals and wholesome social ethics, which the civilized world has generally recognized as becoming to the members of a learned profession; and we think that in this the profession has acted wisely and prudently, and we cannot believe that the millennium of morals and manners has yet arrived in which such restraints can be properly removed.

Are the amendments or mutilations adopted at Al-

bany advisable? What purpose will they subserve? We will not argue the question whether they will subserve in any degree, great or small, the pecuniary interest of the profession. Medicine, as a science, does not exist for the benefit of doctors; it only exists for the benefit of the sick and suffering. It may be true that certain members of the profession will be pecuniarily benefitted by such a change. It is quite probable that it will increase the clientage of those medical men whose practice is chiefly in the form of consultations; and of specialists, who depend for their support mainly upon the patronage of a large class of medical men, both regular and irregular, who desire often to send their patients to the specialists; which are rarely to be found, except in the large cities, for advice and consultation. But, whether this be true or not, none of the gentlemen who have been active in effecting the recent change have offered this as the reason for their action; nor have we any right to suppose that such motives have in any way influenced their conduct. They have frankly given their reasons for the proposed changes, and this is not included among them.

Nor do we think it necessary to argue the question whether such an apparent or seeming affiliation with physicians holding to certain dogmas, is in any way calculated to contribute to the advancement of medical science. There has been no pretence that it is, and we are unable to see how it could possibly effect any such result.

Furthermore, it is scarcely necessary to state that, where the interest of the sick and suffering are alone concerned, we have no right to subordinate our opinions in a matter of science, which we claim to have investigated, to the opinions of the public at large. It is no business of ours to know or to regard, in matters of this sort, the opinions of those who have not any knowledge upon the subject, and who from the very nature of things cannot have. Our conduct is not to be influenced by the fact that some people regard it as "narrow" or "bigoted," so long as we are fully conscious that the intimation is unjust. There is no possibility of bigotry or of narrowness in a science which is based solely upon experience. Legitimate medicine looks for its remedies to the whole universe of mind and matter. It is enough for us to know that any agent is capable of effecting the cure or amelioration of disease, to insure its adoption; and the question whether these agents should be employed in larger or smaller doses is simply a question of experience. Those only are narrow and bigoted who employ only those agents, and in such doses, as comply with certain fixed and preconceived theories. This is what constitutes a dogma in science, and its disciples are the only dogmatists. Let it be distinctly understood that while we are not homœopaths, we are equally not allopaths. We are simply Doctors in Medicine. The term allopath, which has of late been so much employed to designate the regular practitioner, was a term invented for us by the homœopaths; and has no foundation in our known practice or theories; nor has it ever been recognized by us. There is, strictly speaking, but one school in medicine and that is the School of Experience.

If in reply to this it were to be said, that homœopaths have practically and openly denied their adherence to the original dogma or dogmas of Hahnemann, they none the less exclude themselves from fellowship with physicians so long as they retain and trade upon the title of their master. On the contrary, they by such act, not only exclude themselves from scientific and professional association with us, but they exclude

themselves also on moral grounds, by conduct unbecoming a gentleman. They profess to be what they are not.

The purpose as avowed is three-fold. First, to meet and soothe the popular sentiment; which is adverse to the sentiment of the profession that we cannot professionally associate with men who hold or practice a medical dogma. This point has already been sufficiently answered.

The second purpose proposed to be attained is the extinction of homœopathy, eclecticism and other dogmas, by conciliation. It is averred that the position hitherto occupied by us in this matter has put these dogmatists in the attitude of martyrs; and that they have been sustained and nourished chiefly by the fact that we refuse them affiliation. It would seem that this thought had come at a moment least expected, when an impression prevails among medical men, sustained as we think by the practice and written statements of the dogmatists and especially of the homœopaths, that they were abandoning their dogmas. The latter having recently repudiated the idea of the value of infinitesimals almost wholly, and having denied the applicability of the law of *similia similibus* in a large proportion of cases. There seems to be abundant evidence that with the present generation both the dogmas and their assumed representatives would cease to exist; yet it is at this moment that certain gentlemen are burdened with anxieties and apprehensions as to the future. To them it seems a matter of pressing importance that something should be done to arrest the progress of irregular and heterodox practice. The means to be employed consist in the adoption of fraternal and conciliatory measures. The enemy is to be met with open and extended hand; he is to be embraced that he may be crushed; he is to be killed by kindness. Whether this position of false friendship, for a sinister purpose, is manly, we leave others to judge.

Finally, we come to the question which is really the only proper question in the case; will consultations with homœopaths, eclectics and the like, benefit the patient. Up to the present time they have been disapproved by us on the ground that they would not. It was known by both physicians and irregulars, that our divergence of opinions in relation to matters of medicine were so great as to be irreconcilable. Indeed, as between us and the homœopaths it might be said to be extreme. We have been willing to discuss the value of the homœopathic doctrines and practice in our medical journals and medical societies, and they have done the same, but it has not seemed proper that such discussions should be carried to the bedside of the patient to be left, as it must necessarily be, to the patient himself, weakened and distracted by disease and pain, to decide the questions at issue. This is the inevitable result of any attempt on our part to consult with a dogmatist. If a man were to announce his belief that all diseases were curable by electricity, and that the employment of any other agent was only pernicious, it would be a supreme act of folly, and a waste of time for a physician to attempt to consult with him. Or if a man announced himself as a botanic doctor, believing only in the efficacy of plants, holding perhaps that man was not a mineral but rather a vegetable and declared that all minerals were poisonous; it would then, also, be equally improper for us to accept of a consultation with him, on the ground that he had formally declared his intention to exclude from the consultation a large proportion of the remedial agents upon which we are accustomed to rely.

Would a sick man, approaching the hour of death

and seeing two roads opening before him, send at the same moment for a Mohammedan and a Christian to decide for him which road he should take to Heaven. The Christian would point to the right, the Mohammedan to the left, and in this attitude they would stand until the eyes of the poor sufferer closed in death. In matters of religious faith, the prophets of which accept no fee or compensation for their advice, such an act on their part might be conceivable, although it would probably result in no good to the sufferer. But in matters of medical faith, the professors of which live by their calling, and accept a fee, such an act is inconceivable.

There is one remaining point, for which it is claimed that such consultations may be advantageous to the patient, namely, that by holding such consultations the educated physician may be able to point out to the uneducated man the actual nature of the patient's disease; and that although in so doing he cannot be permitted to suggest the remedy, his opinion will prove serviceable to the patient, by enabling his physician to select more judiciously from his own limited arsenal of supplies. But we believe that his arsenal of supplies is insufficient, and that without resort to other agents the patient will die. We therefore, in some sense, make ourselves parties to the wrong-doing of the medical attendant. We are in some sense his aiders and abettors.

Further than all this, there is a point beyond which we believe a regard for self-respect is justifiable. If we refuse the consultation, the patient is at liberty to choose a more intelligent medical man for his attendant; and if he or his friends voluntarily decide not to do so after a regular physician has declined consultation, upon the patient, or his friends alone rests the responsibility. We have a right, we say, under these circumstances, to maintain our own self-respect; and we are not required to place ourselves in the position of a pointer who indicates where the game is to be found, while the huntsman discharges the weapon. "Is thy servant a dog, that he should do this thing?"

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, APRIL 6, 1882.

The President, Dr. Fordyce Barker, presided. The minutes of the previous meeting were read and approved. The report of the delegates from the Academy to the Medical Society of the State of New York being next in order, Dr. Austin Flint moved its acceptance as follows: We have abundant reason to congratulate ourselves on the condition of the Academy of Medicine. We have a home practically our own. A most important element in the degree of success and usefulness we have attained is the policy which we have always adhered to of confining our meetings to discussions of scientific subjects and taken no part in medical politics. I have my opinion about the matters submitted in this report, others have theirs. The discussion of these subjects properly belongs to our sister society, the County Medical Society. I would therefore move that the report be accepted, and the consideration of the topics involved therein be postponed." This motion was promptly seconded and unanimously carried.

The paper of the evening, entitled

"CASE OF PERSISTENTLY RECURRING SPASM OF THE BLADDER RESULTING IN THICKENING OF ITS WALLS, DILATATION OF THE URETERS AND HYDRO-NEPHROSIS—DEATH FROM URÆMIA—PATHOLOGICAL SPECIMEN."

was read by its author, Fessenden N. Otis, M.D., and discussed by Drs. A. C. Post, E. L. Keyes and J. W. Gouley.

Dr. Otis first narrated the history of a case of encysted stone in the bladder (an account of this case will be found in our issue of April 8th), as illustrative of some of the possible sources of error in the diagnosis and treatment of urinary difficulties. He cited also a case of spasmodic stricture (published in our issue of June 22, 1879), in which in the absence of prostatic enlargement or discovery of any polypoid growth, the evidences of hidden stone were most marked until the passage of a full-sized sound, which promptly demonstrated the reflex nature of the difficulty. He next passed to the consideration of the case announced, a brief abstract of the salient features of which we give as follows, viz.:

Mr. Z., æt. 57, had suffered from frequent, difficult and more or less painful urination for over 20 years. His earliest trouble with the genito-urinary apparatus was an acute urethritis which soon merging into a chronic form lasted for some years, during which he was tested for urethral stricture by several surgeons. In 1860 his genito-urinary troubles led an eminent surgeon of this city to suspect the presence of stone in the bladder, an unsuccessful search for which was made. He was treated by local and general measures for his cystitis with varying success. The trouble of frequent and painful urination continued however and he came under various surgeons and physicians, among others Sir Henry Thompson of London and M. Civiale of Paris, who examined him for stone with negative result. Painful urination continued unrelieved and his urine, at times bloody and always with more or less pus, was passed every hour or oftener for several years.

The only thing that had ever been done for him that appeared to do him any good was the occasional passage of a No. 26 sound into the bladder.

He became greatly debilitated and was in almost constant suffering from his urinary trouble when I was called to see him. At this time his appearance was that of a man suffering from malignant disease. His urination which occurred regularly at intervals of about fifteen minutes was one continued agonizing spasm for about two minutes at each act. He complained of severe pain in the region of the left kidney, which surgeons had universally attributed to stone in the kidney. Frequent examinations of the urine had failed to detect any organic disease of the kidney. The pains during micturition were always referred to the region of the neck of the bladder, pubis and perineum, never to the glans penis. His sufferings were only during urination and were not aggravated by motion. He had long worn a urinal. Diet chiefly of milk.

Dec. 30th, 1881 I was called in consultation by the family physician, Dr. Lewis Fisher. On the 31st Dec. a careful general examination failed to discover any evidences of organic disease in the thoracic or abdominal regions. The pelvis showed a circumference of $3\frac{3}{4}$ inches, and a urethral orifice of 25 F.; examination with the urethrometer showed a normal calibre of 37

F. from bulbo-membranous junction to within $\frac{3}{4}$ of an inch of the urethral orifice where the canal suddenly narrowed to 26 F. registering the same to the orifice where it was 25 F. The repeated examinations by distinguished surgeons, some quite recent, together with the entire absence of pain in the glans penis or any sudden stoppage of urine during the act of urination satisfied me that if there was any stone in the bladder it was encysted and probably would not be discovered by the use of the sound. The case seemed to me one where the spasm of the bladder occurring with great frequency, and severely through such a long period of time, (over 20 years), must have ended his existence long before if due to organic disease of the spine or kidneys. I suggested the possibility of the difficulty being in a measure if not wholly of reflex origin and due to the irritation of the contracted and thickened urethral orifice, and proposed to test the truth of it by dividing the meatus. To this the patient consented.

Sunday, Jan. 1st., 1882.—Meatus and tissues extending back $\frac{3}{4}$ of an inch were divided from 25 to 38 and 37 solid sound passed well into the bladder without the least force. Following this there was absolute incontinence, the urine passing away without pain, and almost without consciousness. This condition continued until January 4th, when he had some slight power to retain, and for the first time a twinge of pain. He remarked that the second night after operation he had the best night's sleep he had had for ten years. His habitual hypodermic dose of morphia had been omitted up to Wednesday, when, in the early evening, an attack of kidney, the colic (left side) which he had previously suffered from came on, and with such violence that Dr. Fisher was sent for, and administered 10 drops of morphia hypodermically. A comfortable night's rest resulted. On Thursday morning the patient appeared in good condition, passing urine without pain. Thursday night he had another attack of pain in the kidney, requiring another hypodermic injection. Another comfortable night. The next day (Friday), *for the first time in the history of the case, had pain;* referred especially to the end of the penis. The pain before operation was always and solely referred to the neck of the bladder. Suffers from pain in the head of the penis whenever he attempted to urinate voluntarily, but when he checked the effort the urine would flow without pain. Saturday morning, while dressing, two or three sharp spasms of pain in the head of the penis. Pus and mucus, which heavily loaded the urine at the date of operation, have distinctly and steadily decreased up to the present time. Held urine for fifty minutes, and then urinated voluntarily without pain, but very slowly. After this passed No. 37 bulb through the meatus only, but with less pain than anticipated, and less than at any time before. From this time to January 10th, had repeated spasms excited by the effort to pass water; symptoms of uræmic coma manifested themselves, the patient dropping off to sleep, and being roused with difficulty. Died uræmic on January 11th.

Autopsy by Dr. Welch.—By request, only the abdominal organs were examined. *Kidneys.* Both kidneys enlarged. No abscesses are present in the kidneys. The pelvis and calyx of each kidney are greatly dilated, and contain turbid ammoniacal urine. The ureters are likewise dilated, so that their calibre nearly equals that of the small intestine. The walls of the ureters are thickened. No obstruction to the passage of urine exists either in the pelvis of the kidneys or in the ureters. *Bladder.*—The wall of the bladder is

thickened to about four times its normal diameter. This thickening affects all the coats of the bladder, but especially the muscular tissue. The mucous membrane is thickened, and presents in many places, especially about the base, slightly elevated, grayish discolored patches, such as are seen in the so-called diphtheritic cystitis. The capacity of the bladder about normal. Its contents are ammoniacal purulent urine, and a small calculus, about an inch in length and conical in shape, resembling in form a canine tooth. Such a calculus might have been formed in one of the dilated renal calyces. It is of recent formation, very friable, and composed wholly of phosphates without a nucleus of uric acid or oxalate of lime. *Urethra and Prostate.*—Prostate about normal size. Calibre of urethra normal, presenting no evidences of stricture. Microscopical examination of kidney shows marked new growth of fibrillated connective tissue, which is infiltrated with lymphoid cells. Uriniferous tubes are in places compressed and atrophied, in places dilated, in places filled.

Diagnosis.—Chronic cystitis with dilatation of the ureters, hydronephrosis and chronic interstitial nephritis. The cause of the cystitis is not apparent.

We have here conditions which are not explained by anything found in the kidneys, ureters, or bladder. The cause would have been plain had a mechanical obstruction to the flow of urine been discovered, but none was apparent. And yet the conditions were such as to demand a mechanical obstruction to the exit of urine from the bladder to account for their existence. It appears to me that the only possible solution of the difficulty is through the claim of a persistently recurring spasmodic closure of the orifice of the bladder, as a result of irritation reflected from some point in the urethra. The examination of the urethra on Dec. 31st showed an obstruction, practically a stricture of 13 m. The possible influence of a contracted meatus urinarius in producing, in certain cases, disturbances more or less grave throughout the urinary tract has long been known, although not generally appreciated. (Dr. Otis here quoted from the published writings of M. Civiale and Sir Henry Thompson in support of the claim that a contracted meatus would excite and its division relieve the gravest local and general symptoms. He also alluded in this connection to a former paper he had read before the Academy, in which cases were cited corroborating this claim. He then continued.) In the case of Mr. Z., the subject of this report, relief to the spasm of the bladder supervened immediately upon the complete division of the contraction of the meatus urinarius, followed by the introduction of a sound corresponding in size with the normal calibre of the urethra. How much of this relief was due to the passage of the instrument may be a question, but not the least more force was used in its passage than in that of an ordinary sound or catheter through a healthy urethra. The recurrence of the spasm of the bladder soon after, as a distinct effect of the sudden advent of the calculus, renders the estimate as to the permanence of relief to the spasm through the operation entirely conjectural. It still remains, however, that the cessation of painful and frequently recurring painful spasm of many years standing was immediate and complete, as a result of the operation, and practically so continued until an added mechanical irritation within the bladder reinstated it. In the absence then of any other means of accounting for the post mortem conditions presented in this case, it appears to me reasonable to claim that the difficulty was of reflex origin, dependent chiefly, if not wholly,

upon the contracted meatus, and I think we are warranted in believing that if this condition and its horrible effects had been appreciated at an earlier period in his life years of agonizing suffering would have been avoided, and that his life might have been saved through an operation, in a surgical point of view, of the most insignificant possible character.

In considering the salient features of the foregoing cases which I believe to be typical, it must I think be admitted that symptomatic evidences of organic or idiopathic disease of the bladder and prostate as well as of stone or other adventitious material in the bladder should be received with the distinct understanding that such evidences are possibly due entirely or in part to sources of irritation quite outside of the organs apparently the subject of disease.

Dr. Barker in opening the discussion alluded to the many new and striking points suggested by the paper, furnishing a most interesting field for discussion. Dr. A. C. Post:—I can add nothing of interest to what has been presented. I have been satisfied that a contracted state of the meatus has been an important element in maintaining and intensifying some conditions of the bladder and urethra. Catheterization when difficult is made easy by division of the meatus. I recall the case of a distinguished lawyer with enlarged prostate, whom I saw in connection with a former President of the Academy. In this case I found that a small catheter was obstructed at a certain point, the meatus was cut and the catheter passed easily into the bladder and in a few days the patient could dispense with the catheter entirely. A patient with close stricture came under my care. I enlarged the orifice by incision and passed successfully a series of sounds from 15—30 m. and passed sounds for 8—10 days subsequently when the patient went home entirely relieved. These are among a series of cases in which a contracted meatus maintains irritation in the urethra and bladder.

Dr. E. L. Keyes said, I must differ with Dr. Otis with respect to the etiology of the case reported. I will simply state my reasons for this: 1st. The relief of spasm of the urethra is produced by influence of instrumentation on the sensitiveness of the deep urethra, and 2ndly, on the stretching power of the instrument. There are many cases with symptoms of stricture or stone dependent on spasm of the urethra. These cases get well not because the orifice is cut but because the cutting allows of the passage of a larger sound. Many cases in which the meatus is cut are not relieved of their symptoms. The case reported by Dr. Otis allows, I think, of simple explanation. The inflammation commencing as a gonorrhœa extending up, causing cystitis, spasm at the vesical neck, and pyelitis.

The case was further discussed by Drs. Gouley and Frank H. Hamilton, Dr. Otis closing the discussion. The society then adjourned.

LECTURES.

CLINICAL COMMENTS ON HYDROCELE OF THE NECK.

BY

HENRY B. SANDS, M. D.,

Professor of Surgery College of Physicians and Surgeons, New York, Attending Surgeon Roosevelt Hospital, Consulting Surgeon New York and St. Luke's Hospitals, etc., etc.

CASE I.—Woman, æt. 30. Nine years ago had a swelling on the right side of the neck. Three years ago it

grew very rapidly. Three weeks ago tumor extended nearly from the chin to the stomach. Surface of swelling is uniform, not nodular, which renders swelling of lymphatic glands somewhat improbable; and it is soft, while the glandular swellings are firmer.

Fluctuation is perceptible. The tumor, though prominent, is beneath the sterno-cleido-mastoid muscle. It is not painful. Fluctuation suggests that the tumor might be an abscess. This cannot be, because it would have culminated long before nine years. Abscess and inflammatory processes are therefore out of the question. The tumor is not connected with the thyroid gland; as, when the woman swallows, the tumor does not rise.

Two kinds of cysts occur here, namely, atheromatous and serous. There occurs below the jaw, ranula, which always occupies the floor of the mouth, projects upwards as well as downwards in the submaxillary space. This tumor is below the submaxillary triangle, and extends below the notch of the sternum. Atheromatous cysts are not infrequent in the neck. Serous cysts are called by the French hydrocele of the neck. Light test reveals presence of hydrocele of the scrotum, but cannot be used to diagnose hydrocele of the neck. In hydrocele of the tunica vaginalis, the sac containing fluid is covered only by a thin scrotal integument; in hydrocele of the neck, the fluid is covered by thick integument. In all cysts, the crucial test is tapping. If atheroma, a whitish, milky-looking substance will be found; if hydrocele of the neck, a clear fluid.

This case happens to be hydrocele of the neck. It is a simple serous cyst, in which the fluid has reaccumulated, it having been tapped six weeks ago.

Treatment.—First tap tumor, next inject iodine.

Etiology.—Some believe that they are autogenous. They are never retention cysts, as in some cases of ranula, or in the ordinary sebaceous cysts, caused by obstruction of the orifices of the sebaceous glands of the skin or scalp. Serous cysts are believed to be most often congenital. The neck is developed from visceral plates or arches; between these there are four clefts, which in the course of development close by adhesion of the margin of the tissue. Sometimes these clefts are imperfectly closed, and at the period of birth there occurs a fistula of the neck which allows the escape of serous or mucous fluid; sometimes they close externally, and leave a cavity which becomes distended by effusions within, and produces serous cysts. These cysts are lined with an endothelium. Both deep atheromatous and serous cysts should not be treated by excision. Milder means will suffice. It is sufficient to withdraw the contents and apply iodine to effect a cure. At the last tapping eleven ounces of fluid were withdrawn.

CLINICAL COMMENTS ON OVARIAN FIBROMA AND AMENORRHOEA.

BY

PAUL F. MUNDE, M.D.,

Clinical Lecturer on Diseases of Women, College of Physicians and Surgeons, New York, Etc.

CASE I. *History.*—Female, æt. 40; has borne six children. Last delivery thirteen years ago. For the past six months has noticed an enlargement of the abdomen. Has had one miscarriage. First menstrual flow at 16. Urination frequent.

On putting the patient on her back, I feel a very dense tumor, which does not seem like a pregnant uterus. This mass contains very little fluid, and ex-

tends up as far as the umbilicus. On the right side I find an irregular outline with two nodules in the centre. On the left side I also feel an irregular lump, which is solid and extends up a little higher than the umbilicus, in a convex curve over towards the left hypochondrium; then down into the left iliac region, and I follow it way down into the brim of the pelvis. On examining the patient through the vagina, I find the external os gaping, and I could pass the sound $2\frac{1}{2}$ " posteriorly towards the sacral excavation. Therefore the tumor must be located anteriorly in front of the uterus. I could also feel the lower portion of this tumor as a hard mass. I have now used all the methods of examination which are at my disposal except two, one of which would be the explorative aspiration by means of the hypodermic needle inserted in the point of this tumor, which appears less solid than the rest, to see if it contains fluid. The other method would be to make an incision through the abdominal wall till I get into the peritoneal cavity. I do not think the latter method is at all necessary in a case of this kind. The differential diagnosis in this case lies between the two classes of growths which originate from the ovary and uterus. That is to say, this tumor is either a large semi-solid tumor of the ovary, *i.e.*, a tumor composed mostly of fleshy fibres, the so-called sarcomatous tissue, or else it is a fibroid tumor of the uterus composed of numerous small fibres bound together by connective tissue, perhaps containing also cysts, *i.e.*, either fibro-myoid or fibro-cystoma. I find the uterus only $2\frac{1}{2}$ ". That would point to the fact that the uterus was not involved in the tumor. I believe that we have here a multilocular cyst of the ovary, but I am not willing to make that diagnosis positive. The only way to make a correct diagnosis in a case of this sort is aspiration. I am more inclined to think it an ovarian tumor on account of its growing in front of the uterus. The rapidity of the growth is quite improbable. I am confident that the abdomen has been enlarging for a number of years. This is in favor of my view of the case. A tumor of this kind, being almost solid, would require an incision 2" above the umbilicus, almost down to the pubis. The chances are that this tumor might be somewhat adherent. It would require an incision 6" or 7" in length. She should wear an abdominal support, and her general health be improved.

CASE II. History.—Female æt. 35. Has borne 8 children. One miscarriage. Last delivery eleven months ago. Has been ill eight months. Suffers no pain. Digestion good. Menstruation regular but scanty. No leucorrhœa. Patient was first seen in October. Thinks she has been pregnant since November.

Ovarian and fibroid tumors are very often found in the early stages by placing the hand on the abdomen. On examination I find in the left iliac region just above the groin a mass which is four inches in length. It extends exactly on a level with the left groin and is freely movable. I can get my hands pretty well behind it so that I can feel that I have the whole of this tumor in my grasp. It is perfectly solid. It has no connection whatever with the uterus. The position, shape, density of this tumor, the absence of the ovary on careful bimanual palpation, and the absolute want of connection of the tumor with the uterus tell me positively that this is a tumor of the ovary. I believe it to be an ovarian fibroma, because of the entire want of symptoms, except the mere presence of the growth itself. Kidney tumors always retain the shape of the kidney. Fibroid tumors of the spleen are very rare

and we are very unlikely to find the spleen way down in the groin.

CASE III.—Female æt 21; married one year. Has been ill four weeks. Menstruation regular. First appearance at 16. Vaginal discharges moderate. Last menstrual period one week ago. Has had pain in the left ovarian region.

The uterus is in the first degree of retroversion. It is less movable than normal. The growth is perfectly movable and does not appear to be connected with the uterus. It could be made to ballot and the uterus did not move with it. This may be a pedunculated sub-peritoneal fibroid. Still I believe that it is on ovarian tumor in its first stage of development.

CASE IV.—Female æt., 19. Native of Poland, has never menstruated. She has a uterus only two inches in length. The ovaries are smaller than normal. The small size of the uterus shows arrest of development. Her uterus ought to be two and a half inches. In order that there should be a hemorrhage there must be a place from which blood can come. There must be a mucous membrane with sufficiently developed bloodvessels for them to burst. Here the uterus is too small. Her ovaries do not functionate with sufficient activity. She should have tonics, and local stimulation, chiefly galvanism or local faradization. I should recommend faradization of uterus and ovaries by means of a steel probe passed into the uterus and the faradic current run through the fundus and ovaries every other day, month after month.

ORIGINAL ARTICLES.

THE OPIUM HABIT, ITS SUCCESSFUL TREATMENT BY THE AVENA SATIVA.*

BY

E. H. M. SELL, A. M., M. D.,

Fellow of the American Academy of Medicine, etc.

The subject which I desire to discuss to-day is of such vital importance, that I cannot expect to do it justice in the limited time allotted to me. If the practical facts, however, which I shall present, will tend to awaken inquiry, and that lead to beneficial results, the object of my paper will have been attained.

The remedy to which I shall call your attention is the *Concentrated Tincture Avena Sativa*, our common oats.

The *avena sativa* is one of the *genera* of the tribe *Aveneæ*, belonging to the *natural order Gramineæ*.

The *avena sativa* is a highly important grain, one of our staple productions. A most common variety is said to be indigenous to the Island of Juan Fernandez, while another sort, resembling it, is found growing wild in California.

According to Pliny (Hist. nat. XVIII. p. 17) it was known to the Egyptians, Hebrews, Greeks and Romans. However uncertain its native land may be, there seems to be no doubt but that the *Celts* and *Germans* cultivated oats along the Danube two thousand years ago. It was introduced into the North American colonies soon after their settlement by Europeans. It was sown by Gosnold on Cuttyhunk, one of the Elizabeth Islands, in Buzzard Bay in 1602, cultivated in Newfoundland in 1622, and introduced by colonists on Massachusetts Bay in 1629.

CULTIVATION AND USES OF OATS.

Oats forms one of the principal sources of sustenance

* Read before the N. Y. State Medical Society, Feb. 9th, 1882.

of the inhabitants of Norway and Sweden, of a part of Siberia and of Scotland. In the latter country and in Friesland, its cultivation attains the highest perfection, and forms considerably more than half of the annual grain crops.

According to one analysis oats contains fully 7 p. c. of oil or fat, and 17 p. c. of avenine—a proteine compound, as the gluten of wheat—making together 24 p. c. of really nutritive matter. Davy found in 1000 parts of Scotch oats 743 of soluble or nutritive matter, containing 641 of mucilage or starch, 15 saccharine matter, and 87 gluten or albumen.

Mr. Norton's analysis demonstrates the pre-eminent value of oats, both to gratify the olfactories, to please the palate, to build up the bones, and to give body and vigor to the whole animal system. It seems most remarkable, that an article of so much importance, so extensively cultivated for many centuries, should escape the notice of medical men through all these years. Until recently, very little, if any, progress has been made in our knowledge of oats as a medicinal agent since the day of Pliny, when at least one variety of oats was cultivated on account of its superior fitness as an article of diet for the sick. Many works on *Materia Medica* and Therapeutics, among the most recent as well as the oldest, either do not mention it, or else speak of the *Avena Farina*—oatmeal—simply as an article of food, being somewhat laxative, hence appropriate in cases of habitual constipation from inertia of the intestines. Works of less pretension, speak of a decoction of oats as possessing decided diuretic properties, and useful in dropsy and recent colds and coughs, and as poultices. All the uses of oats have evidently been taken from domestic practice. The decoction spoken of is known in Scotland by the name of *water-gruel* and in Ireland by that of *oat-meal tea*. Certain botanical works speak of gruels and decoctions of groats or grits, mixed with water and good cow's milk as excellent for infants, so much so as to be one of the best possible substitutes for breastmilk; and either used plain or sweetened with sugar, or acidulated or acidified, as acting admirably as demulcents, and as being therefore suitable in many cases of fever, inflammation, calculus, dysentery, diarrhoea and cholera. Plain gruel of groats is pronounced useful in clysters.

A small volume on domestic medicine, published in London nearly a century ago (1794), has about as much on the medical use of oats, as all other medical works combined that I had time to consult.

It remained for Dr. Keith to prepare the active principle of the *avena sativa*, in 1858, and after having experimented with it in various classes of nervous diseases, to find that it had great stimulating powers. In 1874 the doctor had a concentrated tincture of the *avena* prepared for paralysis, from the effects of which he himself suffered for 3½ years, and in three weeks, having taken the *avena* in 15 drop doses three or four times a day, he was not only free from paralysis, but relieved from many serious symptoms, both mental and physical.

I commenced experimenting with the so-called active principle, *i. e.* with the powder of *avena sativa*, in 1873, but the results were not flattering, whether due to the preparation or to my employment of the same, I am unable to say. Later, however, after the concentrated tincture was prepared, and I had learned of the results of the above case, I commenced using the tincture, and have ever since found it a most useful and reliable remedy. I attribute to it the following properties: *Diuretic, slightly laxative, tonic, stimulant, but especially nerve-stimulant.* It exerts a most pow-

erful influence upon and through the nervous system. I have found it a most valuable adjuvant to other medicines, in the treatment of different diseases, but especially when the nervous and circulatory systems are at fault.

Many serious cases of the various female diseases gradually but slowly improved under one or more of the many uterine or ovarian remedies, if properly adapted to them, but frequently the patients would remark, that, as soon as the *avena* was extended to them, along with the other remedies, that they found themselves grow fleshy and improve in health more rapidly.

It is an excellent substitute for intoxicating drinks, and will in many cases cure inebriety, provided the patient can be kept from his old associates. It is an antidote to opium poisoning, as verified in a case of attempted suicide by laudanum. Nervous headache and prostration due to mental strain or worry, are easily brought under its curative effect. The *avena* possesses no narcotic nor anodyne effect, yet it readily relieves many cases of insomnia. Some of the worst cases of neuralgia, including those forms so common in patients who suffer from hemiplegia, have been cured by this remedy.

Epilepsy has been brought under subjection by it more effectively than by other remedies, and traumatic cases in particular.

It is one of the best remedies in hysteria, melancholia, neurasthenia, and in all forms of nervous prostration, whether caused by inebriety, by the abuse of tobacco, opium or morphine, by sexual excess, masturbation, or mental strain.

However interesting some of these cases are, to me at least, I shall forbear giving the history of any, being content to merely mention the fact that I am constantly using this remedial agent in such diseases with great satisfaction. I shall close my remarks for to-day by mentioning the last but not least affection for which the *avena* has proven itself an efficacious remedy. It was during the summer of our centennial year, that I made what I consider a no small discovery in therapeutics, namely, that the *concentrated tincture avena sativa* is the very best remedy in the distressful, and in many cases hopeless malady of the *opium* or *morphine habit*.

To show you that I do not overdraw the picture, and that I do not speak hyperbolically, you will indulge me while I relate a brief history of a few cases. To those of you who have seen a single absolutely bad case, I need not say, by way of preface, that I consider such a one, as for himself on herself, worse than an inebriate, and in some instances this holds even true to other members of the household. Most inebriates have lucid intervals, when they are not only good wives or kind husbands, but also thrifty; whereas an inveterate opium eater is a perfect blank to himself and to others, and of the two his drug is the more expensive.

I. *First*, then, look at the slave of this dreadful habit, made so by his own physician, who was supposed to be treating him for some neuralgic affection. The patient, a German of middle age, had gradually, at the end of three years, brought himself to this most deplorable condition, that he injected two large hypodermic syringefuls of Magendie's solution every three hours. These had to be injected amidst sores and ulcers, for he was literally covered with them, as the effect of the injections. These large doses of morphine, the minimum and maximum quantities, actually used during the twenty-four hours being twelve and

forty-eight or fifty grains, had no more effect upon the patient than to produce fifteen minutes of sleep with his eyes wide open. He kept to his bed, and was a constant nuisance to himself and others. All attempts at curing him of this lamentable habit had utterly failed. The *avena* was given him in twelve to twenty drop doses, being ordered at once to reduce the quantity of morphine one-half, and as rapidly as possible to stop it altogether.

When two drachms of the *con. tinc. avena* had been administered, I was informed that the patient slept the greater part of the time, fully two hours at one time, and now with his eyes completely closed. Although this looked very encouraging, the patient was not cured, and perhaps simply because one did not wish to have him cured, all I positively know is, that one refused to procure and give him the remedy.

2. The next case is a Mrs. L., middle-aged, who had been the slave of this habit for seven years, and had taken twelve grains of morphine daily; she was radically cured with the *avena*. Her history is briefly this: For a number of years she had been troubled with pain in her back, together with soreness and weakness in her bowels, suffering at times very much. She consulted physician after physician until she had seen seven, and here comes the old story again, none was able to relieve her pain save by morphine, and thus they not only did not cure her of her ailments, but made her infinitely worse, by making her the slave of a most cruel taskmaster from whom they could not release her. After suffering the most intense pain, at times so severe that she could neither walk nor stand, using the different remedies prescribed by her physicians, besides liniments and strengthening plasters to no purpose, until she many times thought that she would prefer to die to taking the morphine all her life, she became utterly heart-sick and discouraged. At last an advertisement of one of the so-called opium curers fell into her hands, and then she, like a drowning person catching at a straw, took Dr. B's dirty looking morphine preparation for four months, for which she paid eighty dollars, then she discovered that she was no nearer being cured than the first day she took it. This discouraged her more than ever, and she concluded that she never would try to stop it again, but take it and die as soon as possible. However, in the summer of 1876, being very sick and confined to her bed (I happening to be in the town where she lives), she called me to see her. I treated her other ailments, and at the same time gave her the *avena* for her morphine habit, and six months afterwards she writes me:

"I have not taken a particle of morphine or anything of the kind since the first day I saw you. The *nervine* (*avena*) took the place of the morphine, making me comfortable and keeping my nerves quiet. At the end of two weeks I got along nicely without the *nervine*. Under your treatment I have regained my health. I have not been as well for ten years. I feel twenty years younger, and weigh twenty-five pounds more than ever before. I can hardly realize to-day that I have not taken any morphine in six months, after I had taken it seven years. I am now able to do my own housework, and feel well."

3. The next case has been treated by Dr. W. A. D., of Bloomington, Ill., and I will let him give you the facts of the same. On Sept. 20th, 1881, he wrote to me as follows: "After the lapse of two months I write you the results of the use of the *avena* in the case of my wife. You will probably recollect that I stated that she had used morphine for twenty years, that she took an ounce in 15 days" (being 32 grains per day),

and that she seemed a perfect wreck, as you can readily suppose.

After receiving your kind letter in reply to my inquiries, I sent for the tincture and commenced its administration in accordance with your suggestions, and have the extreme satisfaction of reporting complete success—that the patient has used no morphine since she commenced the tincture, except for the first two weeks, when she occasionally took small amounts to relieve extreme distress. Since that time she has used none—now two months.

She is much improved, both mentally and physically, and indeed is hardly like the same woman, and really bids fair to become her former self.

I consider it one of the most remarkable cures on record, and must do myself the justice to tender to you my sincere thanks for the kind letter and suggestions which I received from you.

If you should feel interest in further investigating the case, I will be most happy to hear from you at any time."

In reply to a letter of inquiry from me, he wrote Oct. 1st, 1881, thus:

"My wife is 46 years old, is slender, rather tall, light complected. Was taken in the summer of 1858 with what was thought to be scirrhus of the stomach, and morphine was found to be a palliative and *as such was continued*, until the drug had produced its *own disease*, which has kept the "*castle*" until it was *routee* by the use of the *avena*. About the 1st of last June I commenced the administration of the medicine as you so kindly suggested, and since which time she has used no narcotic, except during the first two weeks, as before stated, since which time she has used *none*, and for the last month has used none of the *avena*, and to-day is improved beyond the most sanguine expectations of her friends, both mentally and physically. When I commenced to give her the *avena*, I felt and said if it cured her, it would certainly cure any case of opium habit, and I still think so."

Feb. 1st, 1882, the Dr. writes: "My wife is radically cured of the opium habit; has used none since June last, either of opium or *avena*."

4. I shall relate but *one more case*, treated by Dr. J. G., of Blue Grass, Iowa. I shall give some of the facts contained in letters dated Oct. 26th, 1881, and Jan. 27th, 1882. "Please accept my thanks for the information I have already received from you relative to the *Con. Tinc. Avena Sativa*."

"I have one of the most remarkable cases of the *opii-morphie mania* that I have seen on record. The patient has been a slave to the habit for over 16 years. He has been using sulph. morphia from 20 to 40 grains per day, two drachms lasting about three days on an average.

"He has been trying every remedy that he has heard of—he has tried some eight or ten different doctors who *claimed* to have cured every case treated.

The first one was a Dr. S. Collins, of La Porte, Ind. The first *thirty dollars* sent him for a *cure* did him more harm than good. Sixteen dollars more were sent for a new supply, which acted no better, but dried up the secretions so much that he was compelled to abandon its use. A Doctor Squires, of some point in Indiana, received the next *five dollars* for a trial bottle of medicine, which contained morphine and had to be abandoned on account of the high price. Berien Springs, Michigan, was the next place of note, but *sixty-five dollars* spent there left him no nearer cured than when he commenced."

Dr. Beck of Cincinnati, Ohio, received the next *one*

hundred and thirteen dollars, but with his slushy looking medicine, containing morphine, the patient was still compelled to use a certain quantity of morphine about eight or nine times every twenty-four hours, and hence had to abandon the Beck remedy. He has tried others and has spent a large amount of money. The *avena* meets more nearly the requirements than anything he has ever tried. It satisfies and dissipates all desire for morphine, but he has paroxysms of weakness, which he himself expresses as an entire goneness and an unearthly feeling and restlessness at night, at such times he resorts to morphine. One dose of which soon allays that weakness, its influence often lasting 36 hours. I tried sulph. quin. and other salts of cinchona, but they seemed to aggravate his weakness or prostration. But for these two troubles he would feel perfectly happy. If you could suggest anything to aid in overcoming them, the victory would be ours. Should we succeed, it will be the greatest victory yet obtained."

This victory, gentlemen, I believe will be obtained in this case as soon as the remedy is properly given and sufficiently pushed.

The ordinary dose and frequency of taking this remedy, will not suffice in such a case as I have just related. In cases of extreme debility, and as a rule in cases of paralysis, as well as in most of the diseases to which I have summarily referred, a dose of from six to thirty drops, three to four times a day will suffice, about half an hour before each meal in hot water, and in cold water at bed-time. When given in hot water its action is almost immediate.

In the *Opium* or *Morphine habit* as well as in *Inebriety* or *alcoholism*, the best rule is to give the *avena* in hot water with the same frequency that the patient was accustomed to take his opium or morphine, *i.e.*, as often as the system demands it, and in doses sufficient to produce the desired effect. As all cases do not require the same amount, trial and experience will be the best guides. It is necessary, however, to bear in mind the physiological action of this remedy, which is to produce congestion of the base of the brain. A *fulness at the base of the brain* will indicate that the *dose dare not be increased*, and a *pain* in that region suggests that an *overdose* has been given. The diminution of the dose regulates itself by the above symptoms. As long as the system demands the remedy, it must be administered in doses sufficient to supply that demand, and whenever given in larger doses than required, it will manifest itself by its symptoms. Dr. G. of Iowa, informed me Jan. 27th, that the *avena* did not affect his patient, as it does most people, indicating that he had not yet supplied his demand, and hence, most likely, the "restless nights" and "weak spells."

Let it be borne in mind, that it is not proposed to cure all manner of diseases by the *avena*, much less such diseases as have generally been held to be incurable. Let the physician use his intelligence and ingenuity in administering remedies which will actually relieve the malady, instead of giving opiates which are generally mere make-believes, and leave the disease no better and the patient in most instances worse for having taken them. It is a grave question with me whether all the good that opium has ever done, can be compared with the mischief and intense harm that its abuse has inflicted upon the human race. There is an awful responsibility resting upon those who have been aiding and abetting in constituting and establishing a large army of miserable wretches, who are enslaved soul and body by this direful opium habit.

Any remedial agent, then, that will aid us in breaking the bonds of this opium slavery should be hailed by the medical profession as a most welcome guest. And however the medical profession may view this subject, for myself I feel as though I had not lived in vain were I to have accomplished nothing else in life, than to have discovered that the *avena sativa* is a cure for the "opium habit," unless the patient is afflicted with some other incurable disease, and even then by far the majority will get along better and live longer without than with opium, provided they receive proper treatment. I invite thorough and faithful investigation of this remedy, and correct reports of cases treated thereby, whether favorable or unfavorable, will be thankfully acknowledged. My favorable results stand thus far corroborated by the two typical cases herein reported, the *one* treated by Dr. W. A. D., of Illinois, the *other* by Dr. S. G., of Iowa.

Since this paper was prepared the following case came to the notice of the author:

Dr. G. E. S., of Cleveland, O., writes, February 20, 1882, as follows: "I see by reading the proceedings of the New York State Medical Society that you read a paper upon the medicinal effect of the *avena sativa* in the cure of the opium habit. I have a case of that kind which I have not succeeded in curing, and I would like very much to get your experience with that drug. The case is not very bad as yet, as only about two grains of morphia is used daily, but it seems as hard to break the habit as if more were taken. I will give you the history of this case from my note-book, as follows: G. B. C., male, aged 58 years, began the use of morphia two years ago to allay the pain in chronic rheumatism. He began by using one-fourth to one-half grain twice per day, but gradually increased until he got up to two grains per day, which dose he has been taking during the last six months. About the 1st of February he applied to me for assistance to break the habit which, at this time had got complete control of him. Although he said he would not increase the dose on any account, yet there was a strong tendency that way. When he stops for a day he claims the pain is as bad as ever. Please let me hear from you on this subject." March 24, 1882, the doctor writes: "Time has now passed sufficiently long for me to give a full statement to you relative to my opium patient. I procured the remedy, and used it as follows: I ordered fifteen drops, to be taken as often as he felt the desire for the morphia. He took the *first* day four doses of fifteen drops each, without any morphia. *Second* day same size and number of doses, but in consequence of the severe pain and lack of the morphia stimulant he took one-fourth grain morphia. *Third* day I increased the *avena* to twenty drops four times and no morphia. *Fourth* day, same amount and one-fourth grain morphia was taken. *Fifth* day, *avena* the same and no morphia. *Sixth* day, twenty-five drops three times and no morphia. No morphia has been taken since the fourth day, but three doses per day of the *avena* up to the 20th of March, since which time he has discontinued the medicine altogether. I am satisfied that if a patient will steadily pursue the course of treatment with the *avena* he can rid himself of this most terrible habit. I hope others will be induced to try this medicine, and report their experience with it, that the profession may know that there is hope for those afflicted with this disease, for it is nothing more than a disease." April 1st the doctor writes: "The patient still suffers with rheumatic pains, but feels himself perfectly cured of the opium habit."

The following affidavits, from the manufacturer of the preparations which I have been using will show that the preparation is in no sense a nostrum, and that any person is free to manufacture the same and place it upon the market under the same name. I also append sworn statements giving the working formulæ for making both the *concentrated tincture* and the *active principle*.

STATE OF NEW YORK, }
CITY AND COUNTY OF NEW YORK, } SS.

George H. Keith, being duly sworn, says that he is a member of the firm of B. Keith & Co., doing business at No. 41 Liberty St., in the City of New York. That said firm do not claim the words "concentrated tinctures" or the abbreviated form thereof, to wit "con. tinc." although they have used words "concentrated tinctures", and said form "con. tinc." during the past twenty-six years, and that they have no trademark as connected with their concentrated medicines.

Sworn to before me this 25th }
day of February, 1882. } GEO. H. KEITH.

PEARCE BARNES,

Notary Public, City and Co. of N. Y.

STATE OF NEW YORK, }
CITY AND COUNTY OF NEW YORK, } SS.

George H. Keith, being duly sworn, says that he is a member of the firm of B. Keith & Co., doing business at No. 41 Liberty St., in the City of New York. That the "con. tinc. avena", as prepared by said firm, is made by dissolving in alcohol *the active principle* of common oats (grain); also that there is no admixture of any kind whatever with "con. tinc. avena" as so prepared (as above stated). That said firm make no compounds or mixtures except as stated upon their labels.

Sworn to before me this 23rd }
day of February, 1882 } GEO. H. KEITH.

PEARCE BARNES,

Notary Public, New York Co.

STATE OF NEW YORK, }
CITY AND COUNTY OF NEW YORK, } SS.

George H. Keith, being duly sworn, says that he is one of the members of the firm of B. Keith & Co., which firm does business at No. 41 Liberty St., in the City of New York. That said firm, in manufacturing the active principle of the avena sativa (common oats), tincture the grain of commerce with alcohol, withdraw alcohol from the same, and distill off alcohol, leaving as result, extract *impure*. As different extracts from the article require different treatment, the re-agents for precipitation must be left to judgment of chemist. That said firm then take the resulting precipitation and dissolve one ounce thereof in ten ounces of alcohol to make "con. tinc. avena sativa."

Sworn to before me this 24th }
day of March, 1882. } GEO. H. KEITH.

PEARCE BARNES,

Notary Public, City and Co., of N. Y.

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK.

COMPOUND FRACTURE OF THE FEMUR—RESECTION— AMPUTATION.

SERVICE OF

GEORGE A. PETERS, M.D.

Patient R. R.—U. S., æt. 30, married; a painter by occupation; was admitted to the hospital Feb. 11th, 1880.

This morning, while at work on the elevated road, fell to the street, a distance of about twenty feet. Patient is unable to tell how he struck. When found by the ambulance surgeon he was conscious, although his mind was somewhat confused; he was suffering no pain, but was very restless, face pale, extremities cold, pulse feeble.

Carbolic dressing with long splint applied, and hypodermic of Majendie given.

On Admission.—Find compound comminuted fracture of right femur at upper portion of middle one-third. Compound opening on anterior and external aspect one inch long, crescentic in shape, from which protrudes small lump of lacerated muscular tissue. Finger introduced into wound; detects comminuted fracture with extensive laceration of tissues in an upward direction and posterior to fragments—shortening one inch.

Treatment.—Ether. Five fragments, varying from two to three inches in length, removed with dressing forceps, the original wound having been enlarged, also two smaller fragments, making seven in all. The lower fragment protruded through wound, and sharp point removed with cutting forceps. Tissues on interior and posterior aspect of thigh protruded on extremity of dressing forceps introduced through the wound, and a counter opening one inch long made. Large-sized fenestrated drainage tube then passed between the two openings and behind the fragments. Simple carbolic dressing applied in such a manner as to allow ends of the drainage tube to emerge through it. Buck's extension with modified Volkmann's sliding apparatus applied. 10 P. M.—Patient entirely recovered from ether, sleeping quietly, temperature 100.2°.

February 12th.—Complains of severe pain in left arm, radiating down fore-arm and fingers; mark of slight contusion over olecranon, to which lot. ammon. muriat. is ordered to be applied. Over right eye, along supra-orbital ridge and extending down on bridge of nose, there is a lacerated and contused wound with gaping edges. These approximated by means of strips of adhesive plaster.

February 14th.—Thigh free from all appearances of inflammation.

March 29th.—Drainage tubes removed.

April 7th.—Extension apparatus removed.

May 5th.—Necrosed bone detected. Extension re-applied. No union; discharge free.

May 25th.—Ether—Incision made exposing both fragments and necrosed portion removed. The limb brought to normal relations and the ends of the now healthy bone found to be in good relation on slight extension. Drainage tube, Buck's extension with Volkmann's railroad improved and 5th extension applied.

October 20th.—Splint removed—no union—no control over limb. Shortening 4 inches.

October 30th.—Amputation decided upon—operation done under Lister. Esmarch's bandage. Silver wire and carbolized catgut sutures.

November 20th.—Patient shown in clinic. Stump healed with exception of ulcers at point where tube has emerged. General condition excellent.

January 22nd.—Discharged cured.

FORMULARY AND POINTS IN PRACTICE.

IN DYSPEPSIA OR DEBILITY—WITH IRRITABLE STOMACH.

R Spts. ammon. aromat..... 3 j.
Acid. hydrocyan. dil..... min. 3-5
Syr. zingiberis..... 3 i
Aquæ carni..... ad 3 12.

Make a draught to be taken twice or thrice a day if there be flatulence or languor.

IN SEVERE COLIC.

R Spiritus ammon. aromat..... min. 30
Magnes. carbonat..... grs. 20
Spiritus chloroformi..... 3 i
Aquæ menth. piperit..... ad 3 12
Make a draught, to be taken occasionally.

FOR A CHILD TWO YEARS OLD WITH HOOPING COUGH.

R Spiritus ammon. aromat..... min. 75
Spiritus ætheris..... 3 i
Tinct. belladonnæ..... min. 12
Acid hydrocyanici dil..... min. 8
Syrupi..... ad. 3 2
M. Sig. One teaspoonful in the same quantity of water every four hours.

VALERIAN DRAUGHT IN HYSTERIA.

R Tinct. valerianæ ammon..... min. 40
Infus. valerianæ..... 3 i
Make a draught to be taken occasionally.

IT IS CLAIMED THAT NITRIC ACID IN THE FOLLOWING FORMULA IS SPECIFIC IN THE TREATMENT OF HOOPING COUGH, CURING THE DISEASE IN FROM TWO TO FIFTEEN DAYS.

R Acid. nitrici dil..... 3 12
Tinct. card. co..... 3 3
Syrupi..... 3 1
Aquæ..... 3 1

Sig. One or two small teaspoonfuls every two hours.

SELECTIONS FROM JOURNALS.

A METHOD OF REMOVING BENIGN TUMORS OF THE BREAST WITHOUT MUTILATION.

Professor T. Gaillard Thomas, contributes to the April number of the *New York Medical Journal* a paper in which he expresses himself in favor of removing benign tumors of the breast as a rule, because the mere presence of a tumor in the breast usually renders the patient apprehensive, nervous, and often gloomy, while with our present improved methods of operating, the patient is exposed to slight risks, the danger of growth of the tumor is removed, and with this disappears at the same time that of the subsequent degeneration of a benign into a malignant growth. If, in addition to these advantages, we can add the avoidance of all mutilation to the person, we have strong

grounds for departing from the practice of non-interference. The method of operation described Dr Thomas has practiced thus far in a dozen cases. He distinctly states that it is entirely inappropriate for tumors of malignant character, and that it is applicable neither to very large nor to very small benign growths, being insufficient for the former and unnecessarily radical in its character for the latter. The growths for the removal of which he has resorted to it have been fibromata, lipomata, cysts, and adenomata, and have varied in size from that of a hen's egg to that of a duck's egg or a little larger. The operation is thus performed:—The patient standing erect and the mamma being completely exposed, a semicircular line is drawn with pen and ink exactly in the fold which is created by the fall of the organ upon the thorax. This line encircles the lower half of the breast at its junction with the trunk. As soon as it has dried the patient is anæsthetized, and with the bistoury the skin and areolar tissue are cut through, the knife exactly following the ink-line until the thoracic muscles are reached. From these the mamma is now dissected away until the line of dissection represents the chord of an arc extending from extremity to extremity of the semicircular incision. The lower half of the mamma which is now dissected off is, after ligation of all bleeding vessels, turned upward by an assistant and laid upon the chest-walls just below the clavicle. An incision is then made upon the tumor from underneath by the bistoury, a pair of short vulsella forceps is firmly fixed into it, and, while traction is made with it, its connections are snipped with scissors, the body of the tumor being closely adhered to in this process, and the growth is removed. All hemorrhage is then checked, and the breast is put back into its original position. Its outer or cutaneous surface is entirely uninjured, and the only alteration consists in a cavity at the former situation of the tumor. A glass tube with small holes at its upper extremity and along its sides, about three inches in length and of about the size of a No. 10 urethral sound, is then passed into this cavity between the lips of the incision, and its lower extremity is fixed to the thoracic walls by India-rubber adhesive plaster, and the line of incision is closed with interrupted suture. In doing this, to avoid cicatrices as much as possible very small round sewing-needles are employed; these are inserted as near as possible to the edges of the incision, and carry the finest Chinese silk. After enough of them have been employed to bring the lips of the wound into accurate contact, the line of incision is covered with gutta-percha and collodion, and the ordinary antiseptic dressing is applied. If the glass drainage-tube acts perfectly, there is no offensive odor to the discharge, and the temperature does not rise above 100°; the tube is in no way interfered with until the ninth day, when the stitches are removed. If, on the other hand, the tube does not appear to perform its function satisfactorily, it is manipulated so as to cause it to drain all parts of the cavity, and warm carbolized water is freely injected through it every eight hours. On the ninth day, when the stitches are removed, the tube is removed likewise.

REMOVAL OF THE ENTIRE UTERUS FOR THE CURE OF CANCER OF THE CERVIX.

In the *American Journal of the Medical Sciences* for April, 1882, Dr. Clinton Cushing reports two cases of removal of the uterus for the cure of cancer of the cervix, one of which was successful and one was fatal, with the following deductions:

First. Do not undertake the operation of entire removal of the uterus if the surrounding tissues are involved in the disease, or the uterus is at all fixed, for the operation is then very difficult, and the disease would certainly return at the seat of operation.

Second. Operate by the vaginal method, it being a much safer one.

Third. Leave the opening made by the removal of the uterus open, so as to allow perfect drainage, there being apparently no disposition to prolapse of the small intestine.

Fourth. Keep a self-retaining catheter in the bladder, in order to avoid its distension, and to prevent the too frequent disturbance of the patient.

Dr. Cushing suggests that, where it can be done, enough of the diseased structure be removed for a microscopical examination, before the decision is made final as to the advisability of an operation.

IS THE OVARIAN CELL PATHOGNOMONIC?

The accurate diagnosis of ovarian tumor is of vital importance, as mistakes are by no means rare, even among our most skilful diagnosticians.

In the *American Journal of the Medical Sciences* for April, 1882, Dr. W. A. Edwards published an account of some researches made in the Pathological Laboratory of the University of Pennsylvania, bearing on the value of the ovarian cell as a diagnostic point, from which he concludes:

1. The ovarian cell is not diagnostic of the ovarian tumor.
2. We may have a fluid from an ovarian tumor entirely devoid of the ovarian cell.
3. On the other hand, we may have an abdominal fluid which is not ovarian, presenting the cell in great abundance.
4. With the present state of our knowledge, the accurate microscopical diagnosis of ovarian dropsy is impossible; the most distinguished ovariologists always make their first incision an exploratory one.

VAGINAL CYST.

Tumors designated as vaginal cysts, and credited by the few writers making special mention of such growths as among the curiosities of general practice, have as yet received no settled opinion concerning their true pathology, nor have we, from the little known of their clinical history, been able to decide satisfactorily whether they originate as solid fibrous bodies, and pass by inflammatory changes to the fluid state, or are, with much greater probability, essentially cystic from their inception.

In the *American Journal of the Medical Sciences* for April, 1882, Dr. Naylor Bradfield reports a case in which the vagina was found obstructed with a tumor fully as large as a hen's egg, and imparting on the touch an impression very much the same as that induced by any ordinary fibroid. The tumor presented a broad base of attachment with a slight narrowing, or neck-like constriction, half an inch below its connection with the vaginal mucous membrane. On puncture, a thick, viscous substance oozed out; the cavity was injected with tr. iodine, and the vagina washed out daily with carbolyzed water and glycerine. After a second opening, necessitated by the refilling of the sac, the tumor entirely disappeared.

A BANDAGE FOR THE TREATMENT OF VARICOCELE.

There are many cases of varicocele where a radical operation would not be advised, for which the ordinary suspensory bandage is not sufficient to prevent the dragging sensations and neuralgic pains which are at times present in almost every case.

In the *American Journal of the Medical Sciences* for April, 1882, Dr. Royal Whitman describes a form of bandage which simply inverts the testicle, allowing the mass of veins which were pressing upon it to fall below, while steady pressure is kept up on the enlarged veins in a direction which does not impede the circulation and by the elevated position of the testicle favors the return of venous blood.

THE VARIETIES, MECHANISM, AND DIAGNOSTIC SIGNIFICANCE OF MITRAL PRE-SYSTOLIC CARDIAC MURMURS.

From a careful clinical study of the varieties, mechanism, and clinical significance of mitral presystolic murmurs, in the *American Journal of the Medical Sciences* for April, 1882, Prof. Austin Flint draws the following conclusions:—

1. There are two varieties of this murmur, which are distinguished by differences in quality and in mechanism. One variety is a rough, and the other is a soft, murmur.
2. The roughness in the first of these varieties is characteristic, and may be distinguished as vibratory or blubbery. The softness of the second variety is bellows-like, like other soft cardiac murmurs. It may vary in pitch and intensity, but as a rule, it is low and weak.
3. The rough murmur is due to vibrations of the curtains of the mitral valve, caused by the passage of blood from the auricle to the ventricle. The soft murmur, like other bellows murmurs, may be due either to contraction of the orifice through which the blood passes, or to roughness of the surface over which it flows.

PROGRESS OF OBSTETRICAL SURGERY.

In the *American Journal of the Medical Sciences* for April, 1882, Dr. R. P. Harris continues the valuable statistical reports which he has been collecting on this subject. He reports five cases of Cæsarean section in the United States for 1880, in which three women and four children were saved—that is, 60 per cent. of the women and 80 per cent. of the children. During the same year Italy saved 4 Porro cases out of 11; Germany 2 out of 5; Austria 3 out of 2; and France 1 out of 2. The antiseptic management of Lister, the drainage-tube, the uterine suture, the cleansing of the abdomen from blood and other fluids, the internal ligation of the pedicle of parts excised, the use of the hæmostatic pincers of Pean, the pocketing of the pedicle, the excision of the pedicle by the actual cautery, and the hæmostatic effect of hot water, have all contributed to secure a higher percentage of recoveries after abdominal operations in women.

The introduction of the Porro modification in Europe has also had the effect of changing very materially, and for the better, the results of Cæsarean deliveries in large maternity hospitals. To save six women in succession with their children, as has been done in the Santa Caterina Hospital of Milan and Krankenhaus of Vienna, speaks well, not only for the care and skill of the three operators in each hospital, but for the operation as it was originally devised by the Pavian professor.

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EDITORIAL.

"It appears to be evident that the high potency party have held sway too long. They represent a form of medical spiritualism which is unsound in theory and very prejudicial to the interests of true homœopathy. Notwithstanding this, they are holding prominent positions in all our medical colleges and societies, and at the same time are endorsing and advocating extravagant theories which are evidently subversive of the fundamental principles of homœopathy. They have held these positions so long that they have evidently come to the belief that they alone represent homœopathy; hence, by right, are privileged to dictate to the low potency party regarding all matters involving homœopathic interests. They appear to be oblivious of, or at least ignore the fact, that this nondescript method of practice is repudiated by many of the best and wisest men in our school. They do not yet appear to comprehend the fact that the recognition and advocacy of the false theory of dynamization must cease because it is the embodiment of error, and, from the homœopathic point of view, of error only."—*N. Y. Med. Times (Homœopathic)*.

In such round terms the simple-hearted and primitive disciples of Hahnemann are berated by their more progressive brethren of the same school. They deny flatly the doctrines of their fathers, and call them "nondescript," "false," etc. Does not this look a little like persecution? and will it not be well, now that we are acting in the character of peace-makers, for the

State Medical Society to attempt to bring about a reconciliation between these opposing "schools?"—the death of both of which we have of late piously compassed. We have taken them both to our bosom; and if, instead of nestling there until they are quietly suffocated, they fall to fighting, is there not danger that they will thrive by their dissensions and become more muscular and venomous? It may be a question to whom the trade-mark "Homœopathist" belongs, if indeed it belongs to either; but so long as we are holding them in our affectionate embrace we must not allow them to frustrate our pious intentions by contending with each other, which, according to our State Medical Society, is the food of martyrs.

BOOK REVIEWS.

A Treatise on the Science and Practice of Medicine, or the Pathology and Therapeutics of Internal Diseases. By Alonzo B. Palmer, M. D., L.L.D., Prof. of Pathology and Practice of Medicine and of Clinical Medicine in the University of Michigan; Physician to the State University Hospital; Formerly Professor of Materia Medica and Practice of Medicine in the Berkshire Medical College, and Professor of Pathology and Practice of Medicine at Bowdoin College. Honorary member of the New York State Medical Society. Ex-vice President of the American Medical Association, etc. Vol. 1. Published by G. P. Putnam's Sons, New York, 1882. Price \$5.00.

Much has been said of late years regarding the lack of thoroughly good works in Medicine and Surgery by American authors. It has been justly claimed that the English treatises on which we have chiefly relied are based on an experience which differs in many important respects from that of American physicians and surgeons. That the manifestations of disease and therefore its treatment and description are largely modified by differences in climate, national habits, etc.

There is no question but that American physicians and surgeons have, with a few exceptions, failed to record their views, though it is well known that their opinions have been formed from experiences which have been, to say the least, quite as rich, if not as fruitful, as those of their European brethren, and which, if gathered and sifted, would unquestionably furnish the best guide for the American practitioner to the cure of disease as it exists in America.

Without, however, further remarking what seems to us a self evident truth, we wish to call attention to the fact that efforts are being made by American authors to give to the profession the fruit of their observations as colored by local or, rather, national peculiarities.

The book before us will, we believe, rank as a most successful effort in this direction.

The author, believing that the time for a strictly scientific classification of diseases has not arrived, has made no attempt at such a classification, but has been guided by convenience in the arrangement of subjects. Certain physiological and pathological facts and principles have been first presented; elementary morbid changes are next described, and an account of particular general diseases follows. Local diseases are then treated of, beginning with those of the digestive organs. The accounts of the diseases of other systems of organs follow, closing with the complex affections of the nervous system. An account of human parasites, and a description of the internal diseases they produce,

is added. The book aims to give a general view of the present state of scientific and practical medicine. The author states, that not having himself been devoted to original work in morbid anatomy, the description of anatomical and histological changes partakes of the character of a compilation from the more recent and reliable sources; while the therapeutical views are more of a personal character, although the opinions and authority of others have not been ignored. The aim has been to present what was essential to the proper understanding of each subject, without entering into historical details, or dwelling upon doubtful facts, or upon theories not established. In short, a *practical* work has been attempted for students and physicians, which should avoid the extremes of superficial brevity and elaborate profuseness.

The style which the author has adopted is in the highest degree pleasing and yet without ornament. It is a simple narrative style which, on account of its clearness and freedom from any attempt at rhetorical display, charms and impresses. The student who is seeking elementary knowledge of disease will find it here. The practitioner who must apply the knowledge to the case in hand, and who must have a faithful account of types of disease, as well as of the special course a disease takes when modified by individual constitution and circumstances, will not turn to these pages in vain.

The plan has been chosen of indicating, as far as possible, the formulæ, the combination of remedies which, in the experience of the author, has proved most beneficial in a given case, and this plan, though of course open to some objections, in the main serves a good purpose, in very materially facilitating the labor of the practitioner.

In no work on the practice of medicine have we met with such explicit directions regarding the proper method of studying disease, on the acquirement of which depends, to so large an extent, success in diagnosis and hence in treatment.

Under the head of definitions and observations of disease, physiological observations, pathological observations, etc., the author has presented most excellent introductory chapters, which can not fail to convey to the student the nature of the land he is to explore, and aid him in directing his efforts rightly in mapping out the paths by which he is to attain theoretical and practical proficiency in medicine, as well as those paths which are to be avoided as leading only to the labyrinth of theoretical speculation, barren of practical result. We have seen no book on the Practice of Medicine better adapted as a text-book to the wants of the American student than this, and we apprehend that it will receive recognition by American colleges as the text book on Practice *par excellence*.

Critical examination will disclose few imperfections, for a work of this magnitude. It may be said that the author has been too prone to regard his dicta as incontrovertible facts, but he has, for the most part, given his reasons for the conclusions arrived at, and his opinions are expressed with the positiveness of conviction.

In etiology, it may be said in general terms, that the germ theory has been accepted. Thus diphtheria is defined to be "an acute specific infectious and contagious disease prevailing epidemically, a general disease affecting the whole organism, but with peculiar local symptoms produced by a specific inflammation depending upon a specific poison. Typhoid fever is defined to be a specific fever produced by a peculiar poison usually found in connection with putrefying

organic substances, particularly fecal matters in privies and sewers, the poison being conveyed to the system by water and other ingesta, and through the air.

The book, while recognizing pathology as the foundation of scientific medicine, and symptomatology and diagnosis as essential guides in the care and management of the sick, regards the practical cure of patients as the crowning object of all medical study, and accordingly this end has been kept constantly in view, and the result has been to make the book an invaluable one for every day reference for practical suggestions in regard to treatment.

It is of course impossible, by a mere mention of some of the more conspicuous merits of the book, and by giving a skeleton of its arrangement, to present to our readers the manifold minor excellences which will commend it on closer inspection. We can only say that because it is an American work, and treats of American diseases in what might be called an essentially practical American way, it deserves, and doubtless will command, an extensive welcome by the profession of this country.

It is tastefully bound, and in every respect well gotten up by the publishers.

LECTURES.

CLINICAL REMARKS ON EXTENSIVE BURNS OF THE FACE AND HANDS—DOUBLE CLUB FOOT AND CONGENITAL PHIMOSIS.

BY

ALFRED C. POST, M.D.

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CASE I.—Female, was operated on June 16th, for burns of hands and face resulting from explosion of gunpowder. The thumbs and fingers are now considerably distorted; the face is without much deviation from the normal, except the left angle of the mouth, which is dropped down. She recovered from the effects of the old burn last summer, except a cicatricial condition of the integument, but there was a fresh attack of inflammation, affecting the skin and cellular tissue, extending over the lower part of the forearm and upper part of the hand. In that condition I had the patient etherized, and applied Pacquelin's cautery, penetrating the skin into the cellular tissue at thirty-nine different points. They were about 2—3 centimetres apart from each other. The dressings were saturated solution of bicarbonate of soda. No other application relieves the pain of a recent burn so much as a saturated solution of the bicarbonate of soda. This application was kept up three or four days and then carbolyzed vaseline was applied. From the beginning to the end of treatment she suffered no pain whatsoever, but a relief from the preexisting pain and a marked diminution of inflammatory swelling. The patient is now in the condition in which she was—but somewhat better—before the recent attack of inflammation came on a few weeks ago. I do not propose, at present, to undertake the cure of the distortions occasioned by the cicatricial contractions. In the right hand you observe the thumb is somewhat drawn backwards. It is drawn forwards at the articulation of the metacarpal bone and carpus, and drawn backward at the articulation of the distal phalanx with the metacarpus. The little finger is bent at a right angle at the articulation of the first phalanx with the metacar-

pus and second phalanx with the first. The ring finger is bent in the same way and to the same extent. In the left hand there is dislocation of the second phalanx of little finger upon the first. It is bent forwards at an acute angle, while the first phalanx is bent backwards upon the metacarpus, and the ring finger is bent in the same direction, but to a much less degree. The other fingers are drawn a little backwards in a state of hyperextension, but they can be drawn forwards. The thumb is very much in the condition of the right hand.

In order to treat this effectually it will be necessary to make very free divisions of the cicatricial hands which draw the phalanges into a distorted condition, and then to stretch them upon a splint and apply a carbolized dressing. I think I shall be able to restore these different members nearly to their normal position, and the patient will probably enjoy some motion. In regard to the face I think the position of the mouth can be improved, and perhaps something may be done to remove the prominence of the cicatrices. It cannot, however, be restored entirely to its normal appearance. If only a small portion of the face were involved we could engraft some skin from the lower part, but the lesion is too extensive here for such a procedure.

CASE II.—Double Club-foot.—Talipes Vari.—Treatment was commenced when the child was twelve weeks old. The cure consisted in bringing the parts as nearly as possible in their normal position by hyper-extension, then applying adhesive straps and bandages to retain them so. Then I used iron compresses to support the foot and since that time felt shoes. At this period of life it is better to avoid division of the tendons. You see now that the foot is very little distorted, and when I turn it with the hand can be brought into a state of talipes valgus, the opposite condition to that which it first possessed. In the beginning the foot was very much distorted and very rigid. You observe the adhesive plasters I use are double. This because they are spread on thin muslin. If spread on cotton flannel they can be used single.

CASE III.—Congenital Phimosis Complicated with Gonorrhoea.—A congenital phimosis is more difficult to relieve than when occurring in consequence of gonorrhoeal inflammations. [Patient was etherized.] In administering anæsthetics you should always observe certain precautions. First, the patient should have an empty stomach. He should take a light early breakfast and no after-meal, so that there shall be no indigested food in the stomach at the time of operation. Secondly, there should be no pressure upon the throat, chest, or abdomen, to interfere with perfect freedom of respiration and circulation. Thirdly, the patient should be in a recumbent position, with his head as low nearly as possible. The use of anæsthetics in a dentist's chair, or upright position, is always objectionable. In administering chloroform you always run some hazard of destroying the patient's life. Ether is always an entirely safe anæsthetic. In certain conditions of organic heart disease with extremely feeble heart action there is danger in the use of any anæsthetic. Also in serious organic disease of the brain, especially in the lower part of the brain or medulla, and where there is any tumor pressing the air passages, larynx or trachea. If you administer ether while the patient has a full stomach, you are not only annoyed by copious vomiting during the administration, but there is some danger of the indigested food, as it passes from the stomach to the fauces, entering the larynx and occasioning suffocation.

I have in my hand a forceps made with blades moving parallel to each other. This holds the prepuce much better than the instruments ordinarily used for that purpose. Now when I relax the hold of the forceps the stricture probably still remains. I have taken off the integument and you observe that the mucous membrane still forms a stricture. This is easily managed by inserting the blades of the scissor and making a longitudinal division. The next thing is to stitch the integument to mucous membrane. The parts are then washed with carbolic acid 1 to 40.

After an operation of this kind you must take some pains to guard against unnecessary strain upon the sutures from erections. During the day this is obviated by applying soft rags moistened with ice-water upon the part, and at night by the use of bromide of potassium and hydrate of chloral. These fine sutures do not occasion so much irritation as two or three large coarse ones. After a day or two the intermediate sutures can be removed. There is abundance of integument left here to supply what prepuce is needed.

CLINICAL REMARKS ON A CASE OF JAUNDICE,

BY

WM. H. THOMSON, M.D.

Prof. Materia Medica, Lecturer on Clinical Medicine, University of the City of New York, Visiting Physician Bellevue and Roosevelt Hospitals, etc., etc.

CASE I.—Patient, male, has been sick two years. Complained at first of pain in the stomach, poor appetite, but cannot recollect when jaundice first came on.

This fact, gentlemen, causes us at once to exclude one of the common causes of jaundice, viz., biliary calculi. A gall stone entering the gall-duct is characterized by agonizing pain, coming on suddenly. On the other hand an insidious, imperceptible approach of a disease characterized by jaundice and mere tenderness, without paroxysmal attacks, points to some other cause than gall-stone.

The earliest indications as to whether bile is flowing into the intestine or not, is the urine. Long before the discoloration in the mucous membranes of mouth, cheek and conjunctiva becomes apparent, the urine is found to be loaded with the elements of bile. Patients will notice that the urine was coffee-colored, or very dark-colored, or black, before the jaundice began to show itself in the eye. In this way the kidneys remove the excess of bile; but when they begin to be irritated, we have uneasiness in the back and other symptoms of obstruction to the free circulation of the bile.

The prognosis is not very serious in jaundice until the urine commences to lose its specific gravity. As soon as cerebral symptoms of cholæmia occur, they are accompanied by a decided fall in the specific gravity of the urine, which falls to 1006 and 1004. It is very much debated whether the cholæmia is the cause of the serious symptoms, or the elimination of urea as the result of liver disease.

On examining this patient's tongue we find it somewhat coated. The majority of tongues in liver troubles are perfectly natural. A coated tongue does not mean biliousness. Those cases caused by impaction of gall-stones are not characterized by a furred tongue. The pulse is slow, weak, and very compressible. The temperature in jaundice is subnormal, if there is no inflammation present. Patients going about with jaundice should wear underclothes in summer, for the following

reasons: First, their temperature being habitually low they are susceptible to cold, and thus cause increased congestion of the liver and portal circulation. In chronic liver trouble the slightest chill to the surface of the body increases their biliousness. Secondly, the skin should be one of the great sources of elimination. It will throw out a great quantity of bile. Very frequently during the night, if the man perspires, the linen will be discolored. Hence the action of the skin should be kept up all the time. No diaphoretic can act when taken as medicine, unless the patient is kept in bed. If he walks about you must cover him so much that he is very uncomfortable in order to get up sweating.

Every case of jaundice is a case of obstructed hepatic circulation, *i. e.* portal circulation. Hence you should exclude from the diet the elements that require emulsification of the biliary secretions. No fat, butter or cream should be given to the patient. He can be allowed free starch principles. He may take meat. Sometimes an attack of biliary colic will be caused by the eating of salad or cream.

Inspection here reveals the following things: First, most likely, ascites, not certainly, because all this swelling may be due to tympanitis. We do not think it is tympanitis on account of the umbilicus, which is beginning to protrude a little. When water is collecting in the abdomen it pushes the umbilicus out; when gas collects in the intestine it depresses the umbilicus from the fact that the gas is in the intestine itself and water in the peritoneum. Again, we suspect this to be true ascites from the shape of the abdomen, *viz.*, its bulging more at the sides. In tympanitis the vertical diameter is the greatest. Moreover, I can see all over the abdomen enlargement of the veins.

On palpation I get the sensation of fluctuation. In the middle the palpation is tympanitic and flat on the side. On percussing the abdomen I get a loud sound, which is tympanitic, of long duration. On the side the sound is not loud, and the duration is very short. The quality is rather wooden.

On making pressure on the veins I notice distinctly that the lower part becomes faint and the upper part remains clear. Therefore I reason that the blood is coming down instead of rising up. This is one of the signs of obstruction to the portal circulation by something in the liver itself. It is seen in cirrhosis repeatedly. Instead of passing through the liver the blood makes a round-about course, and will sometimes inosculate with one of the mammary veins and run down the deep epigastric into the femoral and then pass into the vena cava ascendens. Whenever you have a great deal of interference with the function of the liver, you get elasticity of the skin, in which it feels like a dead membrane, and can be pinched up in folds over the muscles all over the body. In chronic bronchitis, with dilatation of the right side of the heart, leading to congestion of the liver, in chronic heart disease as soon as the mitral valve tends to give way, and in cirrhosis of the liver we observe this feature. In acute affections of the liver this is not observed. Moreover, in Bright's disease or phthisis we do not have the skin presenting in folds. It follows the wasting muscles almost down to the bone. In making a diagnosis for fatty liver, we commence with pressure on the epigastrium to find any tenderness. In acute liver congestion that tenderness means gastric irritation due to hepatic congestion. Where this tenderness exists you cannot get a particle of quinine into the stomach. Hence, in bilious fever you must reduce that tenderness. This can be done in extreme cases by applying two or three leeches to the epigastrium.

There is a swelling above here, which is not a tumor, but an infiltration. It is very doughy and the resistance is muscular. If it were a tumor we would find some hard nodules. Instead of this I find a uniform surface. I suspect that the jaundice in this case is really due to symptoms of inflammation of the liver. It may have begun first as a case of gastro-duodenitis. We cannot settle that now, as we know nothing about the history of the case.

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK.

STRANGULATED INGUINAL HERNIA—OPERATION.

SERVICE OF

GEORGE A. PETERS, M.D.

L. S., native U. S., single, a porter, admitted Sept. 20, 1886.

Three years ago patient strained himself lifting. A few days after noted a swelling the size of a pea in right groin. This grew larger, but was easily reducible; wore a truss until about six months ago. Hernia would frequently come down, but was easily replaced. This afternoon during hard work, the hernia came down and patient could not replace it. Had severe pain within three-quarters of an hour, also nausea and vomiting. He sent for his physician, who was unable to reduce the tumor, and who sent him immediately to the hospital. Reached here three hours after attack.

Admission.—Patient in much pain; suffering from nausea; no vomiting; face pale and anxious. Examination shows a tumor the size of two fists, pyriform in shape, occupying right side of scrotum and plainly extending into inguinal canal, tense and hard to the touch and very tender, giving cough impulse and flatness on percussion.

Treatment.—Attempts at reduction cause so much pain that ether was administered. Taxis employed for half hour, for five minutes at a time. Sol. morph. mag. mvj; ice cap to tumor and patient sent to ward. Attending surgeon notified, and on his arrival half an hour later ether was again given, taxis unsuccessfully employed and operation decided upon.

Operation.—Ether; dorsal decubitus; right leg flexed and rotated in; incision made with scalpel $\frac{1}{2}$ inch from median line, $3\frac{1}{2}$ inches long, so as to cover external ring; skin and superficial fascia divided; successive layers divided upon a director until external ring was exposed; constriction found here; Peters' hernia director passed through ring and constriction divided with curved probe-pointed bistoury, and tumor easily reduced, the sac not being opened; all bleeding points ligated with carbolized catgut; horse hair drainage introduced; wound sutured with carbolized silk sutures; carbolic compress and bandage applied.

Sept. 22nd.—Chill yesterday at 6 p.m., aborted with chloroform gts. x, followed by a temperature of 106° ; gave quinine grs. x.

Sept. 23rd.—Dressing removed; sutures and drainage removed; no union and edges of wound gape widely, exposing deeper portions covered with sloughs; right side of scrotum swollen and reddened; ordered quin. sulph. grs. x. t. i. d. and milk punch twice a day, and poultice to groin and scrotum.

Sept. 24.—Ordered applications of tinct. benzoini co. to wound once a day and poultice continued.

Sept. 25th.—Incision made into scrotal tissues, sloughs removed from wound with scissors.

Sept. 26th.—Discharge. Dressed with bal. Peru and poulticed.

Sept. 29th.—Wound looking nicely, sloughs cleaned away.

Oct. 6th.—Discharged cured.

FORMULARY AND POINTS IN PRACTICE.

IN CARDIAC DISEASE WITH IRRITABILITY OF THE STOMACH.

- R Tinct. digitalis..... 3 1—2
Tinct. card. co..... 3 6
Acid. hydrocyan. dil..... min. 20
Aque camphoræ..... ad 3 8
M. Sig. One sixth part three times a day.

TO RELIEVE SLEEPLESSNESS WITH CONSTIPATION.

- R Extract conii.
Extract. hyoscyami.
Pilulæ Hydrargyri..... aa grs. 3
Pulv. ipecacuanhæ..... gr. 1
Mix and divide into 2 pills to be taken at bed time.

NARCOTIC ENFEMA IN CANCER OF RECTUM, UTERUS, ETC.

- R Ext. opii liquidi..... min. 20
Tinct. belladonnæ..... min. 15—30
Mucilaginis amyli..... 3 2

TO ALLAY PAIN OR IRRITATION ABOUT THE PELVIC VISCERA.

- R Pulv. opii..... grs. 1—2
Saponis duri..... grs. 10
Mix for a suppository.

ESPECIALLY USEFUL IN DISEASES OF THE BLADDER, UTERUS AND RECTUM.

- R Ext. opii..... grs. 1—3
Ext. belladonnæ..... gr. ½
Olei theobromæ..... grs. 20
Mix into a suppository.

ANODYNE IN PHTHISIS WHERE OPIUM CAN NOT BE BORNE.

- R Lactucarii..... grs. 8—10
To be divided into two pills, to be taken at bed-time.

IN NEURALGIC DYSMENORRŒA.

- R Tr. cannabis indicæ..... min. 20
Spts. juniperi..... min. 30
Spts. ætheris..... min. 45
Tinct. aconiti..... min. 10
Mucilag. acaciæ ad..... 3 12
Mix for a draught to be taken at bed-time.

FOR THE RELIEF OF SEVERE PAIN AND TO AFFORD SLEEP IN LINGERING DISEASES.

- R Ext. opii..... grs. 1—4
vei morphiæ hydrochlorat..... grs. ¼—1
Ext. hyoscyami..... grs. 5
Make into two pills to be taken at bed time.

A VALUABLE PURGATIVE IN THE CEREBRAL CONGESTION OF STRONG SUBJECTS.

- R Pilulæ colocynth. et hyoscyami..... grs. 56
Antimonii tartrat..... grs. 4

Divide into twelve pills and order one to be taken every night at bed time.

CROTON OIL SUPPOSITORY.

- R Olei crotonis..... min 2
Olei theobromæ..... grs. 30

Make a suppository to be introduced into the rectum early in the morning.

IN SCIATIC OBSTINATE NEURALGIA, ETC., WITH CONSTIPATION.

- R Olei crotonis..... min 1—2
Pil. colocynth co..... grs. 30
Pil. assafoetidæ co. grs. 60

Make a mass—divide into eighteen pills and order three to be taken every night at bed time.

SELECTIONS FROM JOURNALS.

THE ANTIDOTES FOR STRYCHNINE. By ROBERT BARNES, M. D.

Having occasion to study, experimentally and clinically, the action of strychnine, I was interested in the notice of the experiments of Messrs. Greville Williams and Waters on the antidotal action of "*b* lutidine," in the number of the *Journal* for March 11th. I earnestly hope that further experiments will be carried out, to test the correctness of their theory, in some country in which scientific research is not paralyzed by the tyranny of ignorance. My immediate object is to invite attention to the value of nitrite of amyl in strychnine poisoning. This is not mentioned in the text-books; but it is probably much more efficacious than any of those which are commonly specified. Antidotes, it must be premised, are of two kinds: 1. The true antidotes; those that destroy the poison by decomposing it, or by annihilating it in essence, or by producing inert combinations. These are the chemical or mechanical antidotes. 2. Those, which, not altering the poison in its essence, counteract its action upon the organism. These are the physiological antidotes. In our endeavors to rescue a patient from the action of poison, we have three indications: 1. To discharge the poison from the stomach, if it have been introduced by that organ, by the aid of the stomach-pump and emetics. 2. To administer antidotes that destroy or neutralize the poison in the stomach, or in the system; 3. To administer means that will sustain the patient against the action of the poison—in short, keep him alive until the poison is exhausted.

To apply these principles to strychnine, I am unable to judge how far the new organic base *b* lutidine belongs to the chemical or physiological class of antidotes. Strychnine is, unfortunately, a very stable substance, not easily attacked in its integrity; nor is it easily discharged in substance by vomiting or the stomach-pump. By the time that symptoms of strychnine-poisoning are developed, enough may have entered the circulation to lead to a fatal result, without absorbing more from the stomach. In practice, we shall commonly be reduced to the use of those means which counteract its toxical influence.

There is good evidence to show that strychnine kills

by repeated violent shocks, exhausting the nervous centres, especially the respiratory and spinal centres; and that, if these shocks could be moderated or averted, the patient might be kept alive until the danger had passed, by the elimination of the poison. I had the good fortune, in the pre-hysterical period of legislation, occasionally to assist Marshall Hall in his experiments *ad hoc*. It is well known now that a frog, poisoned by strychnine, may not exhibit any tetanic action if it be kept absolutely quiescent; but that the same dose will kill it, if, by stimulating the diastaltic functions, as by touching its body, or even by shaking the table on which the frog rests, tetanic action be evoked.

The first imperative rule to observe, then, is to avoid every possible cause of physical or emotional disturbance. Agents that have to be administered by the mouth contravene this rule; the attempt to swallow will excite a tetanic fit. Agents that act by inhalation do not contravene this rule. Of all the agents with which I am acquainted, which possess any virtue in stilling the diastaltic function, and in subduing muscular spasm, not one equals the nitrite of amyl. In obstetric practice, we are met by the formidable conditions of morbidly exalted, diastaltic, and spasmodic action: puerperal convulsions; and that irregular action of the uterus called hour-glass contraction. Both these conditions are physiologically allied to tetanus. In my *Obstetric Operations* (third edition), I recommended nitrite of amyl to subdue irregular and excessive action of the uterus. The value of chloroform in counteracting puerperal convulsions is now familiar; but I believe nitrite of amyl is even more valuable. By applying this principle, I have had the satisfaction, as I believe, of saving several lives; and amongst them one or two women who had signed antivivisection petitions. I did not stop to inquire if they were willing to be saved by practice upon vivisection; but I should hope to be forgiven. The means by which the necessary knowledge was obtained may, in their particular cases, be condoned by the end to which that knowledge was applied.

I have had the rare opportunity of treating a case of strychnine poisoning. I was called to a gentleman who had inadvertently swallowed a poison dose. I saw him within a short time of the accident. He was in the most violent tetanic spasms; opisthotonos was so marked that he was arched back, and respiration was nearly suspended. Pending the fetching of the nitrite of amyl, the fits recurred at short intervals with unabated energy. I obtained the assistance of a young medical friend, who sat by the bedside, diligently watching, and making the patient inhale nitrite of amyl the moment the premonitory twitchings or facial expression appeared, and always with the effect of averting or greatly moderating the fits; and, to make the evidence complete, when the warning was not seized in time, the fit appeared in nearly its original intensity. This treatment, continued during sixteen hours, resulted in the recovery of the patient. It was impossible to determine with precision the dose taken. We had only the physiological test to satisfy us that he had taken enough to destroy life.—*Brit. Med. Jour.*

SALICYLIC ACID TREATMENT CONTRASTED WITH OTHER REMEDIES IN THE TREATMENT OF ACUTE RHEUMATISM.

By JAMES RUSSELL, M.D., F.R.C.P.

The following observations are based upon 90 cases of acute rheumatism; 35 (uncomplicated) having been

treated by remedies in use before salicylic acid, 55 treated by salicylate of soda or ammonia. The circumstances of the cases are alike in all.

I compare the two groups (1) with reference to the number of hours occupied by the temperature in dropping to 99°; (2) with reference to the respective stay in hospital.

1. In 35 cases treated by various remedies (uncomplicated) the average number of hours occupied in the temperature falling to 99° was 248; the extremes, 12 and 1,056 hours. The average stay in hospital (27 cases) was 39 days.

2. The cases treated by salicylate salt must be subdivided into (a) 43 cases in which the remedy acted successfully; and (b) 12 in which it failed; but, as in 4 the failure probably resulted from imperfect administration, the number of failures must be reduced to 8.

(a) In 43 successful cases, the average number of hours in temperature reaching 99° (39 cases) was 38; the extremes were 6 hours and 72. In 16 cases, it was 30 hours or fewer. The average stay in hospital (37 cases) was 38 days; the extremes, 10 days and 138. The reduction of the local symptoms, particularly of pain and heat, generally kept pace with the decline of temperature, or even anticipated it. In 20 cases, it is expressly stated that the relief of pain was effected within 24 hours; the same thing probably occurred in others. In 4, it began with the first dose. Hence, whilst the average residence in hospital was hardly lessened by the salicylic acid, the period was passed in comparative immunity from the symptoms of the disease. The duration of residence was determined by relapses, and also by the need of caution in guarding against their occurrence. Of the 43 cases of successful treatment, a relapse occurred in 11; a second in 4. In all, the relapse was brief and speedily controlled. The duration of the salicylate treatment strikingly attests the varied character of the disease. Taking 22 cases in which no relapse had occurred, the number of days during which the remedy had been given varied between 2 and 17. In two cases of relapse, the salt had been taken for 19 days.

(b) In 8 cases the remedy failed. They were severe. The average residence in hospital (6 cases) was 75 days. One death occurred. Four patients were abnormally neurotic.

Accidents.—Of the 55 cases in which the salicylate salt was given, vomiting occurred in 9, chiefly after doses exceeding 10 grains. Delirium occurred in 6; in 2 it was protracted, but was free from alarming element; in 1 it was followed by death.

Two deaths have occurred whilst the patient was taking the medicine. One was in a boy, aged 15, of weak intellect, who had been taking ten grains every four hours with great relief, and without any sign of disagreement except slight vomiting for six days. After screaming through the night, without apparent cause, he died suddenly in the morning; temperature 99.6°. The lungs were highly œdematous, and much congested. The right auricle was gorged with blood. In the second case, a man of nervous temperament had taken ten grains every two hours for two days without relief. The dose was then doubled, and two days afterward was raised to 25 grains. The rheumatism was relieved, and the dose was lowered to 12 grains on the same evening, and to 8 on the following morning. He had been depressed and delirious through the night. The delirium continued severely through the day, and he died suddenly in the night; the temperature, which had sunk to 100°, rising to 111.5° immediately before death. The right side of the heart was

moderately full of dark tarry blood; considerable echymoses under the serous membranes.

Among the 43 successful cases are 5 of pericarditis, in all but one slight and of brief duration. In 3, it preceded the remedy; in 1, it was discovered on the day after commencement; in the fifth case, severe and ultimately fatal pericarditis set in three days after the rheumatic symptoms had been removed by the salicylate.—*Brit. Med. Jour.*

THE PREVENTION OF PROSTATIC OBSTRUCTION.

Mr. Reginald Harrison has been led to believe that the effects of enlarged prostate may be in great measure prevented by proper treatment. His attention was first called to the point some years ago by the case of an elderly gentleman who had been told, years before he came under Mr. Harrison's notice, that his slight urinary troubles were the early indications of an enlarged prostate. In consequence of his alarm he never allowed a day to go by without passing a full-sized gum-elastic bougie. Post-mortem examination showed that though the middle lobe was considerably enlarged, it was deeply bisected by a canal which secured the "maintenance of the water way." In consequence of the apparently good effect of constant catheterism in this case Mr. Harrison has since advised persistent dilatation in cases in which enlargement of the prostate seemed imminent or had already commenced.

On the recognition of symptoms indicating that enlargement of the prostate has commenced, he at once urges the regular and persistent employment of the prostatic bougie. For the most effectual carrying out of this treatment he instructs the patient, as early as practicable, in the introduction of the bougie, and when he has determined the size of the instrument, requires him to use it daily, or at least thrice a week, on going to bed.

"In the employment of instruments for this purpose it is of importance that a kind should be used which is efficient, and at the same time incapable of doing harm to the parts when placed in the hands of a non-professional person of average intelligence. After many trials of different shapes and descriptions of bougies I have come to the conclusion that the instrument which best answers the purpose is the *bougie olivaire*, of which I have selected some different sizes. The olive-shaped dilators exercise as much pressure as can be desired on the obstructing portion of the prostate, whilst by reason of the small size of the stem no tension is thrown on the most sensitive part of the urethra, namely, the orifice.

"I have these prostatic dilators made from two to four inches longer in the stem than ordinary urethral bougies, in order that the olive portion may be fairly passed into the bladder. In this way pressure is exerted on the prostate as the expanded part passes into the bladder and again as it is withdrawn. It is very important that the instrument should be used in this way, as the dilatation exercised by the bulb on the withdrawal of the bougie corresponds with that of the urine as it is expelled from the bladder.

"At first the instrument may be passed once in forty-eight hours, subsequently twice, and in cases where the prostate has already become large I have caused it to be used night and morning with most satisfactory results.

"When the prostate is already large and the bladder is never completely emptied, I use a catheter similarly

shaped to the prostatic dilator; in order that all the urine may be removed at the same time that dilatation is practiced."

In addition to mechanical measures Mr. Harrison lays stress upon certain points in the hygiene of the bladder which should be regarded by persons suffering from the earlier symptoms of enlarged prostate. These points, somewhat abridged, are as follows:

(1) Avoid being placed in circumstances where the bladder cannot be emptied at will.

(2.) Avoid checking perspiration by exposure to cold, thus throwing additional work on the kidneys, the constant wearing of flannel being a means to this end.

(3.) Be sparing in the use of wines or spirits exercising marked diuretic effect, either by quantity or quality. Diuretics have no effect in removing residual urine.

(4.) Tolerable constancy in the quantity of fluids daily consumed. A large excess over the daily quantity of fluids consumed may lead to the over-distention of a bladder hovering between competency and incompetency. The retention thus occasioned has frequently been the first step toward establishing a permanent if not a fatal condition of atony of this organ.

(5.) It is important to test the reaction of the urine from time to time. When it has become permanently alkaline prudence and comfort indicate the regular use of the catheter.

(6.) Some regularity as to the time of performing micturition should be inculcated.—*Bost. Med. and Surg. Jour.*

SYPHILITIC RE-INFECTION.

This question of the possibility of a re-infection by syphilis is a very important and interesting one, touching as it does upon the possibility of a cure of the disease, for it is generally believed that, while the patient is under the influence of the first infection, he is not obnoxious to a second.

In the *Medical Journal of the Medical Sciences* for April, 1882, Dr. F. R. Sturgis reports the history of a man, who, apparently free from previous disease, entered the hospital with two initial lesions, followed by a macular syphilide, osteocopic and muscular pains, and a double iritis. Under treatment, extending eight months, his symptoms entirely disappeared and remained absent for fifteen months from the last date of his taking medicine. He then entered the hospital again with a couple of lesions of the genitals, which appeared three days after coitus, no other connections having been indulged in for a period of five months. At the time of his entrance these ulcers were already a month old, and presented the appearance of initial lesions. Auto-inoculation practised with the matter from one of these ulcers produced an apparently positive result, but the resultant pustule was short-lived, and did not have the characteristics of the simple venereal ulcer. It was followed by a macular syphilide, osteocopic pains, and other symptoms of an early syphilis.

TRUE ANEURISM OF THE BRACHIAL ARTERY CURED BY COMPRESSION WITH A CONICAL PAD.

Cases of true aneurism of the brachial artery are of great rarity. After a careful search through the literature of the subject, Dr. L. Emmett Holt finds (*American Journal of the Medical Sciences* for April, 1882) thirteen cases of brachial aneurism which seemed

to be of spontaneous origin, *i. e.*, not directly traceable to a wound or injury of the vessel. Abstracts of these cases, as well as one occurring in Dr. Holt's own experience which was cured by compression with the conical pad, are reported, with a careful study of the age, sex, site of the disease, exciting causes, and methods of treatment of the various cases.

CASE OF CÆSAREAN SECTION.

In the *American Journal of the Medical Sciences* for April, 1882, Dr. George McClellan publishes an account of a case in which he performed Cæsarean section under peculiarly trying circumstances. The woman was a Canadian Indian basket-maker, 38 years old, and the mother of seven children. She had always had difficult labors, but was only attended by a midwife, a member of the same tribe. She had been in labor forty-eight hours, and the physician who saw her first had applied the forceps and attempted version, but had not succeeded, the head with an arm and foot being engaged in the superior straight. As it was found that the child was dead and no change could be made in its position, Cæsarean section was performed. The woman died.

THE TREATMENT OF SYPHILIS WITHOUT MERCURY—A NEW ABORTIVE METHOD.

Dr. J. Edmund Guntz, of Dresden, in a work just published by him, makes some novel announcements regarding the treatment of syphilis. If true, they are of the highest importance, for he claims to be able "not only to do away with mercury in syphilis, but in a large proportion of cases to abort the disease."

It is now over twelve years since Dr. Guntz first wrote on this subject. He is, therefore, not a novice in the matter. In 1869 he advocated the use of bichromate of potassium as being a useful drug in treating syphilis.

He could not prove any very great advantages for it, however, at the time. It acted slowly, and was apt to disturb the stomach, but being convinced that there was something in the drug, he set at work to find some way of getting more into the system without producing functional disturbance. For a time he combined the bichromate with the nitrate of potassium, and gave pills containing about 1-15 gr. of each three times a day. With these pills he produced "remarkably favorable results." Yet the action was slow, and when a prompt amelioration of symptoms was needed, as in malignant cases, the remedy would hardly meet the expectations.

From the favorable results obtained by giving the various minerals in solutions with carbonic acid water, our author was led to attempt administering chromium in the same way, and with, as he now claims, very great success. He found that much larger doses could be taken in this form, and that a profounder impression on the system could thus be made. As a maximum dose he was able to give three and a half grains (.3 grammes) daily of bichromate of potassium in about 600 grammes of carbonic acid water, this being divided into five doses. Larger amounts provoked vomiting.

This "chromwater," as he calls it, could also be given daily for weeks and months in all forms of syphilis without detriment to the health.

Having described his method of giving the drug, Dr. Guntz discusses its action upon the initial stage of syphilis and upon the disease itself after its full development in the system.

In estimating the possible value of any drug as an abortive of syphilis, the numerous sources of error are

referred to. The existence of and difference between true chancre and chancroid are admitted.

The following are his statistics:

Within one and a quarter years the author treated 194 cases of chancre. For a comparative study he selects only 85 of these, since in the others there were sources of error. In 14 of these 85 cases the sores were cauterized. The remainder were treated with nothing but the chromwater; and in 47 of them constitutional syphilis failed to appear. In order to avoid every possible chance of mistake the author excludes 10 of this 47. Even then there were left 37 patients, or over one-half, who, when given chromwater alone, developed no after-symptoms. It is not stated, however, how long they were watched, except that 18 were under observation for 159 days.

Still more favorable results took place with the 14 cases in which the initial lesion was cauterized. Of these only two developed symptoms of constitutional syphilis.

Of these 85 patients, therefore, presenting, as Dr. Gunz asserts, initial lesions of syphilis, 47 under the "chromwater" treatment, remained entirely free from the disease. This is certainly a very extraordinary showing and will be received with a great deal of incredulity.

If this new agent is given after constitutional symptoms make their appearance, its action is to ameliorate the disease and hasten its course. It is efficient even in cases where mercury fails, and it acts more pleasantly and promptly. In fact, the disease is "in the shortest time definitely cured."

The author has, for several years, used the chrome salt exclusively in the treatment of syphilis, and has given it in more than a thousand cases. He thinks that the day of mercury is over. He has recorded the history of a large number of cases.

Dr. Guntz has also used his chromwater with the best results in diphtheria.

He suggests that the drug acts by reason of its powerful oxidizing properties. Without committing himself to any germ theory, it is thought that there is certainly a specific poison which develops in the various contagious diseases. And in chromium we have an agent that is inimical to the syphilitic poison while it does not harm the system itself, but rather benefits it.

The importance of Dr. Guntz's claims, and the caution with which they should be received, are alike apparent, and need no comment.—*Medical Record*.

MEDICAL NOTES AND NEWS.

Psychology and Witchcraft.—Dr. George M. Beard read a paper recently before the New York Academy of Sciences, the subject being "The Psychological Explanation of the Salem Witchcraft Excitement and the practical lessons derived therefrom." A large number of members and their friends attended the meeting. On the blackboard behind the platform was drawn an illustration which the doctor used to exemplify various conditions of the convalescent brain. He opened the lecture by presenting to his audience two boys, both of whose minds were diseased. He had scarcely passed his hands over the face of the older lad when the latter fell upon the platform in convulsions. He then brought forward the younger boy, who on being questioned looked intently at the top of the back of President Newberry's chair, where, he said, he saw a yellow bird. A moment later he was again asked what he saw, and he replied that he saw a hog

on the platform, and he gazed intently in the direction where he thought the animal was. Dr. Beard put his hand on the boy's head and said to the audience: "They are here; he sees what he wishes to see." The lecturer then went on to say that herein lay the witchcraft which cost nineteen persons their lives in Salem in 1692 and in the years preceding brought death to a million of persons in Europe. In 1695 the people of Salem began to feel that after all they had done wrong. Dr. Beard said that the condition of Whitaker at West Point was something similar to that of the older boy on the stage when they attempted to wake him up, and the evidence that proved his innocence was that which was used to prove him guilty. Several times during the lecture Dr. Beard referred to the Guiteau trial and pronounced him to be insane for the past twenty years.

At the close of the paper an interesting discussion ensued and several questions were propounded to the lecturer. In the course of his answers he said that spiritualism and kindred issues were signs of a progress in the brain from the mental delusions of witchcraft. The two boys on the platform were still asleep when the Academy adjourned and were awakened with some difficulty.

"Doctor" Richard C. Flower, of No. 439 Fifth avenue, paid a fine of \$200 in the Court of General Sessions recently for practicing medicine without a license.

The Coroner Question.—The subject of the reorganization of the office of Coroner, and the introduction of medical examination by experts in lieu generally of an inquest by a jury, has just been presented for the consideration of the two professions most concerned, by a committee of the Medico-Legal Society, in the following report, soon to be discussed by that body.

To the Medico-Legal Society:

The undersigned committee, appointed to consider and report upon the needed changes in the statutes of this State relating to the office and functions of Coroner, respectfully report that we have carefully examined and considered said statutes and the prevailing practice under them, with reference to the proposed changes, and the statute of the State of Massachusetts.

But believing that if we should formulate a bill to be submitted to the Legislature, and present it for the approval of the society, it would be likely to occasion discussion, and result in material changes, your committee have concluded that a recommendation of the principal features of the contemplated changes, would afford better facilities for their intelligent consideration, and that when they shall be determined, their embodiment into an act embracing the necessary details to make it efficient may be safely intrusted to a sub-committee.

The committee are substantially agreed in the opinion, that the principal changes needed are the abolition of the cumbersome, expensive and comparatively useless "coroner's jury," and the inefficient examination and inquest which generally prevail under the present system, and the substitution thereof of an intelligent, thorough and useful medical examination in all cases where a person shall have been slain, or shall have suddenly died, or been dangerously wounded, or found dead under such circumstances as require an examination or inquisition, and in proper cases a competent judicial inquest, the result of which

would materially aid the proper officers in the prosecution and conviction of criminals.

As a means of securing these results it will, in the opinion of your committee, be very important to provide for the appointment of experienced and competent examiners, and to that end to lodge the appointing power where it shall be as far removed as practicable from political influences, and enjoin absolute freedom from partisan considerations. It has also been the desire of your committee to effect the reforms contemplated without adding to the public burdens.

We have received reliable information that the Massachusetts law for the five years of its existence has worked acceptably, met public expectation and approval, and disclosed no defects except of minor moment, easily remedied; and we recommend the preparation and passage of an act which shall embody the general features suggested in this report, with such conformity to the spirit of that law as shall be consistent with the requirements of our State constitution.

As the office of Coroner is constitutional it cannot be abolished except by constitutional amendment, which would take at least two years to effect; and as the duties of Coroners, other than holding inquests, are quite important, we are of the opinion that the necessary changes may be effected with the retention of Coroners, who may serve a useful purpose under the new system proposed.

The committee are of the opinion that there should be one medical examiner in each of the Assembly Districts of the State, except in the counties of New York and Kings—in the former there should be four and in the latter two—to be appointed by the several County Judges, except in the City of New York, and there by the Chief Justice of the Court of Common Pleas, and should hold their office for the term of ten years and until their successors shall be appointed and qualify; to have a salary in said cities, payable quarterly, out of the city treasury; but we differ as to whether such salary should be fixed at four or five thousand dollars per annum, and therefore submit it to the judgment of the society.

The Assembly District examiners should receive for each view five dollars, and for a view and autopsy twenty dollars, and travel fee at the rate of five cents per mile, to and from the place of view, to be paid by the County Treasurer on proper audit.

It has been suggested that in several other cities of the State an examiner might appear to be necessary, and that the proposed law should provide that the Board of Aldermen in any city in the State might recommend such appointment and fix salary or compensation, to be paid out of the city treasury, on which recommendation the County Judge should appoint an examiner for said city; but upon this suggestion the minds of your committee have not met, and it is reported for the consideration of the society.

The general duties of a medical examiner should be to visit and carefully examine the body of any person reported or supposed to have been slain, or suddenly died, or mortally wounded, or been found dead under circumstances requiring inquisition, make an autopsy, if it shall appear to be necessary, to ascertain the cause of death; and if it shall appear to said examiner that there is no reason to suspect that a crime has been committed, he should be required to make a careful and detailed report in writing in duplicate of his examination and autopsy, if any, and deliver one without delay to the nearest Coroner, and the other to the District Attorney of the county; which report should also contain a statement of the probable cause of death,

to be duly verified; whereupon he should give the requisite burial certificate; and, in case the person shall appear to have been a stranger, and no relative or friend shall undertake his burial, give order for such burial at the expense of the county.

In case the examiners shall be of the opinion, from such examination, that a crime has been committed causing or contributing to the death of a person, or he shall entertain doubts upon the subject, he should so report, in addition to the other matters above suggested to such Coroner and District Attorney, and if he should deem it necessary, call a chemist to aid in the examination of the body, or of substances supposed to have caused or contributed to the death, and such chemist should be entitled to such compensation as the medical examiner shall certify to be reasonable, and no other chemical or medical examination or autopsy should be made at public expense.

On the receipt of the last-named notice and report, the Coroner should without delay institute and prosecute an inquest into the cause of such death, and the name or names of such person or persons who shall appear by said testimony to have contributed to said death should be duly certified by said magistrate and delivered to the District Attorney for his action; and in case it shall appear that said person or persons are at large, said magistrate should be required to issue his warrant for their arrest, and bind the witnesses to appear as such before the then next grand jury. It should be made the duty of any person who may become aware of the death or mortal wounding of any person, requiring view or examination as aforesaid, forthwith to notify the nearest medical examiner; and any wilful or culpable neglect so to do should be adjudged a misdemeanor.

It has been suggested that after the expiration of the term of office of the present Coroners their numbers should be materially reduced, as probably less than one-fourth of the cases for examination would require an inquest, and that those hereafter elected should be attorneys at law of the degree of counselor, so that all inquests might be confided to their supervision; but your committee have not united upon this scheme, and, therefore, submit it to the society. It is recommended that the mode of examination of the body and the particular facts which should be embraced in the certificate or report of the examiner should be minutely described in order to secure thoroughness, uniformity and statistical accuracy.

It is also recommended that in those counties where burial permits are not now required by law there should be inserted in the proposed act a provision requiring the same by the proper physician or Coroner before burial. The directions of the society are desired upon this point, and also upon the question whether it is desirable to prepare the bill and present it to the present Legislature.

For the purpose of presenting clearly the questions submitted by this report for the consideration and determination of the society, your committee beg leave to briefly recapitulate—

First. Shall "Coroners' juries" be abolished?

Second. Shall medical examinations be substituted for Coroners' inquests in cases where there appears to be no reason to suppose that a crime has been committed?

Third. Shall such an examination precede all inquisitions?

Fourth. How many examiners shall be appointed and by whom?

Fifth. What shall be their salary or fees and their term of office?

Sixth. Should the number of Coroners be reduced; if so, when and to what extent?

Seventh. Shall the law require burial certificates where they are not now prescribed?

Eighth. Shall the bill be prepared and submitted to the present Legislature, or shall it first be submitted to the society?

All of which is respectfully submitted 5th April, 1882.

D. C. CALVIN.

ALEX. B. MOTT, M. D.

CHARLES A. DOREMUS, M. D.

AUSTIN ABBOTT.

GEORGE M. BEARD, M. D.

WOOSTER BEARD, M. D.

Insanity from Drugs.—Members of the Medical Profession, especially those having had dealings with the insane, are earnestly requested to answer the following questions, fully, yet concisely. The subject is one of so much importance, medico-legally, and otherwise, and so very little is to be found upon it in works on insanity, that it merits the attention asked for it.

1. Have you ever seen any cases of insanity, temporary or permanent, or any deviation from the normal mental or moral state that could be traced directly to the use of a single large dose, or the continued use of Opium, or any of its preparations or alkaloids?

2. Of what type was such insanity? Give symptoms.

3. State patient's age, sex, civil condition, and occupation.

4. What was its duration and result.

5. State color of patient's hair, eyes, and complexion.

6. Was there any hereditary tendency to insanity, or any history of alcoholism, grave nervous disease, or any drug habit in the patient's ancestors?

7. What amount of the drug was used, and for how long a time.

8. What line of treatment was pursued?

9. Please answer the same questions regarding the use of Chloral Hydrate.

10. Please answer the same questions regarding the use of Bromide of Potassium, or any other drugs.

Stamps will invariably be returned. In all cases so requested, communications will be considered strictly confidential. Reprints of the article, embodying the results of such statistics, will be sent to each correspondent. Address, Dr. H. H. Kane, DeQuincey Home, Fort Washington, New York City.

New York's Refuse and Garbage.—A CIVIL ENGINEER'S EXPERIMENTS IN UTILIZING THE CITY'S CONDEMNED MATTER—THE FEASIBILITY OF CREMATION.—At the regular weekly meeting of the Farmers' Club, in room No. 22, Cooper Institute, recently, the order of the evening was the reading of a paper on "Utilizing Refuse and Garbage" by Mr. Henry R. Foote, civil engineer. After a few preliminary words Mr. Foote said the time has come when the important question, What can and what must be done with the garbage, ashes and condemned matter of cities? should be answered. New York was particularly interested in the matter. The inventive and progressive spirit of this age and the practical and theoretical farmers of this country ought to arrive at some definite conclusion about so important a subject. He had seen the great city of New York, with its fine harbor, where all the

commerce and navies of the world could ride at ease, struggling with a giant of destruction. That harbor was being made the receptacle and dumping ground of all the refuse of the city, and into it were thrown each year over one million cubic yards of dirt. The water roadway leading to it was becoming more and more filled up; its once beautiful waters were changing into a treacherous current, and the bottom of the bay, which formerly was the home of the choicest varieties of fish, had become a vast bed of dirt and filth. The beautiful villas which wealth and taste had erected along its shores had deteriorated in value by the litter and carcasses which were brought in with every tide. All around the city were acres of land now almost as barren as the desert of Sahara, but which, enriched by this same garbage daily dumped into the bay, might be changed into fertile fields.

A CREMATION PLAN.

He was in Philadelphia in 1876 attending to professional duties when he received a letter from an estimable and representative lady of New York, who asked him, "Can't you make a furnace to cremate garbage?" adding that there was a fortune to be got of the invention, and enclosing an extract from the *Herald*, the first paper, the speaker added, to propose this means of getting rid of the refuse of the city. On his return to New York he investigated the subject and became a student of the ash barrels. His examination showed him that their contents consisted of a mass of almost every conceivable matter, and that unlike the custom prevailing in other cities the ashes and garbage were not separated. The examination also suggested a solution of the problem. It was necessary to destroy the matter without creating offensive odors, make the products easy to handle and the system cheaper and an improvement on that in vogue. The problem was to construct an apparatus in which the garbage would burn itself, to operate without disagreeable results and to carry on the work in a central locality where the accumulations of matter were greatest. He constructed a furnace like a blast furnace, containing a shaft, in which at the base was a blast of air forced in by a blower. The ashes and garbage were dumped in at the top of the furnace. From the top was run a pipe to carry away the gases, and on the inside a cone, the purpose of which was to form a gas chamber. The furnace was started by burning coke or charcoal. The first result of his experiments was that the garbage was consumed but that there was left a clinker which adhered to the side of the furnace. He thereupon added a material which would flux it. Then came another problem, to construct a plan by which the organic and mineral matter would be separated. After a number of trials and experiments he succeeded. He made his furnace a closed furnace and effected other changes so that he obtained from the ashes and sand a solid substance like stone, from the vegetable fibre a fertilizer, and from the liquid portion ammonia. In conclusion he said that if farmers could get cheap manure it would be a great thing. At present they paid too much for it—\$4 a ton. Now the equivalent of a ton in this form, he showed them, could be got for forty cents. It was practical to convert every cart load of garbage in this city into those three products, each of them useful. His furnace was twenty-four feet high and reduced fifty loads a day.

The Croton Supply.—In a recent number of *Science*, Mr. Michels, the editor, sets forth at length his views on the water supply of this city. The article is

illustrated with maps of the Croton watershed, and enlarged microscopic views of various vegetable forms found in the water. The quantity of water furnished by the present reservoirs Mr. Michels believes to be ample for all legitimate purposes. What is wanted is not so much an additional reservoir as a better distribution of the present supply. Mr. Michels favors the cistern system, as adopted in London and other places. Under this system every householder has one or more cisterns which are filled twice daily, and he pays in proportion to the quantity of water used—an amount which is easily ascertained. The tendency of such a system is to encourage economy in the use of water, while from a sanitary point of view the comparison would be in favor of allowing the impurities in the water to subside in cisterns before use.

As to the quality of the water furnished Mr. Michels is very emphatic, and his view may be inferred from his recommendation to boil and filter the water before using it for drinking purposes. His opinion of the present plan of storing the water is given in this closing paragraph of the article: "We consider," he says, "the method of storing the water supply of a city in shallow, marshy lakes, in fever and malarious districts, to be wrong in principle, and that a radical change in the management of the water supply of New York city, rather than an expensive extension of it, to be the most prudent course to adopt at the present moment."

A Second Jefferson Medical College.—We presume the new school recently started in Louisville, Kentucky, under this name, was so called because that city is in Jefferson county, but the title is too close a copy of that of its illustrious predecessor. A more original name would have been in better taste, to say the least that can be said in condemnation of such an unjustifiable appropriation of a title that belongs rightfully to another. If it was supposed that some of the lustre that attached to the Jefferson Medical College might be borrowed with the name, time will show the futility of such an assumption, and the fable of the "Ass in the Lion's Skin" will be fully verified. In the meantime we trust that the voice of the Alumni of the true Jefferson, as reported in another column, will be heard, loudly condemning, in every part of the land, so unwarrantable a procedure; and not her Alumni only, but also those independent members of the profession and of the medical press who realize the propriety of fair dealing. A bogus Jefferson College was started about ten years ago, somewhere out west, whose diplomas could be purchased without the formality of attendance upon lectures. We do not know whether this institution has anything to do with the one now referred to, but we suspect that it has the same excuse for existence.—*College & Clin. Record*.

SPLENECTOMY.

Mr. Haward read notes of this case before the Clinical Society of London. The patient, a woman, aged 40, had usually enjoyed good health. She had never suffered from ague or any intermittent fever. The catamenia had ceased three years. She had been seven years married, but had no children. For eighteen months she had suffered pain in the left side of the abdomen, and for ten months had been aware of an

abdominal tumor, which had been steadily increasing in size, and which distressed her by its weight. When admitted into St. George's Hospital, she was a rather stout woman of good complexion. She did not look at all anæmic, and although the number of the white corpuscles of the blood was increased, she showed no other sign of leucocythæmia, excepting a greatly enlarged spleen. The spleen occupied the greater part of the left side of the abdomen, and extended from the loin to three inches beyond the middle line, and from the ribs to the groin. The tumor was firm, well defined, and moderately movable. It produced great discomfort from its weight, and a dragging sensation whenever she moved about. There was no other glandular enlargement, and the rest of the viscera were healthy. She had no palpitation nor dyspnoea, nor had she suffered any hemorrhage. Her temperature, pulse, and respiration were natural. The urine was natural. It having been decided to remove the spleen, Mr. Haward performed abdominal section for the purpose. An incision was made in the middle line of the abdominal wall, extending from two inches below the ensiform cartilage to within two inches of the pubes. The enlarged spleen at once presented, and was found free from adhesions. In endeavoring to tilt up the lower end of the tumor, a rent occurred at its upper margin, from which free hemorrhage took place for a moment, but the bleeding was speedily arrested by the pressure of a sponge upon the torn part. The vessels at the pelvis, which were enormously enlarged, were then clamped and ligatured, after which those of the gastro-splenic omentum were secured by passing an aneurism-needle threaded with silk through the membrane, and tying it in several separate portions. The connections of the spleen were then severed, and the organ was removed without further difficulty. Carbolized silk was used for the ligatures, and the only hemorrhage of any consequence was that which occurred from the rent in the spleen. While the wound was being closed the patient suddenly became profoundly collapsed, but was revived by artificial respiration and the subcutaneous injection of ether. Five hours after the operation vomiting commenced, and, persisting with great frequency, rapidly exhausted the patient, who died on the evening of the day of operation. The spleen, both to the naked eye and microscope, presented the appearance of simple hypertrophy. *Post mortem*, no disease of any organ other than the spleen could be discovered. There had been no hemorrhage after the closing of the wound, but the abdomen contained some thin blood-tinged fluid. With the exception of slight ecchymosis in the immediate neighborhood of the wound, the peritoneum and abdominal viscera showed no sign of injury. The indications for and against the operation were considered, and it was shown that, although there was an increase in the white corpuscles of the blood, the patient exhibited none of the other signs of leucocythæmia excepting the large spleen; that there was no sign of anæmia nor tendency to hemorrhage; and that the condition of the blood would not have been suspected excepting on microscopical examination. The woman's suffering seemed entirely due to the dragging weight of the tumor, and there was no sign of any other visceral disease. The fatal result was certainly not caused by hemorrhage, which was the chief danger in cases of leucocythæmia, but seemed to be due rather to the disturbance of the great sympathetic plexuses, and the consequent shock and vomiting. The paper concluded with some remarks upon the method of the operation.

—*Brit. Med. Jour.*

REMARKABLE THERAPEUTICAL EFFECTS OF THE INTERNAL USE OF CARBOLIC ACID IN THE TREATMENT OF PYREXIAS.

By Dr. RAYMOND.

It is in the course of typhoid fever, particularly, that Dr. Raymond has obtained happy results from the use of this medical agent, given both in the form of pills and lavements.

Dr. Raymond stated before the Biological Society, that instead of having recourse to the old therapeutical doses of 10 to 12 grams, he prescribed it at the rate of one gram per day, 50 centigrams in three pills, and 50 centigrams in lavement.

Its effects are manifested soon after the taking. Lowering of temperature from 3 to 4 Centigrade, and a considerable diaphoresis takes place, which in half an hour becomes intense.

Is this diaphoresis caused by carbolic acid? Dr. Raymond has plainly demonstrated that it is; by injecting $\frac{1}{4}$ of a milligram of duboisia hypodermically he has suddenly stopped the diaphoresis, the lowering of temperature taking place as before. The results are not always identical, being more marked after two or three days of treatment, when it becomes more rapid and energetic in its effects.

Such splendid success made him bold. He raised the dose from one to two grams, given as in the first dose, and he noticed signs of poisoning, dropping of temperature to 34°, convulsions, darkening of the urine. How can we justify, in the presence of such facts, the doses of 10 to 15 grams, which we used to administer in the past?

Dr. Raymond tried to use the carbolate of sodium for carbolic acid, giving that salt at the rate of 1 gram in 50, with the precaution that, according to Hallopeau, the patient must be kept under the constant influence of the drug. The same happy results were obtained, with the addition of this: that it never exposes the patient to the poisonous effects of pure carbolic acid mentioned above. Carbolic acid is a very efficient agent in the treatment of contagious fevers, but its action is merely to reduce the temperature; in typhoid, for instance, it does not modify in any way the development of the different stages of the disease.

Given in form of lavements of 50 centigrams, and topically with the solution at 1-50, it is said to give excellent results in erysipelas.

In an operation for empyema, there was injected, by mistake, into the pleural cavity one liter of carbolic acid solution of 1.20; there was a sudden dropping of the temperature to 34°, and for nine days the urine of the patient was of dark color, notwithstanding the use of the sulphate of sodium. A fact worthy of notice is, that in tuberculosis, a non-contagious disease, carbolic acid has no influence over the fever.

As to the physiological mode of action of this agent, particularly in typhoid: It is not, according to Dr. Raymond, in its influence of immediate contact with the seat of the lesions that it must be looked for, because the carbolic acid is decomposed long before it reaches the lower part of the alimentary canal. The fall in the temperature is in this case of nervous origin, resulting from an action of carbolic acid on the great cells of the anterior cornua of the cord, produced through the medium of the vascular system, and, in the meantime, while this is manifested by a fall of temperature, it affects the whole of the sudorific gland. The appearance of convulsions, when too large a dose has been taken, is another point in favor of this hypothesis.—*Le Medecin Practicien—Chicago Med. Jour.*

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EDITORIAL.

THE RESIGNATION OF THE POST GRADUATE FACULTY OF THE UNIVERSITY MEDICAL COLLEGE—WHAT THEY PROPOSE TO DO.

No doubt the natural wonderment which this event excited in the local medical world has been succeeded by a desire to learn the motives of the gentlemen who have thus suddenly severed their connection with the university, the causes which have led them to take this step, and the plans which they have formed for the future.

The immediate exciting cause of the secession seems to have been a commendable desire on the part of the so-called post graduate faculty to be in *reality* what they were in *name*, to enjoy the prerogatives of a post graduate faculty and assume the functions that had been promised them when appointed. Opposed to this apparently just and natural claim was the hesita-

tion on the part of the gentlemen who owned the institution and who are the faculty proper to recognize the expediency of fulfilling their promise at the present time, a failure to see the policy of complying with the demand of the post graduate faculty for a voice in the government of the college, and a fear that the present prosperous condition of the college might be compromised by instituting a reform in medical instruction for which the times were not yet ripe.

The ostensible and sufficient cause then of the disruption was apparently a promise made, and a desire to defer its fulfillment on the one side; and a demand for its immediate fulfillment in spirit and letter on the other.

Perhaps a more remote cause of the defection might be found in the fact that taxation, whether of money or brains, without representation, is no more tolerated now than it was a hundred years ago by our great grand-fathers. The gentlemen who lent the prestige of their reputation and labor to an institution, and contributed to its prosperity were ill content to be barred from sharing in its councils. As far as we are cognizant of the facts we must express ourselves as heartily in accord with the action and intentions of the gentlemen who have resigned, and we fail to see how they could have acted otherwise without compromising their dignity and self respect. We must believe that the faculty proper have made a great mistake in not engrafting on the parent, a branch so promising of good to the profession and to the institution and so in harmony with the desire for higher medical education, which is being so universally manifested.

Through the courtesy of one of the post-graduate-faculty (By Wm. A. Hammond) we learn that it will immediately organize a post-graduate school, that a charter is in process of being procured, a building will be secured and adapted to the objects for which it is designed, and the faculty will be prepared to instruct graduates in medicine by November of the present year. They propose to have three grades of teachers, fourteen professors, fourteen associates, and as many more instructors all having a vote in the government of the institution. It is proposed not to increase the number of Doctors but to add to the qualifications of those already graduated.

It will thus be seen that these gentlemen are thoroughly in earnest in their efforts to establish a school for post-graduate instruction. The success or failure of such an institution will depend largely on the character of the instruction afforded. There are enough practitioners who would gladly avail themselves of an opportunity to better fit themselves for practice, to assure the financial prosperity of such a school, provided the instruction is of a standard to warrant their devoting the necessary time and money to its acquisition. Among those who are identified with this movement some are men of superior scientific attainments, men of executive ability and acknowledged skill in teaching. It is to be hoped that these will gather round them the best teachers in the country, (the supply is sufficient), and make the institution a potent factor in the promotion of that form of medical education which has been so long needed in this country, but which has hitherto been considered impracticable.

We are not disposed to enthuse over a project which is yet in a chrysalis state, but we think all true lovers of medical progress must unite with us in wishing God-speed to an enterprise which is auspicious of a new era in medical instruction in this country and fraught with so much of good to medicine and humanity that we must watch its consummation with anxious solicitude

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY
OF MEDICINE APRIL 20th, 1882.

The President Dr. Fordyce Barker presided. The minutes of the previous meeting were read and approved. The report of the corresponding secretary, of the section on Practical Medicine, and the librarian's report were read and accepted.

Dr. W. M. Chamberlain explained to the Academy some

APPLICATIONS AND USES OF RUBBER
TUBING.

He said that he had presented this subject before the Journal Association in 1873. The idea of circulating cold water through rubber tubing for the reduction of temperature was applied by Roberts of London in 1871, and Ashhurst of Philadelphia, in 1872. It is unnecessary here to enter into the therapeutic value of heat and cold. The best monograph on the subject is that of Esmarch published by the Sydenham Society. Esmarch says, "of all the means which we possess for limiting the inflammatory process, cold is the most effective and without it I would rather not be a surgeon." Esmarch used rubber bags, but by these a constant temperature could not be maintained. The idea of circulating water through rubber tubes on the siphon principle suggested itself to me as the best means of securing a constant degree of cold for therapeutical purposes. The principle being understood it is very easy to vary the form of apparatus to the individual case. Practically speaking a table at the bed side 18 inches above the level of the patient will establish a strong current. The amount of pressure is regulated by the supply vessel. The tubing may be made to assume any desired shape and confined by strips of muslin or otherwise, wire may be introduced through the tubing so that it may be coiled so as to attach it to any desired surface. I have been in the habit of applying this apparatus generally in inflammation and have obtained very good results. I will mention but one case viz: that of a lacerated and penetrating wound of the joint by a rusty knife. Water at 50° was circulated about the joint for 4 days. There was immediate relief of pain, complete abortion of the inflammatory process and no suppuration. Very many similar cases have been reported in the monograph of Esmarch alluded to. In the heat of fever this method of abstracting heat is not perhaps equal in efficiency to the fever cot or the cold bath or cold affusion, but is useful in that class of cases where these means are not admissible, and also it may be used with advantage to prevent the rise in temperature which follows the use of the cold bath etc.

Dr. Emmet reports a case in which a temperature of 103° was reduced to 99 and maintained at that point for 4 days by means of rubber tubing.

The irrigation of the internal cavities of the body as the vagina, uterus, bladder, stomach etc. may be more easily and safely and efficiently accomplished by this means than by any other, as for example, washing out the bladder may be done without pain to the patient by attaching the tubing to a catheter introduced into the bladder, holding the supply vessel as high as the head and when the bladder is full, simply reversing the process by lowering the vessel. By this means water may be passed from the rectum to the mouth and I have had great satisfaction in seeing invagination of

the intestine disappear by distending the intestine by this method.

A form of apparatus for application to the eye may be readily devised. The successful treatment of tetanus by cold has been reported by a Long Island Surgeon, and though I have not had a case of tetanus I have thought over the apparatus I should use in treating such a case.

In the discussion which followed Drs. Leale, Vanderpoel, and Barker took part—Dr. Leale testified to hearing this subject presented by Dr. Chamberlain before the Journal Association but said he had been unable to find any record of it in the

Dr. Vanderpoel said that this subject had been brought before the State Society by Dr. Chamberlain and had been received with great interest. The use of soft rubber tubing to wash out the stomach in disease of that organ was greatly to be preferred to that of the stomach pump, it was less dangerous, and caused less pain to the patient. (Dr. Chamberlain here alluded to the case of a patient who was accustomed to use the rubber tubing on the siphon principle to wash out the stomach after each meal).

Dr. Barker said he felt warranted in thanking Dr. Chamberlain in behalf of the Academy for bringing this matter before them. To many present it doubtless possessed the freshness and charm of originality. It was brought before the International Medical Congress and there regarded as of the greatest importance. It must occur to all that it is a resource available in a large number of cases and a perfectly safe one.

Dr. J. D. Bryant next read a paper, illustrated by specimens, on

"PERIOSTEAL PRESERVATION IN AMPUTATIONS OF THE LEG."

The following is a brief summary of his remarks—The subject which I have chosen is one which is not suggestive of new ideas nor is it of revolutionary interest. I will simply bring forward some practical proofs of periosteal preservation from my own experience. The early history of periosteal preservation will be little discussed in this paper. The labors of Drs. Wood, Sayre, Hamilton, Stephen Smith and other surgeons have testified to the practicability of periosteal preservation in amputation of the leg. I desire to call attention to the possibility of periosteum separated from healthy bone reproducing normal bone. Perhaps I shall make my opinions on this subject clearer by answering the questions suggested by it.

First.—Can healthy periosteum separated from bone and its integrity, be preserved for the reproduction of bone? Yes. Success, however, will depend on the age of the patient and the care exercised in separating the periosteum. In old age the function of the periosteum is protection. The fibro-vascular and fibro-cellular layers have a coequal importance in the reproduction of bone.

Second.—Is this second growth constant in occurrence, durable in existence and useful to the patient?

If proper precautions are observed new bone will be produced in from six to eight months, not however with a certainty of its being permanent and of use to the patient. The conditions on which the accomplishment of the objects desired depend are a proper selection of cases and care in doing the operation. An injudicious selection of cases, want of care and consequent bruising of tissues may bring the operation into undeserved disrepute. Dr. Bryant in conclusion alluded to the objections to the operation which were dispelled by its proper performance, and exhibited

specimens illustrating the method of taking the periosteum and of coaptating the flaps.

Dr. Stephen Smith said he had had much experience in attempting to save the periosteum in a rude way. He had learned to do an operation which, though very tedious, he considered better than that of Dr. Bryant. He made the incision laterally, turning the flap back about an inch and with it the periosteum. It was a very easy and exact though tedious method. He used the finest saw possible for amputating so as to avoid laceration. He never used a drainage tube in these cases, as drainage was very perfect and the tube was always an irritant. The advantages claimed by Dr. Bryant for periosteal preservation in amputation of the leg he had often noticed, especially the soft yielding cicatrix thus obtained. By this means also an advantage not mentioned was obtained, namely, the tendency of the bone to waste and become sharpened was obviated.

The Academy then adjourned.

LECTURES.

PULMONARY PHTHISIS—BRONCHIAL CATARRH.

A CLINICAL LECTURE.

BY

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CASE I. *Pulmonary Phthisis.*—Male has complained of cough for last year. Expectorates small white pieces. Has headache for the past two weeks. Has sweated a little. Patient gets out of breath by going up stairs.

When there is no phthisical history in the family the question arises whether the patient has had employment in a damp basement. I assume that he has phthisis for these reasons: First because he has coughed a year, and has had sweating at night. He does not seem at any time to have had a bloody expectoration. He has a complexion that is almost diagnostic, and there has evidently been a good deal of emaciation. It is possible for a pleurisy that may have perforated the lung to imitate the symptoms of phthisis very closely. If that is the case we can recognize it at once when we come to examine the chest.

The points in the examination will be first to notice the appearance of the chest, to see whether there is anything like a bird's nest on one side of the clavicle. Secondly, to examine the movements of the chest. Third, to note the character of the rales if any are present. Fourth, to listen to the respiration and ascertain whether there is any prolonged expiration. Fifth, the force of the respiratory sound. Sixth, the force of the voice and resonance. Seventh, to note whether there is dulness on percussion on either side.

Physical Examination.—There is a deeper depression on the left than on the right side; the left side moves more than the right on inspiration. In the back the right side moves pretty freely. I can feel the ribs on the right more than on the left, and can recognize the fact that the intercostal spaces are on the outer surface of the ribs. That suggests the idea of pleuritic effusion. Percussion is equal on both sides. There does not

seem to be any effusion, but I will listen to the breathing and see whether it is emphysematous. The breathing is a little crackling, not obscure as in emphysema, but considering that the intercostal spaces are crowded out, and that there is no watery or purulent effusion, we shall have to assume that there is some emphysema. There are no rales on the right side. On the left side the expiration is about equal to the inspiration, and at the end of the inspiration I get a sort of cavernous tone to the sound, as if the breathing were echoing from a cavity at a little distance from the ear. The voice is not very natural on the left side. There are some rales also present.

I conclude from these signs that while there is some phthisical deposit upon the right side there is more on the left and the left is partly solidified. At first the natural spongy condition of the lung is partly filled up so that the lung does not do its work. The explanation of the rather constrained movement of the right side at the clavicle is probably this: In the deposit of tubercles in that part of the lung there has occurred some inflammation of the pleura and adhesion of the pleura to the costal wall. This has restrained a little the action of the ribs high up. They are freer low down than on the left side, probably due to a moderate emphysema of the sonorous side.

In this instance the disease seems to have come without hereditary taint, without an occupation in a place most likely to induce it, and without bad habits. (Patient does not drink or smoke). The progress is rather slow. He has had none of the extreme indications of phthisis. He has had some sweating, but that occurs at almost any time in the course of the disease—in some persons quite early. I think it depends very much upon the sympathies of the nervous system. Then we have so far an entire absence of hæmoptysis.

Treatment.—The course for this man to pursue is to get the open air a great deal, to take freely of food. This man's appetite is yet good. When the lungs become considerably diseased the stomach commonly loses a portion of its power to digest, and the appetite falls away. This is one of the most frequent embarrassments in the treatment of phthisis. The character of the food should be oily to a certain extent. He may eat meat, drink milk or cream, or cod-liver oil, and a little more freely than is commonly prescribed. One tablespoonful three times a day is hardly enough to depend upon alone. He should be rubbed in the morning before he is dressed all over the body with dry flannel. If he sleeps in a warm room, it is a very good plan to have the body all sponged over at night when taking off his clothes to go to bed, and wiped dry with a towel at once. As to change of climate, I am getting more and more disinclined to send people away from their homes.

CASE II. *Bronchial Catarrh.*—Patient took cold two weeks ago. Has a cough and spitting. At first the cough was dry, and there was a tickling sensation. He is short of breath in going up stairs.

There are no rales, and therefore the cough is hardly of the variety called capillary bronchitis. There is a nasal catarrh or common cold which generally wears out in a fortnight or so. Still, doctors very often prescribe something for the cough, and I do not know but that the old compound tincture of benzoin is about as good as anything. I give ten drops on sugar every four hours. The syrup of senega may be given. This, however, is made of varying strengths by different pharmacists. If a teaspoonful produces nausea, the patient can dilute it with one-third of the common

syrup. I commonly add about enough laudanum to make ten drops in each dose.

ORIGINAL ARTICLES.

DR. RYERSON ON THE FRENCH LANGUAGE AND ON WOUNDS OF THE ABDOMEN.

BY WILLIAM A. HAMMOND, M. D.

In the MEDICAL GAZETTE for April, 1882, I find an article by Dr. Thomas Ryerson of so extraordinary a character in some respects as to call for a word from me in reply. It is entitled "Dr. Hammond's Quotations" and is an attempt to show that in my citations from authors in a paper contributed to the *North American Review* for December, 1881, I distorted facts to suit my views. The observations of Dr. Ryerson relative to my quotations from Longmore and Lidell are neither more nor less than quibbles, and the matter which he supplies from the "Medical and Surgical History of the Rebellion," has nothing to do with "Dr. Hammond's Quotations." Some other points I propose to notice.

1st. Dr. Ryerson says: "I will admit that with the facts before him he *probably* [italics mine] dealt justly with the case of gunshot wound of the spine which Dr. Hamilton exhibited," etc.

Now if Dr. Ryerson knows anything at all about the case he knows *certainly* that I "dealt justly" with it, and hence his use of the word "probably" is, to say the least, an impertinence. My remarks in full were as follow (*N. A. Review*, Dec. 1881, p. 579): "But one of the most instructive cases on record is that reported by Dr. F. H. Hamilton. A soldier was wounded March 16, 1865, the ball perforating or possibly grooving the anterior surface of the body of the second lumbar vertebra. In September, 1865, a small fragment of bone escaped. In September, 1867, Dr. Hamilton found him suffering only with a slight paralysis of the bladder. The ball was found lying in the muscles on the other side of the spine and Dr. Hamilton cut it out. Since then it is stated that recovery is complete. Dr. Hamilton took the man before the New York Pathological Society and he says: '[The members present concurred with me in the opinion that the ball had struck the body of the vertebra.]'"

Dr. Hamilton's language in full is (Principles and Practice of Surgery, 2d ed., 1873, p. 106): "William Madden enlisted as William McMahon, a private in the 20th Conn. V., was wounded by a rifle ball at Averysborough, N. C., March 16th, 1865, which *traversed his loins, perforating or possibly grooving the anterior surface of the body of the second lumbar vertebra. Paralysis of the lower extremities immediately ensued.* Sometime in September, 1865, a small fragment of bone escaped in which was embedded a piece of lead. September 19th, 1867, I found him suffering only with slight paralysis of his bladder; the wound was closed; *a marked posterior curvature of the spine existed opposite the first, second and third lumbar vertebrae*; but this curvature has not increased during several months, and the spine felt firm. I detected the ball lying in the muscles, nearly opposite the point of entrance and cut it out. It was flattened on one surface and covered at points with calcerous matter. *His recovery is now complete, and he has since been in person before the New York Pathological Society. The members present concurred with me in the opinion that the ball had struck the body of the vertebra.*" [italics mine].

With these two extracts before them I think the readers of the GAZETTE will agree with me in my opinion that Dr. Ryerson is guilty of an impertinence when he says I *probably* dealt justly with the case.

But let us see how justly Dr. Ryerson deals with it: He says:

"I will admit that with the facts before him he probably dealt justly with the case of gunshot wound of the spine which Dr. Hamilton exhibited in the New York Pathological Society which was then thought to be of the body of a lumbar vertebra and *to be upon the high road to recovery.* But the man was borne upon the pension rolls and *died without an autopsy being had.* This was in the days of biennial examination of pensioners and *therefore the man probably died of his wound.* And *besides the pension office records show that the examining surgeons did not think the body of the vertebra to be wounded.*" [Italics mine.]

Let us compare Dr. Hamilton's and Dr. Ryerson's statements in order to see how justly the latter deals with the case.

Dr. Hamilton says, 1873, eight years after the wound was received, "Recovery is now complete."

Dr. Ryerson says he was then "thought to be upon the high road to recovery."

Dr. Hamilton says the ball perforated or possibly grooved the body of the second lumbar vertebra, and that the members of the New York Pathological Society, who examined the man, agreed with him that the body of the vertebra had been struck.

Dr. Ryerson says that the pension surgeons did not think that the body of the vertebra had been wounded, and this although there had been no *post-mortem* examination.

Dr. Hamilton says the man was paralyzed at first.

Dr. Ryerson says nothing about this sign of injury of the vertebral column.

Dr. Hamilton says there was a curvature of the spine at the seat of the injury.

Dr. Ryerson neglects to mention this striking fact.

Dr. Hamilton says the man was alive and completely recovered eight years after the reception of the wound.

Dr. Ryerson says, without the slightest attempt at proof, that he "probably died of his wound." "*Probably*" seems to be a familiar word with him. Of course he *may* have died of his wound, and the vertebra *may* not have been injured. But if so, I do not see how we can avoid the conclusion that an error was made by Dr. Hamilton and the members of the New York Pathological Society in the first instance, and that Private Madden, or McMahon, was the prototype of President Garfield in the matter of mistaken diagnosis.

So much for Dr. Ryerson's just dealing with this case.

2d. Dr. Ryerson says:

"The case introduced from Jobert de Lamballe's treatise on gunshot wounds, published in Paris in 1833, I happen to know by inspection is incorrectly represented." So far as I can make out, the incorrectness is to be found in the following citation from Dr. Ryerson's article:

"Doctor Hammond quotes him as follows: 'The man had a fracture of the lumbar region and complete paralysis * * * * *; but he was almost entirely cured.' Lamballe does not say this. He says: * * * 'the patient left the hospital, after a long time it is true, but approaching a complete cure.'"

Now I assert that Jobert (for that is his name and not *Lamballe*, which is the place he comes from. Dr.

Ryerson might as well in referring to "Sayre of New York" call him "New York") uses the exact language I employed. The French is as follows, the words in italics being omitted by me as immaterial to the point at issue; "Ce blessé avait eu une fracture de la région lombaire et une paralysie complète. *Les saignées, les ventouses, les moxas tour-à-tour employés, produisirent le meilleur effet et le malade sortit de l'hôpital long-temps après, il est vrai; mais à peu près complètement guéri.*"

The "incorrect representation" seems to be narrowed down to my translation of the words: "*a peu près complètement guéri.*" I translate them, "almost entirely cured." Dr. Ryerson renders them into awkward English by the words, "approaching a complete cure." The difference is scarcely worth discussion, but if Dr. Ryerson thinks his translation is literally correct, he knows as little of French as he does of the case of Private Madden, or McMahon. As another instance of Dr. Ryerson's just dealing, he says of this man of Jobert's: "He probably [probably again] left the hospital as Hamilton's man left the Pathological Society to be borne on the pension rolls until he was borne to his long home." Which is about as much to the point as if he had said, "he lived till he died." But what does he know of the case, and what business has he to come into it with his probabilities? There were probabilities enough, Heaven knows, about the President's case, without the necessity for Dr. Ryerson to lug in more uncertainties.

3d. In the next placé Dr. Ryerson treats us to some edifying quotations relative to probing wounds of the abdomen, and in so doing displays again the disingenuousness which has characterized the other parts of his paper. It is difficult to speak of this attempt to begof the issue, in terms which, while sufficiently severe, will not pass the limits of moderation. What have wounds of the abdomen to do with the case? Did I say anything in my paper of wounds of the abdomen? Did I make a single quotation in regard to them? Was Gen. Garfield's wound a penetrating one of the abdomen? Did not the *post-mortem* examination show that the abdominal cavity was not entered, and does not Dr. Ryerson know that it is so stated in the report? It is true the surgeons thought at one time that the bullet had entered the abdomen, and now Dr. Ryerson takes their mistaken diagnosis and attempts to raise a false issue from it. If the case had been properly examined in the first instance, it would have been discovered that the wound did not involve the abdominal cavity. Think of Dr. Ryerson presuming to quote the following as in the slightest degree applicable to the President's case:

"Lamballe [he means Jobert] was in Dr. Hammond's hands and quoted on the point of mortality; and he says on page 209 in regard to penetrating abdominal wounds: 'A ball should be regarded as lost, whenever it is beyond the aperture of entrance.'"

Now, if Dr. Ryerson can go on in this way, putting up men of straw and knocking them down with his own pop-guns, there is no end to the axioms in surgery he can bring forward. He knows President Garfield did not have "a penetrating wound of the abdomen."

But it is scarcely necessary to say that Jobert (or Lamballe, as Dr. Ryerson continues to call him in happy ignorance) never wrote anything so ridiculous as the quotation Dr. Ryerson attributes to him. If a bullet is always to be regarded as lost when it is "*beyond*," the aperture of entrance, what bullets can be

saved, except those that rebound from the wound? Are there any bullets in a man's body that are not "*beyond*" the aperture of entrance? Jobert wrote "*une balle doit être regardée comme perdue quand une fois elle s'est éloignée de l'ouverture d'entree.*" Dr. Ryerson translates the French word *s'éloignée* by the English word "beyond," a meaning which it never had at any time in the existence of the French language. The sentence, properly translated, reads: "A ball should be regarded as lost when *it is far removed* from the aperture of entrance." A true enough assertion, perhaps, but one that has nothing (as Jobert is speaking of penetrating wounds of the abdomen) to do with the question under consideration.

This concludes all I have to say to Dr. Ryerson. Perhaps when the "able writer, thoroughly competent and fully informed," with whom I am threatened, makes his appearance, his virtues may call for something further from me on the subject.

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK—IMPERFORATE RECTUM—LUMBO-COLO TOMY.

SERVICE OF

ROBERT F. WEIR, M.D.

J. P. 2 days old. Admitted March 7, 1881. Patient has not passed gas or feces from the bowels. Has been given nothing but sugar and water, which he vomited. Last night had hiccough. Patient is the eighth child: no malformation existing in other children.

Admission.—Child very small and weak. Examination shows presence of anal ring which does not communicate with rectum, but is simply a depression. Abdomen somewhat distended.

Treatment.—(Lister's precautions). Incision made through anus and deepened until the ischio-rectal space was well opened. Finger introduced and exploration made, but not rewarded by discovery of the gut. Colotomy was then resorted to; incision oblique in direction made just above the middle point of crest of left ilium, and tissues carefully divided until a portion of the intestine appeared. No muscular bands could be recognized. During manipulation of the intestine to discover if it were the colon, a knuckle of small intestine appeared at its side and protruded, showing the peritoneum to have been opened.

This was not unexpected, as the space between the folds of the perineum on the back part of the colon is often very small in children and sometimes obliterated by a meso-colon.

The colon transfixed with double suture, drawn forward and opened with scissors. Immediate escape of gas and meconium. Edges of incision in intestine stitched to those of incision in abdominal wall, the edges of peritoneum carefully sutured and a Lister dressing applied.

As child had not passed urine, so far as the mother knew, a probe was carried gently through the urethra into the bladder. A few drops of urine with blood flowed out. Milk with brandy given and patient sent to ward.

During the night seemed to be in good condition, taking nourishment well until midnight when he began to fail and at 4 P. M. March 8th died.

Autopsy.—Considerable blood in peritoneal cavity which was evidently the cause of death. Rectum ends in blind pouch, much distended with meconium, and terminating about $1\frac{3}{4}$ inches above the anus. Only the thickness of the mucous membrane interposed between the end of the incision in the perineum, and the cavity of the gut. Descending colon had been opened at lumbar incision.

FORMULARY AND POINTS IN PRACTICE.

Dr. Fothergill recommends the following as a fever draught.

℞ Hydrochloric acid. dil.....mxv
Syrup of orange.....3i
Water.....3ii

Sig—Take at a draught every three or four hours.

TO INCREASE THE SECRETIONS BOTH OF THE KIDNEYS AND SKIN.

℞ Iodide of potassium.....grs. vj
Liq. acetate of ammonia.....3i

Sig—To be taken properly diluted once in four or six hours or in smaller doses more frequently repeated.

AN EXCELLENT COOLING AND ELIMINATIVE DRINK.

℞ Bitartrate of potash.....3i
Bicarbonate of soda.....3i

One half added to half a tumbler of water and taken at one draught in a state of moderate effervescence once in from one to three or four hours. The materials for this drink are to be found in most households, and it has the additional advantage of not being disagreeable, often even grateful to the taste.

Niemeyer strongly recommends the following in PNEUMONIA AND OTHER INFLAMMATORY FEVERS, AS AN ANTIPYRETIC.

℞ Sulph. quiniæ.....grs. v
Tinct. digitalis.....mxv
Phos. acid. dil.....mxv

M. Sig—To be taken properly diluted once in four or six hours.

IN THE SEVERE SERIOUS VOMITING AND PURGING OF AGUE.

℞ Opium.....
Camphor gum.....aa grs. ij
Calomel.....grs. iij
Sugar of milk.....grs. xv

M—Rub up into a very fine impalpable powder. This should be dropped into a teaspoonful of water and taken far back in the mouth, followed by a single small swallow of water.

CASTOR OIL EMULSION.

℞ Olei ricini, mucilag. acacia.....
Aqua camphora.....aa 3j
Sacch. alba.....3ij

M—For an emulsion.....

Dose. Two to four drachms. If there be much irritation of the bowels five to ten drops of tinc. opii or an equivalent quantity of some other opiate may be added.

ENEMA IN HEMORRHAGE FROM THE BOWELS IN TYPHOID FEVER.

℞ Acetate of lead.....grs. x
Acetic acid.....m x
Acetate morphia.....grs. $\frac{1}{2}$
Aqua pura.....3iv

M—For an enema given with hips elevated and best through an elastic tube introduced into the colon.

SELECTIONS FROM JOURNALS.

ON THE TREATMENT OF EMPYEMA. By J. M. HOBSON, M.D., CROYDON.

A DETAILED ACCOUNT OF SEVEN CASES OF EMPYEMA WHICH WERE TREATED BY FREE INCISION, AND DRESSED ANTISEPTICALLY THROUGHOUT.

No. 1.—James Yardley, aged three years, admitted September 1st, 1880. Previously ill two months; wasted, anæmic, cough with "phlegm." All left side of chest dull, breath-sounds suppressed, and heart pushed over to right. Aspirated to $4\frac{1}{2}$ oz.

September 3rd.—Has been coughing up pus mixed with air, but without any odor.

September 5th.—Heart very distinctly beating to right of sternum, nearly as far as right nipple. Front and side of chest freely resonant, and behind there is resonance nearly as low as inferior angle of scapula. Breath-sounds heard pretty well both back and front, though not so well as on right side. Temperature goes up in the evenings. Right front is quite dull, but yet breath-sounds are very good over it. Side and back quite resonant.

September 7th.—Breath-sounds and voice amphoric on left. Heart still to right. Coughed up some pus yesterday.

September 9th.—Temperature keeping up. Heart to right of sternum. Physical signs being those of pneumothorax, the chest was opened in the back below inferior angle of scapula, and much air and pus escaped. A drainage tube was passed, and carbolic acid 1-20 injected through it.

September 12th.—Discharge serous the last two days. Heart still appears to right of sternum. Discharge has soaked through dressings. Diarrhœa. Discharge continued abundant till end of month.

October 4th.—Child very weakly and ill. Left side dull all over. Air enters chest, except below wound. Not much discharge on dressings. Got gradually weaker.

October 10th.—Died.

No. 2.—William Manning, aged two and a half years, admitted May 21st, 1880. Had measles in previous November, not well since, has been gradually wasting, and has had a bad cough on and off, and now worse. Very thin and pale, a frequent short cough, breathing short, *alæ nasi* working. Left front of chest bulged and quite dull, distant bronchial breathing and broncophony. Left base resonant, but breathing not so loud as on right side. Abdomen large, liver enlarged.

May 30th.—Bulging well marked in left front. Frequent short cough, and occasional fits of coughing; some purulent matter brought up on the 27th. Left front absolutely dull, dull at upper part of side and back, elsewhere tympanitic, heart beating to right of sternum. Breathing now here normal. Exploratory needle withdrew pus from the axilla (subcutaneous

syringe used), then aspirating needle was thrust in, and seven ounces of sweet pus removed. Aspiration was discontinued when a little blood and air bubbles made their appearance.

May 31st.—Since removal of the pus yesterday the cough has not been nearly so troublesome. There is no diminution of the dulness in front and side, and the heart's impulse is still seen during expiration to the right of sternum. Since yesterday a *single* harsh bruit has been heard over the normal cardiac area, but is hardly heard to right of sternum, where the normal heart-sounds are best heard, nor is it carried to the left. There are coarse bubbling rales with inspiration at lower part of front.

June 1st.—Breath-sounds certainly heard over clear area behind, which reaches above inferior angle of scapula—only a little larger than before aspiration. Bruit not heard.

June 2d.—A free incision made into chest a little below axilla, and much pus evacuated, and a drainage tube left in. This was done under the steam-spray.

June 8th.—Slight reddish discharge. No fœtor.

June 21st.—Is doing well; dressed on the 19th; rather abundant discharge then. Dressed again to-day; discharge sero-purulent.

July 1st.—Yesterday morning his voice was rather husky when crying, but nothing was specially noted till evening, when his cough became troublesome and croupy. He was then put under a "steam-tent," and passed a fairly good night, but at 7 A.M. this morning his breathing became worse, and continued so all day. About 5 P.M. he became worse still, and got blue. He was put on the table, and a few whiffs of chloroform administered, but before the tracheotomy tube could be introduced he died. No post-mortem examination was allowed.

No. 3.—Mary A. White, aged one year eight months, had marked puckerings and cicatrices about her mouth. Came first as out-patient on *June 1st*, 1880, with history of cough and wheezing for one week; dulness, back and front of right side, tubular breathing and crepitation.

June 8th.—Heart's apex to left of nipple: *Paracentesis*— $3\frac{1}{2}$ oz. of pus drawn off.

June 15th.—8 oz. drawn off.

Admitted June 18th.—Considerable emaciation; breathing 74 per minute; heart still displaced; all right side dull, only boxy under clavicle (temperature $102^{\circ}.4$); chest opened antiseptically, and drainage tube inserted.

June 25th.—Discharge quite sweet. Has improved till to-day and taken food better, but to-day temperature has gone up ($102^{\circ}.6$) and breathing is quick.

June 28th.—Improved; breathing quiet; temperature gone down; discharge free and orange-colored serum.

July 6th.—Discharge much diminished; tube removed.

July 17th.—Has not been dressed for a week; wound closed. Breath-sounds heard well to base.

July 20th.—Discharged cured.

No. 4.—Emily Zimmer, aged four years. Had been ill seven weeks. Right side of chest, shallow resonance or boxiness over upper part of upper lobe; dull elsewhere. Over semi-resonant parts distant breath-sounds heard, elsewhere *nil*; over upper lobe bronchophony heard and bronchophonic ægophony between apex and inferior angle of scapula behind. Heart displaced to left. Exaggerated breathing on left side.

January 13th, 1880.—Exploratory puncture, and pus discovered.

January 14th.—Right chest opened antiseptically in ninth space in axillary line, drainage-tube $2\frac{1}{2}$ in. long inserted downwards, 14 oz. of pus collected.

January 15th.—Much relieved, passed a good night. Dressed first time, free purulent discharge, quite sweet.

January 16th.—Looks better, no discharge appears at lower margin of dressings.

January 17th.—Dressed second time; free, perfectly sweet, *serous* discharge.

January 22d.—Discharge serous, not abundant. Respiratory sounds heard normally to about two inches from base.

January 26th.—Discharge very slight—reddish serum with lymph flowed from tube. Tube removed finally.

February 2d.—Wound practically closed (nineteenth day after incision). Normal respiratory sound quite to base. Dull over empyemic area.

February 13th.—Sent to Croydon, cured.

March 24th, 1880.—Quite plump and rosy after having been at Croydon. Breath-sounds heard normally quite at right base, but not so loud as on opposite side. Resonance impaired.

No. 5.—Maud Price, aged one year, admitted as out-patient *February 17th*, 1880; used to be brought up to the hospital to be dressed. Up to the previous November well and thriving, then had "croup," and continued to ail from that date. When first seen, the whole of left chest was dull, heart beating to right of sternum and abscess near left scapula.

February 18th.—Abscess opened antiseptically and $1\frac{1}{2}$ oz. of thick pus evacuated; no communication with chest could be discovered, and a subcutaneous syringe passed through an interspace in floor of abscess, as well as through a space below, withdrew nothing.

February 19th.—Abscess dressed a second time.

February 22d.—Dressed a third time, not much discharge from wound, and that not offensive; no communication with chest found. Whole of left chest dull.

March 2d.—Aspirated—fourteen days after diagnosis of empyema—and 12 oz. of pus withdrawn, some, which came last, being very thick. An opening was then made with a knife in the same place, and a drainage-tube inserted.

March 5th.—Dressed a second time since incision. Tube had got into chest, so some discharge was retained; that on dressings quite sweet.

March 9th.—Dressed a third time, discharge again retained; counter-opening made, and a tube passed in at one opening and out at another. Child improved in health.

March 12th.—Dressed again; discharge on dressings abundant, and sweet; some retention of thickish dark-colored matter which contained many pus-cells.

March 13th.—Dressed again, discharge very abundant, but quite sweet, not much retention. The narrow drainage-tube which was passed through both openings was removed, and a larger one passed through the second opening. The rib in first opening is bare and rough; the aperture has always been small and the passage of a large tube through it difficult (probably produced by pressure of a tube larger than that last used in this aperture).

March 15th.—Discharge not offensive and thinner, not much retained. To prevent the tube slipping into the chest again it was transfixed with a needle, the point nipped off and a strip of gauze interposed between its ends and the skin.

March 20th.—Discharge serous. Condition of child improved.

March 23d.—Dressed again, discharge serous and not abundant. Baby much improved in health.

March 27th.—Tube removed. Normal breath-sounds down to base, both back and front. Baby gaining weight.

March 30th.—Discharge confined to dressing immediately covering wounds.

April 3d.—Child had not been dressed since last note, there was no appearance of discharge this morning, but in the afternoon mother noticed a copious discharge at the lower part of dressings. On taking off the dressings there was much *purulent* discharge on them; *pure pus* was retained in the chest. A narrow drainage-tube was therefore introduced, and the cavity syringed out with carbolic lotion till the fluid ran out clear. Chest shrinking.

April 23rd.—Antiseptic dressing has been left off for a week. The cavity of the chest appears to be quite closed; a little discharge on dressings and probe did just pass a little way through the lower wound. There was a question whether any rough bone was felt there. Upper wound closed [at that time, or soon after, there was no more trouble with the rib that had been bare]. Chest considerably shrunken. Child vastly improved in health, filling out, and quite lively. It had become a puny little thing.

A year after this—April 13th, 1881—we heard from the mother that the child was quite well and fat, and had quite regained her proper shape.

No. 6.—Mary Ann Levy, aged two years and four months, had been ailing since having "measles and bronchitis" three months before. Admitted *March 24th*, 1880.

The whole of left chest dull. Heart beating far to right. Elastic bulging in left front of chest about third and fourth ribs. Breath-sounds suppressed, though not absolutely inaudible. Child pale and ill-looking. The chest was first aspirated, and pure pus withdrawn, and then an incision was made in the same place, and a drainage-tube inserted. Pus altogether amounted to about 10 oz.

March 25th.—There has been a good deal of draining of serum from below dressings. On dressing patient to-day the dressings contained a good deal of blood-stained serum. Some warm carbolic lotion was injected per tube, and some pus-colored fluid came out.

March 27th.—Discharge consists of *blood-stained serum*, which is rather abundant.

March 31st.—Discharge still pretty free. Probe passed through wound only $1\frac{1}{2}$ in. in any direction. Tube removed to see if she could do better without it.

April 1st.—Considerable discharge. Probe could only be passed a very short distance into chest; it *struck against bare rib*. The discharge which passed through wound during dressing was a *thin orange-colored fluid*. Child's health is good. Ever since the chest was opened the bulging in front has disappeared.

April 7th.—Some elevation of temperature ($102^{\circ}.6$) and retention in chest. A narrow tube put into chest again.

April 10th.—No retention; discharge *semi-serous*.

April 18th.—Discharge continues freely, is *purulent*. Yesterday a probe passed upwards about $2\frac{1}{2}$ in.; no retention. Health very good. Discharge has been apt to get to the surface from under waterproof.

April 26th.—Discharge much less; on last few occasions has been dressed every other day; had to be

dressed, before, every day. Probe still passes 2 in. upwards and forwards.

May 12th.—Tube was left out when dressed on 9th instant, although there was still some discharge. Dressings were removed yesterday, but there was no discharge on them, so they were entirely removed. This morning, too, there is no discharge. She has gained 4 lbs. since admission. Left side is larger at mammary level than right. Right, $8\frac{1}{2}$ in.; left, 9 in. Below left clavicle, however, there is some flattening. Fair breath-sounds are heard pretty nearly throughout, and there is some amount of resonance everywhere, except quite at base.

No. 7.—Edith Church, aged five years, admitted *August 26th*, 1880. Ill seven weeks. When first seen, all left side dull; heart beating to right of sternum; temperature 102° . Aspirated to $18\frac{1}{2}$ oz. This as outpatient, *August 23rd*.

August 27th.—Heart's impulse marked in epigastrium. All left side of chest resonant and tympanitic, though this is more marked in front than behind. Breath-sounds also heard all over, though more feebly than on right. Measurement a little below nipple level gives $\frac{1}{2}$ in. more on right side. Child's condition is improved.

August 30th.—Heart's impulse now very preceptible to right of sternum. Breath-sounds still heard everywhere, and front of chest tympanitic, but behind it is more dull. V. resonance diminished at base. Measurement at the same level gives $\frac{1}{2}$ in. excess on right side. Aspirated, but only 2 oz. of pus escaped.

September 5th.—Heart still to right of sternum. Dulness is altered with position: when lying on back, front of chest is quite resonant, when sitting up, it is dull, and the same obtains, *mutatis mutandis*, with back and side.

September 9th.—More dulness in chest. Heart still to right of sternum. Opened antiseptically.

September 15th.—Heart beating in its proper place, discharge less purulent than it was.

September 30th.—Antiseptic dressings left off. Respiration audible all over left side, except at extreme base, somewhat diminished in intensity, breathing on right side exaggerated. Percussion note flat—dull below wound.

October 2nd.—No discharge from wound.

October 7th.—Air enters left lung, throughout, less freely than on the right side. Expansion of left chest defective, with dulness on percussion, except between scapula and spine.

October 10th.—Sent to Croydon, convalescent.—*Practitioner.*

REMARKS ON ANTHRACIC VACCINATION AS A PROPHYLACTIC OF SPLENIC FEVER.*

By L. PASTEUR, Membre de l'Institut.

The Editor of the *British Medical Journal* has asked me for an expression of opinion on the experiments of vaccination as a prophylactic of splenic fever, performed in Hungary at the request of Baron Kemeny, Minister of Agriculture for that country. These experiments were made by a gentleman belonging to my laboratory, M. Thuillier, whose reports, made to me on his return from Pesth and Kapuvar, are appended. I must here observe that, unfortunately, M. Thuillier only had at his disposal animals of which a certain

* M. Pasteur, for reasons explained in his address at the International Medical Congress, employs the term "vaccination" for anthracic inoculation.

number were affected with various diseases, and likely to die during the course of the vaccination from the effects of these diseases, without reference to splenic fever. However that may be I am the first to recognize that these experiments have not been so completely successful as those which were performed in France, and which are now reckoned by dozens. I speak, let it be understood, of the experimental verification of the efficacy of the vaccination by means of final inoculation with highly virulent material. After the return of M. Thuillier to France, I feared that the small difference in the results to which I refer must be attributed to the difference between the race of animals in France and Hungary. Fortunately, my fellow worker and myself soon discovered that it was not so. Numerous trials made in January and November last clearly showed that the first vaccine employed by M. Thuillier, and which I had myself given to him at the moment of his departure, was, unknown to me, rather weak in reference to a second vaccine, intended to complete the vaccination commenced by the first. This explains how it is that the second vaccine caused the death of some sheep after the second vaccination. It cannot, however, in any way compromise the success of the new method of vaccination.

At the International Medical Congress held last August in London, I stated that 20,000 sheep had already been vaccinated. The figures at the present moment are, 130,500 sheep, 19,000 oxen, cows, and horses; in all, 150,000 head. In proportion as we approach the months in which deaths from splenic fever are most considerable, vaccinations increase to an extraordinary extent. I am convinced that, from the month of April to the month of September next, the new method of inoculation will have been brought to bear on more than a million of animals, without reckoning what is done out of France.

I have noted the article of one of the *privat-docents* of the Faculty of Pesth, who made part of the commission on M. Thuillier's experiments. This gentleman has, it appears, many preconceived notions on the subject of microphytic diseases. He has thrown himself into all kinds of speculative considerations on imaginary dangers on the subject of the new method of vaccination. I deplore—without, however, feeling any surprise—the foregone conclusions of the *privat-docent*. All scientific novelties are subject to inconsiderate criticism. In the present case, this only troubles me with regard to the injury it may inflict on argiculture and on stock-raising in Hungary. It would be disastrous if it were to have the result of retarding the application of vaccination for the prophylaxis of splenic fever in a country where such a remedy is so much required.

REPORT ON ANTHRACIC VACCINATION AT BUDA-PESTH BY M. L. THUILLIER.

Experiments have been made in the establishment of the Veterinary Institute at Buda-Pesth, under the auspices of Baron de Kemeny, the Hungarian Minister of Agriculture and Industry, and under the superintendence of a commission nominated by his Excellency, and composed of nine members: Dr. Tormay, President, Director of the Veterinary Institute; Dr. Azary, Secretary, Professor of the Institute; Dr. Thanhoffer, Dr. Czako, Professor of Hygiene to the Faculty of Medicine; Dr. Koranyi, Professor of Therapeutics; Dr. Plosz, Professor of Chemistry; and Dr. Rozsahegyi, Privat-Docent of the Faculty.

Sixty sheep, and ten animals belonging to the bovine genus, were set apart for these experiments. They were divided in the following manner:—thirty Hun-

garian sheep, thirty Merino sheep, three Hungarian oxen, three Hungarian cows, three Hungarian calves, one young buffalo. These animals were bought at the city market two and three days before the first inoculation. Some of the sheep were more or less weakly animals. They were divided in the following manner:—fifteen Hungarian sheep and fifteen Merino sheep intended to be inoculated; thirteen of each species by recent cultivated material, containing only filaments and no spores; two of each species by less recent cultures brought from Paris, and only containing spores; two cows, one ox, and two calves intended to be vaccinated by recent cultures; fifteen Hungarian and fifteen Merino sheep, two oxen, one cow, one Hungarian calf, and the young buffalo were reserved as test-animals (*temoins*). The whole of the sheep were placed together in a building destined for glandered horses; the cattle were lodged in stables at the Institute.

The first vaccinal inoculation was performed at midday on September 23d, 1881. The four sheep were inoculated by spores of a culture dating from August 10th, 1881. All the inoculated animals tolerated the vaccinal fever which followed this inoculation very well. On the morning of October 2nd—that is to say, nine days after the inoculation—one of the thirteen sheep inoculated by recent cultures was found dead. The superintending commission made a necropsy, and declared the sheep to have died of catarrhal pneumonia. The second inoculation was performed on October 15th, at midday. The four sheep inoculated on September 23d by spores were again inoculated on that day by a culture of the second vaccine dating from June 25th, 1881, likewise containing spores only. The inoculated animals bore very well the vaccinal fever which resulted from this second dose of virus. On this occasion also one of the Merino sheep inoculated by recent culture died. It was found dead on the morning of the 8th. In this case, likewise, necropsy showed that death was not a consequence of the inoculation. The superintending committee declared that the sheep had died of catarrh of the stomach. The inoculation of the non-diluted virus took place on October 17th. The superintending committee having expressed a desire to reserve some sheep for ulterior researches, only twenty-five sheep of each lot were inoculated. Each lot comprised thirteen Hungarian and twelve Merino sheep. All the larger animals were inoculated with the virulent material. The two inoculated Hungarian and the Merino sheep which were reserved had been vaccinated by recent cultures.

On the morning of the 19th, fourteen of the test (*temoins*) sheep were found dead; on the 20th, four more succumbed, and five others died on the succeeding days. Thus, out of the twenty-five test sheep (*temoins*), twenty-three died. The clinical symptoms, the cadaveric lesions, the presence of bacteria in the blood, showed the cause of death in all the victims to be anthrax. However, one cachectic sheep which died with symptoms of splenic fever, did not show, at the necropsy made by the commission, any of the naked eye or microscopic characteristics of that disease. On the morning of the 26th, one of the Hungarian sheep vaccinated by recent culture was found dead. The commission made a necropsy, and declared the cause of death to be cachexia induced by *distoma hepaticum*. Amongst the cattle, no fever nor any morbid appearance whatever supervened amongst those which were vaccinated. In the test series, the temperature rose two or three degrees. There was a little depression, but no want of appetite.

These experiments have fully verified the harmlessness and the efficacy of vaccination. The experiment made on the series of sheep vaccinated by culture of old date brought from Paris in closed tubes showed that the virus may be transported under these conditions for any distance without losing its valuable qualities.

REPORT ON INOCULATION AT KAPUVAR.

The Buda-Pesth experiment was repeated at Kapuvar on one hundred sheep and twenty oxen. Fifty sheep and fourteen oxen were vaccinated; fifty sheep and six oxen were reserved as test animals (*temoins*) of the virulent inoculation. After the second vaccination, six sheep died; after the virulent inoculation, fifty-nine sheep and one test cow (*temoins*) died. The surviving sheep and three out of the five surviving cows were very seriously ill. One vaccinated sheep died, the other sheep and oxen inoculated were not affected. Twenty-six sheep out of a flock ravaged by anthrax were also inoculated. Between the first and second vaccinal inoculation, two of these sheep died, one of the remainder of the flock died. After the second inoculation, ten of the inoculated sheep died; nine have since died. It is not known whether there have been any subsequent deaths from anthrax in the remainder of the non-vaccinated flock.—*Brit. Med. Jour.*

MINIMUM DOSES OF IODIDE OF POTASSIUM IN FRONTAL HEADACHES.

Dr. Haley draws attention to the powerful anticephalalgic properties of this drug when used in small doses. As a rule, a heavy dull headache situated over the brows and accompanied by languor, chilliness, and a feeling of general discomfort, with distaste for food which sometimes approaches to nausea, can be completely removed in about ten minutes by a two-grain dose of the iodide of potassium dissolved in half a wineglassful of water, this being quietly sipped so that the whole quantity is consumed in about ten minutes. This class of headaches seems to have no particular or definite cause, belonging apparently to the class of sympathetic headaches. In many cases the effect of these small doses is simply wonderful, and their great advantage is the rapidity with which they act.—*The Australian Medical Journal*, Aug. 15, 1881.

NEW THEORY OF URÆMIA.

MM. Feltz and Ritter consider uræmic symptoms to be due to a modification in the proportion of potassium salts present in the blood; they therefore prefer to speak of *potassæmia* rather than of uræmia. 1. The proportion of potassium salts, both in blood and urine, varies with the quantity and quality of the food; in dogs badly and insufficiently nourished, it falls to the minimum. 2. A special and prolonged alimentation consisting of materials containing sodium salts, reduces the proportion of the potassium salts to nearly the same degree as bad and insufficient feeding. The demineralization of the blood is greater, as regards potassic salts at least, than when the diet includes potash in some form. 3. The quantity of potassic salts existing in the blood influences to a certain degree the quantity of urea necessary to provoke grave symptoms or death. 4. Suppression of the renal function by simultaneous ligation of both ureters causes a sensible increase in the proportion of potash salts in the whole blood and in the serum, notwithstanding supplementary gas:ro-intestinal excretion; in

this respect the alkaline salts follow the same law as urea and extractive matters, both of which are augmented in the blood under similar conditions. 5. The grave symptoms of experimental uræmia not being in proportion to the degree of retention and accumulation of urea or of urinary extractive matters in the blood, and corresponding, on the contrary, to the phenomena produced by the injection of fresh normal urine, or of equivalent solutions of potassium salts, it seems probable that the true toxic agents in cases of so-called uræmia are always the potassium salts which have accumulated in the blood.—*The Bull. Gen. de Therap.*, Sept. 15, 1881; *Glasgow Medical Journal*, Nov., 1881.

ON THE TREATMENT OF ECZEMA BY BANTINGISM. BY BALMBENNO SQUIRE, Senior Surgeon to the Britise Hospital for Diseases of the Skin.

It is familiar to every practitioner that eczema is specially common amongst infants, and particularly amongst lymphatic infants, that is to say, fat and pasty-looking infants. I do not refer only to those instances in which the very fatness of the infant is the mechanical cause of the complaint; that is to say, where a "fold" of skin in the fat infant becomes raw and discharging (intertrigo); but I refer to the well known fact that infants of this constitution are more liable than others to eczema (of the scalp and other parts), not coming under the head of "intertrigo," and that their eczema is more profuse in its discharge, whether that discharge be serous or purulent, than it is in other infants; it is also more obstinate.

I recently recorded in the *Journal* some experiments I had made with iodoform as an application in such cases, and which succeeded very well as a means of reducing the eczema of such infants from the discharging to the dry condition pretty rapidly. As to that, I was supported by other writers.

But from some observations I have recently made, I have reason to think that Bantingism as applied to such infants is as rapid in its effects, and if sustained, is of more permanent efficacy. Some years ago the late Mr. Banting was under my care for eczema, and I had an opportunity of conversing with him pretty frequently on the system of which he was the apostle. It is through this accident that the idea suggested itself to me.

I have used the word infant for the sake of convenience, but I refer rather to very young children. To Bantingize a suckling infant is, of course, not very practicable, but a child of two or three years old can be dieted very readily. It does not appear necessary to the end in view that the diet should be restricted in quantity as well as in quality, which of course was essential under the *regime* laid down by Mr. Banting, or rather by the late Mr. Harvey (the aurist) for him. It is simply necessary to limit the fat-producing elements of food for the amelioration of eczema in lymphatic young children. At least so I have found. By this means their excessive obesity becomes diminished and their eczema very remarkably improved within ten days of commencing the regimen, and that without any injury whatever to their general health, so far as I can judge.

In place of pure milk, they should take milk diluted with an equal or even a double quantity of water. In place of bread and butter they should take dry toast or dry biscuits; and with these particular articles of food they may be supplied indefinitely. All the fat is

to be carefully cut away from such meat as they may partake of, and they should not be allowed pork, veal or lamb. They may have poultry or game, or fish, except the oily kind of fishes, such as herrings, salmon, eels, etc.; and the fish they partake of should be broiled (not fried). They may eat boiled vegetable tops, but not vegetable roots, such as potato, parsnip, beet-root, turnip or carrot. Beef-tea (the melted fat being carefully skimmed off) is permissible in any quantity, and so also toast and water. Cooked fruit (not sweetened) may also be allowed.

But the principles of the Banting treatment are universally known. It only remains for me to say that cod-liver oil (the favorite remedy, *par excellence*, for the condition of which I am speaking) is quite incompatible with the treatment I am advocating. Of course, the health of the child should be watched; and it should be weighed at the commencement of its dieting, and afterwards from week to week.

INJURY PECULIAR TO CHILDREN, PROBABLY DISLOCATION OF EITHER END OF RADIUS. By WILLIAM SNEDDON, M. D., Beith.

A short article, entitled "Dislocations of the Elbow-joint in Children," by Mr. S. H. Lindeman, which appeared in the *British Medical Journal*, March 18th, interested me, because it is the only notice I have observed of this injury, except the one referred to in Mr. C. Heath's *Minor Surgery*, and is one which has attracted my attention, as I have notes of several cases. From what little has been written on the subject, there is great diversity of opinion as to the seat of the injury and its nature. The injury is described by Heath as being rare, but I have seen ten cases in as many years, and Mr. Lindeman says he saw ten in a year; the injury would either appear to be so trivial as to be beneath the notice of publication, or else we must be acute observers (perhaps too acute), to which qualification personally I do not lay any claim. So far as my observation has gone, it is generally confined to children who are delicate and atonic, and who are not more than six years old.

A typical case is this. A child is brought who is suffering pain in the arm, with inability to lift the fore-arm, or to catch anything offered to it, with the arm not quite semi-flexed, and the fore-arm fully pronated as a rule. The injury, in seven of the cases, was situated at the elbow, though in three it seemed to be at the wrist. There is seldom any deformity to be seen or felt; but, when the fore-arm is supinated and then flexed, a slight *click* is usually heard or felt, and the pain vanishes in a minute. If one now offer a coin to the child, it will lift its arm and catch hold of it at once. Sometimes this manipulation is not sufficient, for, besides supinating the fore-arm, the hand must be flexed on the arm. The injury is very apt to recur, and may not do so at the same seat, for I had one case in which the injury seemed to be situated at the wrist twice and once at the elbow. Another case had it thrice at the elbow; once when the child was on a visit. The surgeon who examined it could detect nothing, but after making his examination it was better. This I believe to be one reason of its so-called rarity; for, on making the customary examination for some probable dislocation, it is rectified, and it is quite a possible thing that some cases rectify themselves, for the displacement is so slight.

Mr. McNab, of Epping, who was the first to write about it in this country, thinks it is the lower end of

the radius which is dislocated from the ulna. M. Goyrand says it is a displacement of the interarticular cartilage of the wrist, at the end of the ulna. Other French surgeons, also Dr. Hodges of Boston, and Mr. S. H. Lindeman, think that it is the head of the radius which is displaced at the elbow. Mr. C. Heath thinks it occurs sometimes at the wrist, and other times near the elbow, and this is my opinion. I am not prepared to say what the exact nature of the injury is; but, in those cases at the elbow, it seems to be a slight displacement of the head of the radius forwards and probably outwards. In one case at the wrist the injury was not remedied, though I supinated the arm and flexed the wrist, till I moulded the parts, as it were, surrounding the wrist-joint. This, I thought, might be a case of displacement of the ulnar interarticular cartilage, but I am more inclined to think that the injury at the wrist is due to displacement of the lower end of the radius.

The majority of the cases which I have seen were caused by some one catching hold of the hand of the child, who was then dragged towards them. In a few cases, where I could get more reliable information, a nurse-girl stood behind the child, who was sitting, caught it by the hand, which caused it to rotate, as it were, on its elbow-joint, with its arm fully pronated, and raised it at the same time from the floor.—*Brit. Med. Jour.*

MEDICAL NOTES AND NEWS.

American Medical Association.—The Thirty-third Annual Session will be held in St. Paul, Minn., on Tuesday, Wednesday, Thursday, and Friday, June 6, 7, 8, 9, 1882, commencing on Tuesday, at 11 A.M.

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies as are recognized by *representation in their respective State Societies*, and from the Medical Department of the Army and Navy, and the Marine Hospital Service of the United States."

"Each State, County, and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates for any particular State, territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Secretaries of Medical Societies as above designated are earnestly requested to forward, *at once*, lists of their delegates.

SECTIONS.

"The Chairmen of the several Sections shall prepare and read in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective Sections. * * *"—*By-Laws, Art. II., Sect. 4.*

Practice of Medicine, Materia Medica, and Physiology—Dr. J. A. Ochterlony, Louisville, Ky., Chairman; Dr. D. J. Roberts, Nashville, Tenn., Secretary.

Obstetrics and Diseases of Women and Children—Dr. H. O. Marcy, Boston, Mass., Chairman; Dr. C. V. Mottram, Lawrence, Kan., Secretary.

Surgery and Anatomy—Dr. ———, Chairman; Dr. W. A. Byrd, Quincy, Ill., Secretary.

State Medicine—Dr. A. L. Gihon, U. S. Navy, Chairman; Dr. J. H. Sears, Waco, Texas, Secretary.

Ophthalmology, Otology, and Laryngology—Dr. ———, Chairman; Dr. J. Solis Cohen, Philadelphia, Secretary.

Diseases of Children—Dr. S. C. Busey, Washington, D. C., Chairman; Dr. Wm. Lee, Baltimore, Md., Secretary.

Dentistry—Dr. D. H. Goodwillie, New York City, Chairman; Dr. T. W. Brophy, Illinois, Secretary.

A member desiring to read a paper before any Section should forward the paper, or its *title and length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements at least one month before the meeting.—*By-Laws*.

Committee of Arrangements—Dr. A. J. Stone, St. Paul, Minn., Chairman.

AMENDMENTS TO THE BY-LAWS.

Offered by Dr. D. H. Goodwillie, Art. II., Sect. 8. Permanent Members: Strike out the words "but without the right of voting."

Offered by Dr. J. H. Packard, Regulation II., par. 1, to read "as Permanent Members or members by application."

Regulation VI., line 4, strike out 5 and insert 10. Second paragraph, lines 4 and 5, strike out all after "publication" to and including "Association," and insert "publication."

Regulation IX. Add new paragraph: "Members by application shall consist of such members of State and county societies, in good standing, as shall make application in writing for admission. They shall simply have the right to receive the Journal on the same terms as other members."

Regulation IV., paragraph 6, strike out all from "see," in line 7, to "and" in line 9.

Regulation V., paragraph 3, after "published" insert "in such manner as the Association may direct."

WILLIAM B. ATKINSON, M.D.,

Permanent Secretary.

M. Paul Bert.—The *Times* correspondent telegraphs from Paris that M. Paul Bert was on Monday elected a member of the Academy of Sciences in the place of the late M. Bouillaud. The medical section, on whom the recommendation devolved, had presented as in the order of fitness—(1) M. Davaine; (2) M. Charcot; (3) MM. Paul Bert and Brown-Sequard *ex æquo*; (4) M. Sappey. But the contest lay between M. Davaine, the precursor of Pasteur, whose treatises have repeatedly been "crowned" by the Academy, and M. Bert, Claude Bernard's most brilliant pupil. M. Bert was elected by thirty votes to twenty-six. Curiously enough, the Extremists on both sides represent his success as a political one. The *Republique Francaise* declares that he is avenged on his assailants; while the *Univers* describes his election as a scandal, and speaks of "the vivisector, Paul Bert", as "owing his notoriety solely to his contemptible political role." Both injudicious friends and relentless foes are certainly mistaken. M. Bert has simply obtained the due recognition of his scientific merits; and, even had he this time been defeated, it would merely have shown that the Academy thought his competitor's age entitled him to priority.—*Brit. Med. Jour.*

Professional Earnings in England.—We have recently allotted special space to the notification of wills left by medical men. It must have already struck those of our readers who have glanced at the figures recorded in this weekly report, that the average value of the property handed down by members of the profession to their families is singularly small. This is, unhappily, the fact. The general practitioner is a hard-working and too often a struggling man to the end of his days. Comparatively few of the class are able to retire, as the members of other callings retire, for rest from their labors, before the relief which rest brings to all men. Physicians and surgeons as a rule die in harness. The expenses incurred by those who make specialties of medicine or surgeon, or of any one branch of either of those departments of professional work, are necessarily great, while the recompense to the life of labor entailed, looking at the career as a whole, is proportionately small. Even the few who seem to make large incomes during a part of their career seldom amass even moderate competencies. Some five-and-twenty years ago calculations were made for London and the provinces, and it was estimated that a physician, practising as such in London, did not acquire an income on which he would be required to pay income-tax for sixteen years from the commencement, while a physician in the provinces reached the legal figure in eleven years, but not earlier. This difference in favor of the provinces are, of course, due to the fact that no man would think of commencing practice as a pure physician in any city or town, except the capital, unless he had special reason to believe there existed an "opening."

We have no means of knowing whether matters have mended with the profession generally during the last quarter of a century, but looking to the increase of its aggregate numbers in relation to the population, we fear there is not much ground to hope that the rewards of professional labor have been sensibly augmented. The laborer is worthy of his hire, and it is well now and again to look into this matter of money. It will sooner or later be necessary to take it into very serious consideration in relation to the question of fees. Meanwhile the lesson to be learnt from the story of the wills left by medical men is certainly one of caution and thrift. It is a sad reflection that, speaking generally, the families of medical practitioners are insufficiently provided for, a large proportion being left almost in poverty.—*The Lancet.*

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SPECIAL NOTICE.

We have mailed copies of this number of the GAZETTE to a large number of physicians who are not subscribers, and we ask these to examine the journal, and if they think it merits encouragement and support, to kindly remit the amount of subscription without delay. We can still supply a limited number of new subscribers with the GAZETTE from January 1st, when the current volume began. When remitting, state when you wish your subscription to begin.

EDITORIAL.

CAN THE AMERICAN MEDICAL ASSOCIATION CONSISTENTLY ADMIT DELEGATES FROM THE NEW YORK STATE MEDICAL SOCIETY?

"The cloud, which, intercepting the clear light,
Hangs o'er thy eyes, and blunts thy mortal sight
I will remove——."

Virgil.

From the machinations of scheming politicians, from the cunning of foes, from the short-sighted policy of friends, from the lukewarmness of the indifferent, from the manifold dangers that threaten to undermine the integrity of our code of ethics, imperfect though it be, we would fain exclaim, Good Lord deliver us!

Better that code, conservative, antiquated though it be, the tenor of whose precepts is to preserve the bar-

riers which wisdom has devised to keep impostors and charlatans and dishonorable pretenders beyond the pale of recognition and association, than a code which, in the name of tolerance and progressive liberality, opens the door to the enemies of the profession, and licenses the affiliation of the quack with the educated physician.

The question as to the propriety of the National association admitting delegates from the New York State society, in view of the action of this body in adopting a code of ethics totally at variance with that of the parent society, is one deserving the consideration of the profession at the present time.

The action of the National society in this matter will be, for good or for evil, far reaching in its results. The society has the opportunity either to endorse the code of the State society or to condemn it, to emphasize the concessions unquestionably made to homœopathy and eclecticism, or to most emphatically express its disapproval of them. Which shall it be? What course will the society pursue?

We cannot but believe, in common with the majority of those reflecting the opinions of the profession, that there is but one course consistent with honor and the avowed principles of the society, and that is to unhesitatingly condemn the action of the State society, and refuse to admit its delegates.

Any other course would be suicidal. Already the organs of homœopathy are rejoicing and predicting the decay of the old school of medicine and the triumph of the exponents of Hahnemannian principles. As illustrative of how the action of the State Medical Society is regarded by homœopaths, we quote the following from a recent editorial of a homœopathic journal:

"THE LION AND THE LAMB.—Whatever doubt may have existed respecting the desire of the allopathic lion to secure peace and harmony by swallowing the homœopathic lamb, must surely have been dispelled by the events of the past few months. A mighty revolution is shaking the defences of professional intolerance to their foundations, and the whole superstructure, which only one brief year ago seemed well-nigh impregnable, is to-day tottering to its fall. The apparent beginning of this revolution, beside the death-bed of the late Lord Beaconsfield; the stimulus it received in the addresses of Drs. Bristowe and Hutchinson; the conquests it has achieved in the Royal College of Physicians of England and in the State Medical Society of New York; the marked change in the tone of the allopathic journals,—all these had their real origin in a gradual change of professional sentiment, which only awaited an opportunity to give itself open and peremptory expression. The Homœopathy of 1825, knocking timidly at the eastern portal of the Republic, poor, weak, friendless, helpless, was an object to be contemned. The Homœopathy of to-day, reaching out its resistless arms to the Golden Gate of the Pacific, strong, confident of the divinity of its mission, flushed with an undreamed-of success and hurrying forward to new victories and more magnificent achievements, is a power which cannot with safety be despised, and must therefore be conciliated.

"The motive which actuates the revolution is not difficult to discover. The average allopath is not so densely ignorant but that he can learn the relation between cause and effect like other people. His knowledge of drug effects and of disease effects, crude though it may be, is not so exceedingly shallow but that he knows the laws of similars to be true, just as well as we know it. He applies it every day in his practice, he sees its almost marvellous operation in the cure of disease, he reads the comparative statistics of the two schools, he beholds the system making inroads upon the old-school domain, he detests in his own text books multitudes of plagiarisms from homœopathic works, and, last of all, he subjects the principle of similars to the test of rational examination and finds it to be not only reasonable, but the most reasonable method of applying drugs to the treatment of disease which his mind is capable of conceiving. He believes in homœopathy because his common sense compels belief."

The American Medical Association has it within its power to effectually extinguish this premature but natural enthusiasm of the irregulars, to set the seal of its disapproval on the revised code and its originators,

and reassert in all their pristine majesty the canons of the time-honored code which, whatever may be its inconsistencies, has served a most useful purpose in the economy of the body medicale.

But let us not in our indignation at the looseness of the revised code forget that there are inconsistencies in the old. It is vastly better to be governed by a set of laws which are in the main beneficent and conservative, though some of them have outlived the sphere of their usefulness, than to be exposed to the dangers of chaos, but better still to be governed by laws which shall in all respects conform to the demands of the modern relations between physicians. It is apparent that the New York State Medical Society have signally failed in devising such laws, but this does not signify that such a task is impracticable. There are inconsistencies in the old code. It is within the province of the American Medical Association to reconcile these. The sooner this is done the better.

We believe that the New York State Society will at their next meeting repeal the code which a very small minority of the members have enacted—a code which sets at defiance the wishes of the majority, and thus qualify themselves for representation in the National Society. Until this is done, however, consistency, expediency, the honor and vitality of the American Medical Association demand that they be excluded from its councils.

ABOUT BOOKS.

A Practical Manual of the Diseases of Children; with a Formulary, by Edward Ellis M. D., Late Senior Physician to the Victoria Hospital for sick Children, &c., Fourth Edition. Revised and Enlarged. 8vo., 220 pp. Birmingham and Co. New York. 1882. Price \$1.00.

A book that has so quickly run through four editions, and which has received such universal commendation from not only the reviewers, but also what is a better indication of its usefulness, the medical profession on both sides the Atlantic, we must see with pleasure published in the popular and inexpensive form that Birmingham & Co. present it in.

It is unnecessary to give a detailed review of the work here; its name and fame as an interesting and thoroughly reliable treatise on the Diseases of Children, is familiar to many of our readers.

As giving an idea of its practical nature to those who have not read it, it may be stated that all clinical records, all controversial questions, and all theories still under discussion have been omitted in order to present a concise manual for every day guidance.

A most important feature of the book, and one which has no doubt been a factor in its popularity, is the most excellent and carefully selected formulæ which have been appended, the practical character of which may be seen by referring to our column of "Formulary" in this number, p 226. There are few if any classes of diseases which require of the physician more acute observation and care in diagnosis, and which at the same time, if successfully treated, will awaken more lasting gratitude and build up more quickly the physician's reputation for skill, and sooner establish his financial success, than those of children. It is nevertheless true that few practitioners are well versed in those methods by which success in treating children is attained.

The author of the present work has given, in most careful detail, many practical hints which will aid the

practitioner to easily acquire such methods, and has omitted nothing wanting to make the book an invaluable one to the practitioner.

A Practical Encyclopædia of Medicine and Surgery. Edited by Edward J. Bermingham, A. M., M. D.

The problem, which has heretofore vexed, and to no purpose, publishers and authors alike, namely, to supply at small cost in one volume an encyclopædia of medicine and surgery, which shall be a library in epitome, condensing in the compass of one book treatises on every medical and surgical topic from the pens of the most celebrated medical writers in America and England, we believe at last to be approaching a solution. Believing that a book of this character, which has no prototype in medical literature, would be, from its thoroughly practical nature and completeness, an invaluable aid to the profession as a book for constant reference, and would therefore be universally welcomed, we were encouraged to undertake its preparation. Those of the profession to whom we have looked for literary support in this enterprise—and it will be seen by a glance at our advertising pages that they include the most scientific and popular medical writers of the times—, have been quick to respond to our call for aid, and we shall be able to place at the disposal of the profession the product of the best special medical thought of the age.

The arrangement of this book, its form, etc., is set forth on advertising page 2. We are rapidly pushing its completion and trust soon to be able to announce it ready for delivery.

We shall present it with a confidence of its general acceptance, inspired by the belief in the preeminent utility of such a work as it is by this stand and the majority will judge it.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK COUNTY MEDICAL SOCIETY, APRIL 24th, 1882.

The President Dr. F. R. Sturgis presided. The minutes of the previous meeting were read and approved. After the transaction of other routine business the first paper for the evening entitled

OBSERVATIONS ON HEMIPLEGIA

was read by its author, Dr. A. D. Rockwell. The paper was based on records of 81 cases of hemiplegia treated by Dr. Rockwell during the past fifteen years. The characteristic symptoms of hemiplegia were given; these varied widely according to the part of the brain substance affected. A typical case of hemiplegia was cited, viz. Mr. X.—æt. 62, without premonitory symptoms suddenly became partly unconscious, fell to the ground, and became paralyzed on one side, the face was drawn to the paralyzed side and there was aphasia. In two weeks he was somewhat improved and in three months could walk about. The arm recovered less rapidly than the leg, and remained weak until death, which occurred two years later. *Post mortem* there was found hemorrhage in or about the corpora striata. The lesion in this class of cases is situated in the third frontal convolution and is most often in the right hemisphere. The aphasia disappears before the paralysis. When the aphasic symptoms disappear it may be said to be due to a process similar to that by which the left hand grows to supply the place of the right

in disability or loss of the latter. The right brain becomes educated as does the left hand.

Dr. Rockwell next cited a case typifying a lesion of the left hemisphere, detailing the symptoms. He ascribed hemiplegia to three causes, viz. rupture of vessels, occlusion of vessels, and lasting spasm of vessels, the latter causing partial hemiplegia. These cases Dr. Rockwell thought explicable by the theory of reflex influence.

Dr. Seguin said he had only heard a portion of the paper and would therefore confine his remarks to that portion. While blindness with hemiplegia was of importance clinically in the cases related by Dr. Rockwell it was not of such great value from a scientific and pathological point of view, since the ophthalmoscope had not been used. Although Dr. Rockwell maintained as a result of his observations that the special senses were not connected with the hemispheres, Dr. Seguin believed that such connection had been established by Ferrier, at least as regards animals, though it was true, that there were few cases recorded in which the connection had been made out in the human being. He recalled the case of a distinguished physician who had aphasia through word deafness; the aphasia passed away but he never regained his hearing. *Post mortem* the only lesion found was in the inferior portion of the parietal lobe which approximated the area Ferrier has designated as belonging to the special senses. Dr. Rockwell closed the discussion.

The report of the Therapeutical Society on

CALCIUM SULPHIDE AS AN ANTI-SUPPURATIVE

was read by Dr. A. H. Smith.

The report was based on the effects obtained by the administration of sulphide of calcium in fifty-one cases of suppurative disease. Dr. Smith first gave a *resume* of the history of the drug. He then read the report in detail, of which the following is an abstract :

Dr. W. F. Alexander reports 19 cases treated by sulphide of calcium,

CASE I.—P. W., acne punctata and pustulosa ; was given sulph. cal., grn. $\frac{1}{4}$, four times a day, with the result of steady improvement.

CASE II.—Acne rosacea. Ordered on Feb. 6th cal. sulphide, gr. $\frac{1}{4}$ 4 times a day. Feb. 15th, papules all gone.

Dr. Alexander had used the drug in pustulous acne and in anthrax with good result.

Dr. Bayles, of Orange, N. J., had used the drug in bubo with non-indurated sore and in strumous purulent ophthalmia, with the result of an immediate arrest of supuration.

Dr. Hanks had used it in otorrhoea of 20 years standing and in 3 other cases of otorrhoea, in 4 cases of suppurative tonsillitis, in suppurative endometritis, in axillary abscess and in threatened mammary abscess with varying results, but in the main attesting its efficiency as an anti-suppurative agent.

Dr. D. M. Cammann had used it in acne, furuncles, and in the case of a strumous child, and deduced the conclusion that it diminished suppuration and first increased the appetite and subsequently interfered with digestion.

Dr. Gibney had used it in multiple abscess of knee from disease of bone, and in recurring phlegmonous periarthrititis with marked beneficial effects.

Dr. Robert Emory, of Brookline, Mass., had used it in furuncular inflammation, pustular acne and multiple furuncles. In one case there was an immediate arrest of suppuration, in others no benefit from the drug was observed.

Dr. A. H. Smith had used it in inflammation of the connective tissue of the neck, in phlegmon of neck following pneumonia, in sty, chronic inflammation of the breast with implication of axillary glands, in furuncles, etc., and with few exceptions its use was followed by improvement.

Dr. G. H. Swasey had used it in acne simplex with success.

Dr. E. C. Seguin had used it in the aggravated form of acne, due to the bromides, and reported that it acted better than arsenic.

Dr. Bingham, of Vermont, had used it in all the pustular diseases of the skin, and had obtained the best results in acute affections.

From these reports the Therapeutical Society felt warranted in concluding that there was marked benefit from the use of sulphide of calcium as an anti-suppurative agent. It was prone to irritate the stomach, therefore small doses frequently repeated, as 1-10 grain every 2 hours, were to be preferred to larger doses. Its exhibition caused headache and eructations of sulphuretted hydrogen.

In the discussion which followed Dr. David Webster said that since hearing Dr. Sexton's paper on the use of sulphide of calcium in the treatment of suppurative disease of the middle ear he had made use of the drug in two such cases with great benefit to the patients ; he had administered grn. $\frac{1}{4}$ four times a day in one case and grn. $\frac{1}{4}$ t.i.d in the other. He had used it in other cases with negative result.

Dr. Warren had used it in acute inflammation of middle ear following scarlet fever with good result, he had used it also in other cases and had obtained best results in suppurative adenitis. He inquired if the effects of the drug on healthy persons had been tested, and if it acted better on young than on old persons.

Dr. Sexton was glad to see that some of the gentlemen present had found the drug useful in disease of the middle ear ; he had used it for past 2 years and daily its value increased in his eyes. He had given it with benefit to children of one and two months, in 1-20 grain doses every 2 hours. The trituration with sugar he thought the best preparation for children. He was accustomed to combine aconite in very small doses with the calcium sulphide. He had found it to abort suppuration in quinsy sore throat. He had obtained the best results in subacute rather than acute cases. The want of success in its use by some might be due to the administration of an unreliable preparation.

Dr. Piffard thought it probable that sulphide of calcium did not exist in its pure form in any of the preparations administered. The chemical committee of the British Pharmacopœia reported that they were unable to find any pure calcium sulphide and admitted it under the name of sulphurated lime. The fact that there is such a difference in the preparations accounts for the want of success in some cases. Sulphide of calcium was in the last century regarded as an antidote to mercury. It was first used as an anti-suppurative by the Homœopaths, afterward recommended by Ringer and also by Kane of London. Dr. Piffard's own experience of the effects of the drug had varied with every sample used. Its use had extended in many different directions. He had treated 7 or 8 chancroidal buboes with it at Charity Hospital with good results. Dr. F. N. Otis, who followed him in his service at Charity Hospital, had used it in the same class of cases and obtained such excellent results that he had them published. Two days ago he had been called to see a case which gave every promise of being a phlegmonous

inflammation, he had ordered grns. 1-10 calcium sulphide and the inflammation was aborted.

Dr. Douglas had used it in two cases, one of abscess following scarlet fever, the other of inflammation following vaccination, with good results.

Dr. Douglas read a letter from Dr. Emory of Brookline, Mass. Expressing his regret at being unable to be present and testifying to the good results obtained by the use of calcium sulphide.

It was ordered by the society that the secretary be empowered to appoint delegates to the American Medical Association providing no more than the authorized number, viz. 90, applied.

The society then adjourned.

LECTURES.

CYSTITIS IN THE MALE.

BY

SAMUEL W. GROSS, M. D.

Professor of Principles of Surgery and Clinical Surgery in Jefferson Medical college, Phila.

The cause of catarrh of the bladder lies in the presence of some obstacle to the egress of the urine, such as one or more strictures; an enlarged prostate gland; a calculus; hypertrophy or sacculation of the bladder; carcinomatous or sarcomatous tumor, and paralysis of the bladder; this last occurring as a result of fracture or dislocation of the vertebræ, or being dependent upon pneumonia, meningitis, or myelitis. The symptoms of cystorrhœa are an increasing discharge of muco-purulent matter, difficulty in micturition, pain in associate parts, and general breaking down of health. The secretion of cystitis is easy to recognize, rendering the diagnosis plain if a specimen of the urine can be obtained. There is usually in such urine a very copious sediment. Another point of diagnosis may be reached by watching how and when the discharge of viscid, ropy, fetid and ammoniacal fluid comes away from the bladder, not at all times, but only when the bladder is emptied. The total amount of this discharge in the course of the twenty-four hours varies. Early in the disease there may not be more than one fluid-drachm of it in a day, whereas later in the progress of the attack one-half of the whole quantity of fluid passed may be this muco-purulent matter. In one case which came under my notice, as much as sixteen pounds or pints of it were expelled in thirty-two hours. This discharge is not mucus, but pus—pus acted on by ammonia, which destroys all the pus corpuscles. This ammoniacal pus will, as we have heard from this man, sometimes string out in a mass at the close of micturition. If we examine the supernatant fluid of this discharge, it will be found to give the reaction of albumen, and to contain the crystals of the triple ammonio-magnesian phosphates. The bladder of a patient with cystitis is never entirely empty. The urea which remains behind decomposes into the carbonate of ammonium, and this intensifies the inflammation. The character of the urine is but very little changed at first, but in later stages, as I have just said, it becomes turbid, muddy, and decomposed, and contains pus and epithelial cells, the triple phosphatic crystals, bacteria, and vibriones. This being so, the first indication, of course, is to keep the bladder clean, and not to change the character of the urine. As regards the quantity of pus passed, there is not very much in this case, not more than one-eighth of the total quantity of urine, calculating with Professor Tyson, of the University of Pennsylvania, that the average daily secretion of urine is fifty ounces. Of course this daily total varies widely, according to the state of the

weather, etc., etc. In warm weather a large part of it passes off by the skin; in cold weather, as there is little or no diaphoresis, the diuresis is increased in amount. So, too, with regard to the use of certain articles of food. Coffee is a powerful diuretic. This man passes six and one-fourth ounces of pus in twenty-four hours. This naturally causes a considerable drain on the system. The pain in passing water, usually referred to the last two inches of the penis, in reality extends along the whole length of the urethra. This man tells us that he also has pain in the perineum and ano-rectal region, and occasionally in the thigh and groins. Most people have a very indefinite idea of the exact location of a pain. Thus a patient with lumbago will often come to you complaining of pain the kidneys. So, too, a man with functional disorders of the stomach refers his subjective sensations to the heart. In this case pressure over the pubes, after the bladder has been emptied, causes pain. As a general rule pain at the end of the penis denotes inflammation at the neck of the bladder, and pain over the pubic bone denotes inflammation of the whole of the bladder. This patient does not suffer from any constitutional disturbance. His appetite is good, and his bowels are moved regularly every day. The only thing that he complains of is that his rest is broken by having to rise so often and urinate during the night. In most cases of cystitis we find the patient utterly broken down and emaciated. I said that the disease was primarily due to an obstruction to the natural flow of the urine. This obstruction in the young is usually a stricture; in the old it is generally due to paralysis, or, more commonly still, to enlargement of the prostate gland. There are also, as I have already shown, other morbid conditions of the parts, causing obstruction to the flow of urine. The intense desire to make water is due to the inflammation of the mucous membrane of the bladder, which may become so swollen and hypertrophied that the organ will not hold more than an ounce and a half of urine. If the bladder of a patient who has died in the early stages of cystitis be opened, its epithelium will be found to be hypertrophied, and to have become the seat of inflammatory deposits. During the course of the disease the bladder undergoes certain changes—just such changes as would occur in any muscle if it were exercised more than its fellow. The blood would tend to it and it would become hypertrophied and immensely developed. So in stenosis of the valves of the heart causing enlargement of its muscle. The tendency of the blood to the bladder causes an unusual development of its muscular walls in particular. In some fatal cases of cystitis, brought on by stricture, I found the walls of the bladder fully three-quarters of an inch in thickness. Of course, *pari passu* with this concentric hypertrophy, the cavity of the bladder diminishes in size. In eccentric hypertrophy of the walls of the bladder, the cavity on the other hand increases in size. This man, no doubt, has eccentric hypertrophy, joined with increased frequency of micturition, spasm and tenesmus. He may have enlargement of the involuntary, internal columniform fibres of the bladder. Where these muscles are enlarged there is a sort of hydraulic pressure exerted, which drives the mucous membrane out between the columniform fibre, thus forming a number of small cysts, hernial protrusions from the bladder, as it were, which contain urine. Sometimes there are as many as thirty or forty of these cysts, which may contain uric acid calculi. Indeed, one of these cysts may be as large as the bladder itself. Here is a specimen taken from an old man who died with enlarged prostate, in

which you can see the cysts which have formed between the columniform fibres. Here is a specimen of eccentric hypertrophy, in which the size of the bladder is enormously increased. This man is forty-five years of age, and probably has no enlargement of the prostate, for this condition does not usually occur until after the fifty-fifth year. After that age one person in every fifty shows signs of that condition. In diagnosing enlargement of the prostate by means of an instrument, a peculiar form of bougie is necessary in order to get past the obstruction. In very many cases the presence of an enlarged prostate may be determined by means of a finger in the rectum. In health the prostatic gland is about the size of a horse-chestnut. This patient tells me that he had gonorrhœa as many as a dozen times when he was young. This history illustrates a very peculiar fact, namely a gonorrhœal diathesis, one man has an attack of gonorrhœa every time he cohabits with a certain infected woman; another man has connection with her with entire impunity,—the simple fact being that one man has the gonorrhœal diathesis and the other has not. The last attack which our patient had was fifteen years ago. Upon questioning him closely with regard to that period he tells me that very often he woke up in the morning and found that the lips of the meatus urinarius had stuck together. Moreover he affirms that since the last attack he has noticed a very decided difference in the size of the column of urine projected, and can only get a number 13 bougie into the urethra. From the size of the meatus it should certainly admit a number 30. Furthermore, the man says that he cannot project the stream properly. He always has to *milk* the last few drops away as it were. This is due to the loss of function on the part of the urethral muscles. Sometimes, he says, a little streak of blood may be seen in the urine. Upon introducing a bulbous bougie into the urethra I meet with the first obstruction about three-quarters of an inch beyond the meatus; another I find an inch and a half within the meatus. There is great sensitiveness of the urethra. Far back in its calibre I strike tight strictures which I can not get through. In this case the cystitis is very plainly dependent upon stricture of the urethra. I do not care to examine the man any further at present, for I might give him an attack of urethral fever. He says that he was discharged from the army on account of a disease of the bladder,—polyuria he thinks the surgeon said. Later a New York doctor told him that there was a considerable quantity of albumen in his urine. In his present condition it is impossible to determine whether or not the man has disease of the kidneys. The albumen in his urine may be due to kidney trouble, might be imagined to show the presence of Bright's disease in a chronic form, and yet it may be simply a product of the inflamed condition of the bladder. In undertaking the care of a case of stricture one's treatment must of course be modified by the condition of the urinary tract. This, then, brings us to a consideration of the treatment of cystorrhœa. The first indication of course, is to remove the exciting cause. I shall therefore enlarge the stricture by gradual dilatation. I shall try on some future occasion to wash out his bladder thoroughly, and to get a dozen drops of urine uncontaminated by the vesical discharge. If this urine contains albumen we shall know at once that the kidneys are diseased. If the kidneys are healthy the case can be cured I think. The first indication in treatment as I tell you, is to remove the exciting cause. The urethra is very sensitive, while this is the case it

will be hard to cure. We must try to keep down the inflammation. If there be acute pain and spasm, blood must be taken from the perineum by means of leeches. The patient must be kept in bed, and hot fomentations applied over the pubes. At the same time he should take demulcent drinks, with a little hyoscyamus,—one drachm of hyoscyamus to each glass of the drink. If the pain is violent, morphia must be given by the mouth or rectum. The following prescription is a good one

℞ Pulv. opii.....grs xii
Camphoræ.....grs. xxx
Ex. belladon.....grs. iij
Cocao.....q. s

M. et in suppos. No. VI divide; S. One each night before retiring.

The diet should be bland and unstimulating. After the symptoms have abated somewhat balsam of copaiba should be given three times in the course of the twenty-four hours in capsule, or rubbed up in an emulsion. To this opium may be added to prevent flatulence and griping. In some cases turpentine in capsule may do good, other remedies are buchu, decoction of trailing arbutus, or *uva ursi*, with hops, highly recommended by Sir. Henry Thompson,—*uva ursi* f 3 iss., lupuline 3 i., aquæ Oij. This mixture should be allowed to simmer for two hours; then enough water poured in to bring the quantity of the mixture up to two quarts; then two grains of morphia and two drachms of the bicarbonate of sodium added. The dose of this mixture is a wineglassful. In some cases benzoic acid will be found very useful. The dose, beginning with five grains should be gradually pushed up to thirty grains, and finally as much as one drachm may be taken thrice daily. Paregoric has this acid as one of its constituents. Benzoic acid has both a soothing and a chemical action upon the parts. This latter action consists in its influence upon the carbonate of ammonium which it neutralizes, and with which it forms a soluble compound, and so prevents the formation of the crystals of triple phosphate. A prescription which I have often used, and from which I have derived the most excellent results, is the following:

℞ Copaibæ balsami.....3 iv
Acid. benzoici.....3 iv
Gummi arabici.....3 ij
Sacchari.....3 ij
Gaultheriæ olei.....gtt. xx
Aquæ camphoræ.....q. s. ad f. 3 viij

M. S. A teaspoonful every two hours.

So much for the general treatment. The local treatment of cystitis is the most important. Cystitis can never be cured so long as a stricture of the urethra remains. Our first aim, consequently, in all cases must be to remove the stricture. As regards the treatment of the urine, it must be borne in mind that the ammonium in the urine keeps the bladder in a constant state of irritation. The first thing to be done, therefore, after dilating the stricture enough to get an instrument past it, is to wash out the bladder. The best way, perhaps, of doing this is to procure a gum-elastic bag holding about four ounces, and to have a basin of water at 98° F., ready. Then after drawing the urine with a flexible catheter whose end is smooth, allow the catheter to remain *in situ*, and the bladder may be washed out by simply connecting the mouth of the bag with the catheter. The warm water thus injected should be retained as long as possible, and then drawn off, and the operation repeated. If you do not happen to have this bag and a catheter on hand get a bit of rubber tubing and a funnel; then pour the warm

water into the funnel, and after it has come out through the tubing replace the funnel and repeat the operation until the water comes out clear. If the urine is foetid, one grain of the permanganate of potassium may be added to each ounce of warm water; or you may add a small part of carbolic acid. After the water has come out clear, if it is desired to make an impression upon the mucous membrane of the bladder, a solution of borax (fifteen grains to the fluid ounce of water) may be injected; or still better, a twenty grain solution of the nitrate of silver. If this solution does not cause too much smarting it may be allowed to remain ten seconds. The patient should rest in bed during this treatment, and be placed upon a very bland diet.

CLINICAL COMMENTS ON HYDROCELE OF THE CORD—RACHITIS—CHRONIC BRONCHITIS.

BY

A. JACOBI, M.D.

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CASE I.—Hydrocele of the Cord.—George H., æt. three years. About four months ago his mother noticed a swelling in the scrotum on the right side extending up the inguinal canal. This swelling gradually increased in size. A truss was ordered but could not be worn longer than eight days. Five weeks ago the swelling was tapped and three drachms of serum were withdrawn. Since then the swelling has gradually increased. It now extends from the external abdominal ring half way into the scrotum. The testicle is isolated and distinctly felt. As you see the swelling does not disappear on pressure. It does not change with the respirations. The bowels are regular and appetite good. Temperature is normal.

This swelling might be taken for hydrocele or hernia. It is a cystic dilatation of the cord with serum in it. The best treatment of hydrocele of the cord is to let it alone. This cyst is elastic and as a rule will disappear. On the other hand while a scrotal hydrocele is very apt in young infants to yield by a single puncture a hydrocele of the spermatic cord might never yield under the same treatment. If you puncture it you will very often have to puncture all the time, just as you have to puncture an abdominal cavity all the time more and more frequently. This, therefore, should be treated differently from a hydrocele of the scrotum.

CASE II.—Rachitis.—Male æt. two years. Mother's first child. Cut incisors when sixteen months old. Two months after that two upper ones and has now eighteen teeth. The anterior fontanelle is not closed and the child does not walk. Tries to make some steps if led by the hand. The diaphyses of both tibiae are curved inwards. The bowels are always constipated, and the mother gives injections in the summer every day and in the winter, every second day. Was nursed till 16 months old. Then was fed on milk, coffee, potatoes, gruel and farina. The child smiled when six months old. Pulse is normal.

I find that the fontanelle is about as large as you would expect to find it in a child seven or eight months old, when it is largest. It is habitual with children to walk when twelve or fourteen months of age. Such a child ought to have regular teeth in the lower jaw. The incisors should appear at the 7th or 8th month instead of the sixteenth. The lateness of closure of

the fontanelle, the late appearance of the teeth, and the retardation in its attempt to walk all point to an insufficient development, at all events of the osseous system. Then the child's muscles are flabby and the bowels are constipated. One of the main causes of constipation is insufficient action of the muscles of the intestine. This insufficient osseous and muscular system and general ill nutrition is what we are in the habit of calling rickets. Children of two years are more apt to keep the tongue in the mouth than this one before you. Here the tongue is a little bulky and heavy. Cases of children with over-grown tongues are always suspicious as far as cerebral development is concerned. I do not speak of cases of the so-called congenital macroglossa, which is often the result of cystic degeneration of the tongue, and the brain is not the seat of the disease. In congenital idiots with insufficient development of brain you have enlarged tongue very frequently.

Rickets as a rule will develop only where children are seven to eight months of age. Among some it will develop very much earlier. Those cases are very early that come on with constipation, and at the same time, with softening of the cranial bones. The occipital and parietal bones will soften very early, even when the infants are 2-3 months old. There goes hand-in-hand with this rachitic softening of the bones and in many instances meningeal effusion.

The teeth, which have just made their appearance, are decaying already, which indicates a very defective development of the osseous system. Decay of teeth after birth is very rare, except in constitutional disease. In syphilis you will often see it, you will rarely see it in rachitis. Just as young bone is less hard than the bone of adults, so the teeth contain less phosphorus, less cement, than adult teeth.

Treatment.—The child should take a few teaspoonfuls of raw meat and one egg in the twenty-four hours, and plenty of oatmeal with cow's milk. Cod liver oil a teaspoonful three times a day, to which may be added some iodide of iron, six or seven drops in sweetened water.

CASE III.—Chronic Bronchitis.—Boy, æt. ten years. Has dulness on one side of the lungs, which is very probably the result of old pulmonary infiltration, with now and then returning attacks of bronchitis. He has an elongated uvula, and the palate is very long. When there is a catarrh of the pharynx, all the parts assume a larger size, and the uvula is very long. When, however, the length is the result of inflammation, you would always expect to be able to prove it by the red color and oedematous appearance of the parts. When the palate and uvula are elongated, with a pale mucous membrane, and the organ rather thin, then you may always say that this is a chronic condition of things. When the uvula is not very long, it is pretty well endured. But when such persons lie down, the uvula falls backward and touches the posterior wall of the pharynx. There is a sudden tickling, and they cough all the time. It is dangerous in the long run. For the cough itself will be the cause of constant irritation. When you find a throat sore after a cough has lasted for some time, you have no right to conclude that the redness of the pharynx is the cause of that cough. It may just as well be the result and an elongated uvula of this description is apt to give rise to a sudden pharyngeal catarrh, which may extend downwards. It is not improbable that this uvula has been elongated from birth, and it is possible that a great many forms of pulmonary symptoms have been the result of such an elongated uvula. For you must not forget that

particularly in children, most of the cases of pneumonia are the final development of a catarrh in the finer bronchi, and this the result of a catarrh in the larger bronchi, in the trachea, back in the larynx and in the pharynx. This connection can usually be traced in a number of instances, and I have no doubt that in a few cases, such an elongated uvula would be the cause of a great many troubles belonging to the respiratory organs.

Treatment.—The indication would be to remove such an elongated uvula as soon as possible. If there is a choice you ought not to do it when there is diphtheria prevailing. As we have a good deal of diphtheria now, we had better wait a little while. For every wound in the throat, at this time, will become diphtheritic within twenty-four hours.

ORIGINAL ARTICLES.

SOME ADDITIONAL OBSERVATIONS RELATING TO HOUSE SANITATION.

BY

DR. FRANK H. HAMILTON.

CAN SCARLATINA OR OTHER ZYMOTIC DISEASES BE CONVEYED FROM HOUSE TO HOUSE, THROUGH THE MEDIUM OF SEWER GAS?

The readers of the MEDICAL GAZETTE will remember that in my paper entitled "The Struggle for Life against Civilization," &c., read before the Academy of Medicine, March 16, 1882, and published in this journal, I expressed a "suspicion" that scarlatina, diphtheria and other zymotic diseases might be conveyed through the sewers; and those who were present during the discussion which ensued will remember that Dr. Janeway challenged any one to show a case of scarlatina thus conveyed.

The suspicion entertained by myself has for some time been entertained by others, and has been often expressed publicly by medical men, although the opportunities for clearly proving such a fact have been rare. In the number of the *Sanitary Record* for March 15th, 1882, published in London, and just received, is a very carefully prepared article from the pen of Alfred Carpenter, M. D., Lond., C. C. S. Camb., entitled, "Some of the conditions which modify or increase the infective character of Scarlatina."

Dr. Carpenter says, "I have for a long time past had my own opinions as to the causation of scarlatina, and of the conditions which modify or increase its infectious character. These opinions have been based upon an experience which has not been narrow, or restricted to a practice among one class of persons or to one district." He then proceeds to give a *résumé* of a personal investigation and study of four severe outbreaks of scarlatina; all of which, in spite of the most energetic sanitary measures, continued to recur at longer or shorter intervals, until the connection with the sewers, or with sewage sinks was severed; and the epidemics disappeared altogether.

All of these outbreaks occurred in private or public school houses. In the first example the school house was connected with an abandoned cesspool, on severing which connection the disease promptly and permanently disappeared; and Dr. Carpenter remarks: "It must be evident that the cesspool in the school yard was intimately associated with the reappearance

of scarlatina; that it contained some material which continued the vitality of the disease germs."

The second example was in the case of a private school. Three successive outbursts of scarlatina occurred, until the "water-closet was taken away altogether." Since which time it has not reappeared, now a period of nearly eight years.

"The third set of cases" appeared in an elementary school. After fruitless attempts to expel it, "I came to the conclusion," says Dr. Carpenter, "that the fault in the construction of the sewer system, which I am about to detail to you, was the foundation of this epidemic."

The fourth set of cases was in a school connected with a large pauper establishment. "We know" says Dr. Carpenter, "how scarlatina gained admission to the infirmary. The washings and excreta of the patients naturally found admission to the sewer, and I proved that that there was a current up the sewer sometimes."

Finally Dr. Carpenter remarks "what inference do I draw from these cases." It is, that the causation of scarlatina may as often arise from sewage emanations, and sewage contaminated with the scarlatina germs as from personal contact."

Dr. Carpenter also states that he has on several occasions connected outbreaks of diphtheria with certain conditions of the sewers.

To which the writer adds—considering the well known fact that the germs of scarlatina and of all zymotic diseases are nourished and multiplied by warmth and filth, it would seem probable, indeed almost certain, that the germs of disease might be conveyed in this way from house to house. However startling the suggestion may be, it hardly becomes us to conceal from ourselves and the public the fact that such things are possible and even probable.

THE SINS OF THE PLUMBER.

The same journal contains a paper written by W. K. Burton, Resident Engineer to the London Sanitary Protection Association, in which (speaking of iron pipe drains) occurs the following passage:—"As regards the first—the leakage—I believe I do not in any way exaggerate the defective state in which it is common to lay drains, when I say that not one per cent. of those under the houses of London would stand the test of being closed at the sewer end and of being filled with water. A leakage greater or less would be found in almost every one, and very often such a leakage as would make it impossible to fill the drain at all. This being the case, we are brought face to face with two alternatives. Either practically, every house in London should have its drain unreservedly condemned, or a certain small amount of leakage must be allowed to pass. I do not propose to enter into the question as to what extent an inspector is justified in passing slight defects; but would point out that such faults as are small in extent, are almost universal, and are generally passed by inspectors, *do not come strictly under the head of sins of the plumber.*"

This is precisely the ground occupied by Professor Doremus in the Academy discussion.

HOW LONG WILL THE BEST PLUMBING LAST?

In a third article in the same journal entitled "Home Sanitation," by H. H. Collins, F. R. I. B. A., F. I. S. the writer says: "One 'hint' more with regard to the house and its belongings, worth all the rest; do not imagine that when structure, drainage, water-supply, and the various appliances appertaining thereto *are left*

in perfect condition that they will always remain so, and that, unlike every other production, they will last unimpaired for ever, or even that period of 'for ever,' a few years."

What conclusion must we draw from this, except that plumbing, in order to be safe, must be renewed throughout every few years? What do the plumbers and sanitary engineers say to this. This was the position taken by myself in my paper, but Col. Waring, in his communication to the *Herald* and *Evening Mail*, and Mr. Wingate and Dr. Billings have said it could be made perfectly safe. Do they mean to say perfectly safe as long as the house shall last; and if they do not, for how long a time can it be made safe? Those who build houses and those who live in houses have a deep interest in this question.

If it can be made perfectly safe for any length of time why is it not done? Mr. Burton in the paragraph quoted says practically that in London not one per cent. of the houses are entirely free from sewer gas, and that through no fault of the plumbers.

And Col. Waring says (*Herald*, April 12th).— "Few, I imagine would question the substantial soundness of Dr. Hamilton's position on the question of heating, lighting and ventilation, and no one probably at all familiar with the subject will question what he says about the effect of the plumbing work of city houses on the life and health of their occupants. From tenement house to palace they are very often, *almost universally*, disgracefully and dangerously bad" * * "It is quite true that such plumbing work as is to be found to-day in nine out of every ten houses, even in Fifth avenue, is unsafe, and ought not to be allowed to remain within the same four walls with a family of human beings" * * * There is no doubt that the wide distribution of plumbing appliances throughout the whole house, has led to a great increase of risk, and to a wide dissemination of dangerous defects."

Practically these two gentlemen have condemned almost the entire plumbing of London and New York. Where then will Col. Waring, or Mr. Wingate, or Dr. Billings, all of whom say it can be, supply us with the *proof* that it has been and can be made safe for any considerable length of time? What reasons have we to suppose that if a "wide distribution" cannot be made safe, a more limited distribution can be?

Col. Waring intimates that I am not a "professional sanitarian," or I would not have differed with him upon the practicability of excluding poisonous gases from our houses under the modern system of plumbing, and upon certain other points; and warns the people through both the *Herald* and the *Mail* and *Express*, to take no steps backward in the essential improvement of the adjuncts of our daily life.

Let me remind Col. Waring that all medical men are, by virtue of their calling, "professional sanitarians." They are not indeed "sanitary engineers," and there are many things which this class of specialists can teach us; but there are quite as many things, perhaps, which medical men can teach them. We would gladly get information from Col. Waring and other sanitary engineers, or from plumbers, how the pipes can be connected with our dwelling houses, and the gases and poisonous germs be effectually excluded—for medical men believe that both sewer gases and the germs they hold and fructify are dangerous to health. We understand fully that these gentlemen declare it can be done; and they have, when asked, each in his own way, described their peculiar methods; but as we understand them, it has not been done yet, unless it be for short periods of time, in London or

New York; and it is not unreasonable, therefore, that we should remain sceptical until some evidence is furnished of the correctness of their assertions.

WOULD IT BE BETTER, OR IS IT PRACTICABLE TO PLACE ALL OF OUR PLUMBING IN THIS CLIMATE IN AN EXTENSION?

Prof. Willard Parker said in the Academy at the close of the discussion, "I think this is a subject of the greatest importance, and one which it is our duty to be interested in. * * * "If I were to build a house I would not have it connected in any way with a sewer. I would construct a sort of annex, where I would have all the sewers, closets and pipes of the house." To this suggestion I gave my approval: understanding Prof. Parker to mean by the term "a sort of annex" an extension.

Col. Waring says that in this climate it is impossible to do this "in a building substantially detached from the main house," without too greatly increasing the cost. It is probable that Col. Waring means to say that the pipes would freeze, although he does not say so. A proper answer might be, that cost cannot be fairly put in the balance against the value of life; and that with many of our citizens it would never be so placed if they were fully convinced where the danger lay. It would not add much to the cost to properly pack and protect the pipes against the frost of winter; nor to convey to the annex from the furnace, where furnaces are tolerated in a house, a hot air or steam pipe. Indeed, for myself, I would be glad if hot air furnaces were never employed except for the purpose of warming such an annex.

I do not think however that our language conveyed to Col. Waring precisely what Prof. Parker and myself meant in using the term "annex." In this city, as I have just intimated, it is generally employed as meaning "an extension," in which there is no connection with the main building except by a door, sometimes including a short and narrow hallway. This was the sense in which I employed the term, and probably Dr. Parker also.

That this plan is not impracticable in this climate, has been proven satisfactorily in this city, where it is quite common to place more or less of the plumbing in the rear end of the building, or in an extension. With proper precautions it can always be protected from frost.

A circular dated March 13, 1882, designed to convince the public of the superior sanitary arrangements of the Heath House, Schooleys Mountain, N. J., contains a certificate from Charles F. Wingate "Consulting Sanitary Engineer," a portion of which reads as follows:—"I found the plumbing fixtures all placed in an extension, so as to be completely isolated from the rest of the hotel, and with a free circulation of air around them. There are no basins in bed-rooms." * * "In short, sanitary considerations seem to have been studied at every point, and this, I am sure, will have due weight with future guests."

Mr. Wingate is the same gentleman to whom reference has been made as having declared before the Academy of Medicine that it was "foolish to talk of the risks to health" from modern plumbing arrangements when they could "be made perfectly safe." It would seem that this excellent sanitary engineer had become fully convinced of the soundness of the opinions entertained by Professor Parker and myself; we having suggested only that for purposes of safety all the plumbing should be confined to an annex.

Will Mr. Wingate explain why, if plumbing can be made perfectly safe, the guests at the Heath House should be deprived of the comfort of having their

basins and other plumbing fixtures, in or near their rooms.

Finally, in view of the great and increasing mortality of our city, I ask medical men to consider whether it will not be well to look hereafter more to the unsanitary condition of our houses, and to charge less to the unsanitary condition of our streets? At any rate this subject is I think, entitled to a more careful consideration from medical men that it has actually received.

SPURIOUS PREGNANCY.

BY

W. A. McCOY, M.D., Madison, Ind.

An article in the *GAZETTE* a short time ago recalls a case that occurred under my observation not long since.

Dr. W. had been engaged to attend Mrs. R. in confinement, at about a designated time. Near the appointed time the Dr. was called and informed that labor had commenced. After remaining with her for some time, and efficient labor not coming on, he returned home, and in a few days the same thing was repeated. A few weeks afterwards in Doctor W.'s absence I was called to attend a sick child of Mrs. R. During my visit the mother informed me she was expecting to be sick, that she had gone two months over her time and she was becoming alarmed as to her condition. After talking with her and from her appearance, I became pretty well convinced she was not pregnant (made no examination as I did not consider her my case), and suggested that she might possibly be mistaken, but she stoutly insisted that she was not, but my talk with her had the effect to unsettle her mind, for in a couple of days she urged me for a positive opinion.

On examination I found a large, tympanitic belly, the result of dyspeptic troubles, associated with uterine hyperplasia. She was slow to believe me; as she was the mother of two children she did not think it possible she could be so mistaken, but she finally gave it up and requested me to treat her, and in a few months I had the satisfaction of seeing her in good health.

The fact that Mrs. R. had experienced the sensation of maternity, and being at a vigorous child-bearing age, about thirty years, made this case the more interesting to me, as nulliparous women are more liable to be deceived by the sensations of supposed pregnancy, and more particularly if well advanced in life, and anxious to become mothers, as this woman was.

May I offer a suggestion to the younger members of the profession more particularly. In matters obstetrical prove all things, believe what you *know* to be true, and you will avoid some embarrassing situations.

Not all women will try to deceive you, but some will.

EXTENSIVE SELF-INFLICTED WOUND OF ABDOMEN, WITH PROTRUSION OF VISCERA, RESULTING IN RECOVERY.

BY

IRWIN SIMPSON, M.D.,

Niles, Mich.

Jacob Hawser, æt. 30, native of Switzerland, two and a half years in this country. Two years ago met

with an accident in a saw-mill at Port Huron in this State, by which he lost his left arm. He drifted to the southern part of the State and became an inmate of the Poor-house in this county, where he remained until this spring, when he left in hope of obtaining work on some farm, but was unsuccessful, most people preferring a man with two arms. He was determined he would not beg, and in a moment of despair he attempted suicide by cutting his abdomen open with a razor. His groans were heard by some children, who gave the alarm, and after considerable search he was found in a semi-conscious state in the midst of a thicket of sumach, wild blackberry and raspberry vines, &c. I was sent for and arrived four hours after the occurrence. I found the man lying on his back, with an old bed-quilt thrown over him, which I proceeded to remove carefully as it was adherent to the mass of intestines which protruded through the abdominal wound. The intestines were dry and wrinkled, covered with cinders, dust, sand and every variety of foreign body, including leaves, pieces of briar, &c., the latter fastened to the omentum in the way brambles become attached to a sheep's wool, the man having rolled over and over in his agony. I administered chloroform and proceeded with the assistance of some countrymen to cleanse and replace the intestines, a by no means easy job. I found the wound extending through the linea alba from the ensiform cartilage to one inch below the umbilicus, eight inches in length.

The visceral portion of the peritoneum was intensely congested and the omentum and mesentery of a dark purple color. I passed my hand into the peritoneal cavity and found a quantity of blood which I endeavored to remove with a pocket-handkerchief, as I did not have a sponge with me. There was about 8 inches of the transverse colon and about 12 feet of the small intestine protruding. After getting the brush cleared away I sat down, and with a pail of water from a neighboring brook, washed and returned the intestines to their place. I found great difficulty in keeping the omentum from protruding between the lips of the wound. I had no instruments with me but those contained in a small pocket case, and only enough silk to use single in an uninterrupted suture. I passed the needle (a small curved one), from without inwards, but could include the whole thickness of the abdominal wall. I tried when drawing the sutures to push the omentum into place with the end of a lead pencil, but did not succeed very well, and it became adherent to and united with the lips of the wound.

I then got the man placed on a stone boat, and had him taken across the country half a mile, placed on a lumber wagon, and conveyed to town, a distance of three miles, where the only place at my disposal was a dirty cot bed in the city engine house.

The after treatment consisted of cold water compresses (carbolyzed), and small hypodermic injections of morphia for the first four days: afterwards jute and strips of adhesive plaster, with an abdominal binder.

The upper half of the wound united by first intention. The lower half by granulation, the omentum as I have stated being united with the lips of the wound. I had no trouble whatever afterwards, although I looked forward to having to contend with peritonitis, septicæmia, &c.

The temperature never exceeded 100° F. and pulse 70, the latter most of the time between 50 and 60, but good in other respects.

To-day, the fifteenth since the occurrence, I discharged him cured, after having applied two broad strips

of plaster. Why did this man, with all the exposure and handling he was subjected to, escape peritonitis? I confess I had not the faintest hope he would live through it, and am amazed when I recall the condition he was in, that he did not die of shock the first night.

SELECTIONS FROM JOURNALS.

2 A SHORT NOTE ON PRIAPISM. By OSCAR J. COSKERY, M. D., Professor of Surgery, College of Physicians and Surgeons, Baltimore.

Whether it is that the subject of priapism is so small an one in the opinion of the majority of authors as not to call for an extended notice at their hands, or whether it is that with that innate *modesty* that all who "rush into print," especially medical, possess, certain it is that scant reference to it is made, more particularly as to its peculiarities, and as a surgical symptom. In the last edition of Dunglison's Dictionary priapism is defined thus: "Constant and distressing erection, with or without any voluptuous idea or desire for venery." However well this description may fit the condition, as it is said to be produced by a genital excitant, as by cantharides for example, I do not know; but, that it is *not* the condition so often found after injury to the spine, I do know.

Before proceeding further in the discussion of the subject, it would, perhaps, be well to describe the state of the penis in the priapismus condition, as we understand it, especially after surgical injury. And I would start out by saying that priapism from this cause is not *erection*, as we understand the term *erection*. It is truly a *stiffness* of the penis, but not one of true *erection*. As the latter word is used it means a state in which the organ acquires "length, breadth, thickness" (by means to be hereafter alluded to), and its position is thus changed from the downward, hanging, flabby state, to that in which the glans penis looks upwards and forwards, and the body of the organ lies, more or less, parallel with the horizontal axis of the body. In priapism, the penis, while it leaves the normal downward position, never, in my experience, passes beyond the perpendicular to the long axis of the body, and stands out at right angles to short plane. Again, while a certain amount of *stiffness* of the organ is present this does not amount to rigidity, and while it, like Banquo's ghost, "will not down" alone, a very slight pressure will cause it to assume its normally drooping position, from which, however, it immediately returns to the perpendicular, when pressure is removed. Moreover the penis does not necessarily acquire length and breadth in priapism as it does in true *erection*. In one case that was under my charge, the organ, while in the true condition of priapism, so long as the patient lived, only measured one inch in length, and after death this increased to two inches and one-half as the penis became flabby.

I would deduce from the cases I have seen of priapism dependent upon injury to the cervical spine (the condition with which we find it most commonly conjoined), that it (priapism) is not *erection* of the penis as we understand the word *erection*, or the state in which the organ is capable of intromission, and, as far as my own experience goes, the patients have been too badly injured to show any tendency to "voluptuous ideas or desire for venery."

Why priapism occurs in such cases as I have alluded to above—injury, as by fracture of the spine—is

a disputed point. In my own experience this state has only been found where the upper cervical region has been the site of fracture, and I have twice diagnosed fracture between the second and fifth cervical vertebrae from this symptom. The diagnosis was verified in both instances. While not doubting the statement, long ago made, that priapism may accompany fracture of any portion of the spine, I still think it probable that secondary lesion of this particular small portion of the cervical region would, if looked carefully for, be found. Whether this is due to irritation of the generation function centre possibly located here, or, as believed by Dr. Wm. Hunt of Philadelphia, to injury to the sympathetic ganglia or nerves in that region is beyond the province of this "short note." Let the fact suffice.

Before closing these few remarks upon the subject, I will allude to two cases of what may be called priapism, partial or complete. A colored man was struck by a heavy piece of wood upon the dorsum of the penis just at the root. Pain and swelling came on at once, persisting until I saw him three days afterwards. On inspection, the organ was plainly distended, large, long, stiff and elastic to the touch and, to appearances was fully competent to perform its functions, except that it had a downward hang-dog droop, and would not "up" beyond forty-five degrees.

The second case was that of a white man, a wood-carter; in throwing a stick of cord-wood upon his cart, the piece struck one of the chains and rebounding with force struck him also upon the *dorsum penis*, but one-third forward of its total length. A wound was produced through which bleeding took place to fainting of the patient. The surgeon called was obliged to ligate the bleeding vessel. When I saw the patient three weeks after the accident the penis presented rather a funny appearance. It reminded me rather of the relationship of the head of the common snapper-turtle to the neck. At the point where the scar showed that the injury had been received, and posterior to this the organ had the normal size and shape. But anteriorly to this spot the penis was swollen, elastic, congested, and to an extent irregular in shape—looking much like the snapper's head.

Both patients ultimately recovered. The injury, I believe, produced in both of these cases the same condition—*plastic phlebitis*—and as the collateral veins enlarged, and an absorption of the plastic deposit in the injured *dorsalis* penis vein went on, a restoration to the former condition was reached. These cases, I think, seem to show that what may truly be called priapism may depend upon different causes.—*Maryland Med. Journal*.

CASTRATION IN SPURIOUS HERMAPHRODITISM.

Dr. E. P. Bennett, of Danbury, Conn., sends us the following interesting and suggestive communication: "There perhaps has never been a true case of hermaphroditism found in the human subject, but there is a peculiar deformity which, among the ignorant, is considered as such. Two cases of this kind have occurred in my own practice. Both children were considered females, and baptized as such. In one of these cases, my son, Dr. Wm. C. Bennett, was called upon to visit a sick girl, as they said, and during his visit the mother had occasion to change the child's diaper, and, although at first sight the genitals of the child appeared as those of a female, yet from some peculiarity he suspected that it was not a female. We

then together visited it, and upon examination we found an ununited scrotum, and in the sulcus between the two halves was the opening of the urethra, and in each labia was found a testicle. The penis was about the size of a small goose-quill, without any prepuce and unperforate. The second case was a complete duplicate of the first. Now, I do not report this case as any thing strange, as most works upon surgery treat of them, but it is another aspect of the case to which I wish to call the attention of the profession, and seek their advice. One of these mothers, after I had explained the case to her, wished me to remove the testes, and for, as I thought, good and substantial reasons. She said to me, "This child can never develop into a man or woman. He will have the passions of a man without being able to gratify them; therefore, if castrated he will not have this to contend with. Again, the removal of the testicles will prevent the growth of a beard and whiskers and I can rear it as a female and the deformity will never be discovered, as it certainly would be if reared as a boy, as he would always have to sit down to urinate, and other little boys would soon discover his deformity and call him hermaphroditic to his shame and annoyance." Now, the question is, would not this have been the better course under the circumstances? In my opinion it would, but I told the mother I did not know that I had a legal right to do so. I then lost sight of the case.—*Medical Record.*

FORMULARY AND POINTS IN PRACTICE.

HYDRATE OF CHLORAL IN THE DISEASES OF CHILDREN.

Hydrate of chloral is used a good deal as a soporific in children. M. Ferrand recommends five grains in simple syrup for a child four or five years old with pertussis. It is also used in child crowing, chorea, and convulsive affections generally. In fact there are three remedies that need a word of special mention in the preventive and intermediate treatment of convulsive and spasmodic affections in children. These are bromide of potassium, hydrate of chloral, and tincture of gelsemin. The last is of special service in restless wakefulness, a high state of nervous erethism, and in inflammatory conditions of the brain and its meninges. Bromide of potassium is admirable in the threatened convulsions often accompanying teething, and in intervals between actual paroxysms. Chloral has a special value in violent chorea, in many cases of ordinary convulsions, in the spasms of whooping-cough, and in warding off attacks of laryngismus stridulus. As regards the comparative values of chloral and bromide of potassium, Dr. Rayne regards the bromide as exercising power chiefly over the motor centres in the spinal cord and basal ganglia. Chloral as controlling the higher motor centres in the cerebral cortex itself. Practically the value of a combination of the two in many of the convulsive disorders of children is undoubted.

Chloroform is often of great service in breaking a formidable attack of convulsions, as those attending uræmic poisoning after scarlatina, in laryngismus stridulus, and other paroxysms; a few drops on a handkerchief will usually suffice, and plenty of air should be allowed to dilute the vapor. Lastly, the hypodermic use of morphia or of morphia and atropia has been recommended in uræmic convulsions (Scanzoni), and in severe chorea (Trousseau).

℞ Chloral hydrat.....gr. x—xx ;
Aquaë, ʒj. Ft. lotio.

To relieve itching and irritation.

℞ Camphoræ,
Chloral hydrat.....aa ʒj

These triturated together make a clear fluid ; to this add—

Aquaë rosæ, ʒj. Ft. applicatio.

May be painted over parts painful from neuralgia and other causes.

ENEMA.

℞ Chloral hydrat.....gr. iij
Aquaë, ʒv.

Used by M. Polaillon in infantile convulsions. Used during the attack, and once again after twenty-four hours, sufficed to cure certain cases.

Rokitansky has used a solution containing 50 per cent. of chloral in diphtheria applied every half hour, and after three or four applications benefit resulted. Chloral is an antiseptic among other properties; possibly the antiseptic action was of value in these cases.

Croton Chloral Hydrate resembles chloral in its hypnotic action, but it is more unreliable. It has been used (as what has not ?) in chorea, neuralgia, and pertussis. I am unaware of any special evidence in its favor, and my own experience of it in adults proved very unsatisfactory.—*Ellis' Diseases of Children, 4th Ed.*

MEDICAL NOTES AND NEWS.

An Ingenious Device.—Dr. F. N. Otis, in reporting to the Academy of Medicine, April, 1882, a case of encysted stone removed by median lithotomy, suggested the following simple device for lengthening the finger and thus facilitating the search for stones so situated as to be beyond the reach secured by the unaided finger.



It consists of copper wire so attached to the forefinger of the operator as to form a loop at its extremity,—an increased sweep of an inch or more is thus obtained, and the tactile sense with the attachment is very little inferior to that of the finger without it. The wire is rendered secure by simply twisting it about the finger, hand and wrist.

The applicability of this device to those cases in which the stone is sacculated or immured and at a distance from the vesical orifice is at once evident. More thorough exploration in cases of suspected tumors, etc., is thus made possible. The same appliance promises also to prove of service in removing foreign bodies from the throat as well as in explorations of the uterus and in detaching and removing growths from the interior of that organ.

Death of Dr. John T. Hodgen.—Dr. John T. Hodgen, of St. Louis, died suddenly and unexpectedly at half past seven o'clock on the evening of April 28th.

Scarcely past his prime, and in the full vigor of intellect, it is a question which will feel his loss more keenly, the profession, or the public among which he worked. For many years and up to the time of his death he was dean of the faculty of the St. Louis Medical College, and filled the chair of Surgical Anatomy in that institution, where he labored unremittingly to advance the standard of medical education. As a teacher he was excelled by none, his absolute mastery of anatomy, and his sound practical judgment and almost unerring observation placed him among the most prominent of American surgeons, while as a man he united a purity of character, and nobility of heart which has left him a spotless reputation.

Dr. Hodgen leaves a widow and two sons.

CHARLES BLACK, M.D.

Endowment of Jefferson.—A movement is on foot to secure a permanent endowment fund for the College. The subject was proposed at the Alumni meeting and referred to the Executive Committee. At the Alumni supper one member pledged himself to raise \$1000, before the next meeting of the Association. —*Coll. and Clin. Record.*

New Disinfectant.—Professor Carlo Pavesi, of Italy, proposes as an improved disinfectant a solution composed of chloride of lime, camphor, and glycerine. This mixture is capable of being used in all cases in which phenic acid is now employed, and its odor is less disagreeable, less irritating, and less toxic than that of the latter. It is said to at once arrest the putrefaction of animal bodies, and is highly commended by the *London Medical Record*.

Poisoning by Bichromate of Potash.—A woman was charged at Birmingham, on March 28th, with administering poison to her two children, and attempting to commit suicide on March 20th. Whilst suffering from depression she took two children with her into a garret, and administered to them and to herself some bichromate of potash, a salt commonly used in her trade, that of a furniture polisher. The poison produced great pain and vomiting, but no death ensued. Poisoning by bichromate is not known.—*Brit. Med. Jour.*

Number of Physicians.—According to calculations made by the Medical Academy of Paris, there are at present 189,000 doctors scattered over the world. Of these there are 65,000 in the United States; 26,000 in France; 32,000 in Germany and Austria; 35,000 in Great Britain and its colonies; 11,000 in Italy, and 5,000 in Spain. Putting aside pamphlets and memoirs innumerable, it is estimated that 120,000 works have been published on medical subjects. Of the writers, 2,800 are American; 2,600 French; 2,300 German and Austrian, and 2,100 English.—*Cincinnati Lancet and Clinic*

Nocturnal Incontinence of Urine in Children.—Few practitioners escape the care of frequent cases of children's nocturnal incontinence. It is one of the least dangerous, but at the same time one of the most annoying and persistent disorders of childhood, and any help we may get of a practical sort, especially in the way of prevention, will be welcome to our readers. A recent paper read before the Harveian Society by Dr. Tom Robinson has two homely hints that are of value, and to which we desire to call attention. "There is no doubt," he says, "that nurses and mothers are fre-

quently to blame for this troublesome vice. Young children ought to be taken out of bed during the night and placed on a chamber, so as to excite their bladders to act." And again, "Fear will frequently prevent young people from rising in the dark to relieve themselves." If we instruct our patients to take up their children when they go to bed themselves, we shall do much, even in quite young children, to arrest the natural incontinence of infancy. And no parent should allow children to sleep without a dim but sufficient light, not only that they may readily find the chamber, or the water-closet, but that in case of fire or sudden illness darkness may not add its unknown terrors as a hindrance to their seeking aid, or the means of escape. If they sleep at a distance, or in different stories, the halls also should be lighted.—*Medical News.*

Drifting.—A late number of one of our esteemed city contemporaries contains a very wordy and not very intelligible article on "Pharmacodynamics"—whatever that may be—which article, taken in connection with the well known views of the editor on the subject of free consultations, would seem to imply that the journal in question had lost its rudder, and was drifting.

Does any one know whether any of the gentlemen connected with the recent action at Albany were in the same boat? If so, their friends at home will feel anxious for their safety.

The total annual consumption of quinine throughout the world is computed at two hundred and twenty thousand pounds, of which one quarter is said to be used in the United States alone.

The Medical Press and Circular says that an anti-vivisectionist, who subscribes £20 yearly toward carrying on the anti-scientific agitation, has been fined for maltreating an unoffending animal in his possession.

The Royal Academy of Belgium offers a prize of fifteen hundred francs for the best essay on the effects of alcohol, physical and psychical, upon the individual and his offspring. The *concours* will close February 15, 1883.

Professor Gross has resigned the chair of Surgery in the Jefferson Medical College, of which he has been the incumbent for twenty-six years. His son, Dr. S. W. Gross, has been elected to the chair of Principles of Surgery and Clinical Surgery, and Dr. John H. Brinton to the chair of Practice of Surgery and Clinical Surgery.

Sir William Ferguson, after a successful operation on a Manchester millionaire, was asked by the patient to name his fee.

"Two hundred guineas."

"Two hundred guineas," exclaimed the patient.

"Yes," said Sir William. "You forget the life-long experience required to give the proper skill, the time and toil of the journey, and the loss of practice in London."

"But you have been only ten minutes about it," said old Dives.

"Oh! if that is your only objection," said Sir William, in his broad Scotch, "the next time I come, I'll keep ye an 'oor under the knife."—*British Medical Journal.*

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EDITORIAL.

CONCERNING FREEDOM IN CONSULTATIONS.

The *Medical Record* for May 13th, 1882, contains a letter addressed to Dr. C. R. Agnew, our well known oculist, by Prof. Theodore W. Dwight, of the Columbia College Law School, on the subject of Medical Ethics, which claims from us a moment's consideration.

Dr. Agnew asked Prof. Dwight "to make a study of the subject," and he seems to have done this to the entire satisfaction of Dr. Agnew, as must be inferred from the comments of the latter made in the same connection.

The reply of Prof. Dwight appears to us to be subject to the following criticisms:—

First.—It is impertinent, if intended for any person other than the gentleman who asked for his opinion.

The medical profession has not sought his advice in the matter; nor would it ever be likely to seek the advice of any lawyer upon a question of this sort. It is not a question of Law, but a question of Ethics which he undertakes to determine; and upon even *general* questions of ethics we would hardly think of consulting a lawyer. Lawyers do many things which we would consider disreputable, and most of which things are

declared disreputable in our code of ethics. They advertise themselves on their private cards and in public print; they publicly invite patronage, stating the reasons why they should be preferred, and giving the names and certificates of those who have employed or recommend them; they offer to do business for their clients on the principle of "no cure, no pay," that is, they offer to try the case and if they are successful they will take half the award, and if they fail they ask nothing; they personally abuse and malign each other openly in the presence of their clients and of the courts; they habitually, or at least very commonly, make charges against defendants in public, calculated and intended to do them irreparable injury, and which they know to be false; and for none of these things are they subjected to discipline or even censure in the majority of cases.

There is good reason, therefore, why lawyers would not, by most people, be chosen as arbiters in questions of ethics; certainly not by medical men, who have been educated to a much higher standard than that ever adopted or practiced by lawyers; and when Prof. Dwight declares that the code of ethics of the American Medical Association, or any portion of it, is "contrary to public policy and worthy of public reprobation," he has assumed to pass judgment upon the conduct and practice of nine-tenths of the medical men of the U. S., who have for many years and still continue to sustain this code. Only two out of sixty or more medical journals in the U. S., (and these belong to this city), have defended the recent action of our State society.

We, as a profession, have never volunteered to advise lawyers or clergymen as to their code of ethics, and we must consider it impertinent to an intelligent and educated class of citizens when they volunteer to advise us, or to express opinions even on such matters.

But we cannot afford, perhaps, to reject wise counsel solely because it is impertinent.

Prof. Dwight argues that the code of the American Medical Association is not wise because it is inhumane. It does not allow a *consultation* in an *emergency*. An "emergency" demands *action* on the part of every person, layman or physician, and *that* medical men never refuse. Medical men under this rule have always felt at liberty to act in an emergency whoever might be present, and to give advice in an emergency when the patient or his friends ask for it, but they do not consent to "consult" with persons whom they do not recognize as physicians. The *law* may recognize any man as a physician, possibly a blacksmith or a mesmerist, but we do not, and while we will do what we can to aid the sufferer, if he or his friends wish it, we will not hold a formal consultation with such men, because it is impossible—as much impossible as it would be for a lawyer to attempt a consultation with a man who proposed to try a case in a New York court on the basis of the laws of Japan.

Prof. Dwight thinks we are bound to consult with an irregular in order to show him what direction the ball had taken, and to refuse to do so is inhumane. This is specious, but not sound. Surgeons are called by physicians in analogous cases, but no surgeon would consent to such a consultation if he could not be permitted to advise or "consult" also as to the management of the surgical fever which might arise as a consequence of the wound. But upon this point consultation with a homœopath is again impossible, for reasons which every intelligent medical man can see. If the physician refuses to consult, therefore, there is no inhumanity in the act. One or the other

must be responsible for the case; they cannot be jointly inasmuch as they *cannot* agree. Let the patient choose the man whom he thinks can do both and the matter is ended. If the patient or his friends do otherwise *they* are guilty of the act of inhumanity and not we.

Says Prof. Dwight,—"When the State authorizes practitioners of other schools to practice medicine, does not courtesy to State authority dictate recognition of their fitness for association? How can the State Medical Society consistently demand public recognition by reason of State legislation, and yet deny it to others who have precisely the same authority?"

We shall always obey the laws of the State, but the State has not yet *demand*ed that *we* shall recognize every one as a physician whom *it* recognizes as a physician. This would be a step further than the State is ever likely to go. As to whether we are bound to *respect* the opinions of our legislators is another question, and upon which we may be permitted to entertain our own views. The State has at times recognized all men as entitled to practice medicine; but it has now restricted this right to three classes, namely, physicians, homœopaths, and eclectics; but to-morrow the Legislature may see fit to include Thomsonians, Mesmerists, Root Doctors, etc. Must we then recognize these men as "fit for association" solely because our legislators have recognized them as qualified to practice? Our legislators may see fit to legalize prostitution, but this would not make it necessary or proper that we should consort with prostitutes.

Medical men act in the interests of humanity purely and solely a hundred times where lawyers do once. We are trained and educated in the school of suffering, sympathy and humanity; and we cannot remain silent under any intimation from such a source that we have been ignorant of our duty in these regards, and have therefore failed in its performance.

ABOUT BOOKS.

Manual of Diseases of the Skin, with an Analysis of Eight Thousand Consecutive Cases and a Formulary, by L. Duncan Bulkley, A. M., M. D., Attending Physician for Skin and Venereal Diseases at the New York Hospital Out Patient Department. Published by G. P. Putnam's Sons, New York, 1882. Price \$1.25.

The author of this little manual has endeavored to make it thoroughly practical. Pathology is introduced but briefly, and no attempt has been made to enter the literature of the subject or to present doubtful questions. The diseases are grouped on a pathological basis.

Therapeutics is gone into more extensively than other divisions of the subject and copious formulæ have been appended.

Dr. Bulkley has prepared the work for those following his clinics at the New York Hospital Dispensary and expresses the hope that its study may incite to that of more complete treatises.

We think it an improvement on former works by the same author, inasmuch as what was too diffusely presented in his other books has been condensed and more concisely stated in this manual.

The form of the book is expressive of the good taste of the publishers.

A Clinical Hand Book on the Diseases of Women, by W. Symington Brown, M.D., Member of the Gynecological Society of Boston. Published by Wm. Wood, & Co., New York, 1882. Price, \$2.50.

This book is intended as a practical guide on most of the diseases peculiar to women, for the use of medical students and country practitioners. The author states that an effort has been made to concentrate the best that has been written on each subject. Unless students and country practitioners want to read a discussion of diseases of women which is inharmonious and incomplete we would not commend this to them. For while it embraces many useful hints culled from the works of Spencer Wells, Sims, Emmet, Thomas, and Skene, it is in the main fragmentary, and fails in communicating the elementary knowledge essential to the intelligent treatment of diseases of women. While some of the illustrations are excellent, others might better have been left out.

The book is better adapted as a manual for gynecologists and those who already have had special training in treating disease of women, than for those to whom it is addressed. It is substantially bound; printed from large type and on good paper, and on account of its comparatively low price it may prove to some an imperfect substitute for more complete works.

THE FOUL AIR OF LONDON.

"The popular idea of drainage was very simple. You emptied the slops into the sink, and they went—the devil knows where. That was the popular idea of drainage; but they, as professional men, knew where the slops went. They knew also, that they were occasionally arrested in their progress in these most inefficient and ill-contrived underground channels. They knew that the soil which was taken off, as we say, euphemistically, by water-carriage, was often arrested, and allowed to remain and decompose, and pass into the form of gas. They knew gas was generated by the decomposition of this decaying matter, when deposited, in however slight a degree, upon any interior surface. What followed? They knew this gas had two qualities which were extremely obnoxious; one quality was that it ascended to the highest level by reason of deficient specific gravity; and the second quality was that when it reached the highest level it exercised a pressure, being an extremely elastic gas. He need scarcely point out the effect of these two considerations. When the sewer-gas (a most excellent name, without going into particulars as to whether it should be called gas or vapor; the name sewer gas carried an idea of offensiveness which was extremely convenient)—when the sewer-gas had reached the highest level, it exercised a powerful elastic pressure to force its way out, and succeeded in forcing its way. It got into the house; and if there were no other grievance there was this to complain of—that this pestiferous and poisonous gas, forcing its way from the sewers into our houses, reached the air-bath, and of course reached the vital organs of those who occupied it. So much for the sewer-gas."—*From Professor Kerr's Address before the Civil and Mechanical Engineers' Society.*

It will be noticed that Professor Kerr does not hesitate to employ the term "sewer-gas," a term against the use of which one of our sanitarians lately protested; and that he believes this sewer-gas *will* force its way into our apartments, or "air-baths," as he calls them.

LECTURES.

CLINICAL COMMENTS ON DYSURIA—STRUMA—ANÆMIC NEURALGIA—CHOREA.

BY

J. LEWIS SMITH, M.D.,

Clinical Professor of Diseases of Children, Bellevue Hospital Medical College, Visiting Physician Charity Hospital, etc

CASE I.—Boy, æt. three months. Has dysuria and frequent micturition. The prepuce was found adherent to the glans penis. Child has brought on umbilical hernia from excessive straining. There is no reason to suspect any fault in the urine itself in this case. Generally the urine contains a sediment of urate of ammonium and sodium. All that is necessary in this case is to break up the adhesions and remove the smegma, which consists of epithelial cells. The causative relation of adherent prepuce to certain nervous disorders has been recently diagnosed before the Neurological Society. I have no doubt that the most common effect of adherent prepuce is dysuria. It is an irritable condition of the bladder due probably to reflex action, from the intimate relation of the bladder through the nervous system with the prepuce. It has been claimed that this condition sometimes gives rise to paralysis of the extremities. The so-called congenital paralysis of former times is now known to be due to a cause entirely distinct from the teeth, viz., a paramic condition of an inflammatory nature occurring in the anterior cornua of the spinal cord. Thirty years ago infantile paralysis was supposed to be due to teething, and every physician carried a gum lancet with him to relieve severe convulsions as a result of dentition. Of late years I have only heard of a single case where tonic convulsions of a severe character were permanently relieved by lancing the gums. I myself have not used the gum lancet in five years.

CASE II.—Child, æt. 1 year. Has an inflamed condition of the nostrils, fissures of the lips, sore tongue, and the general appearance of markedly strumous child. Has had constant coryza since two months old.

This child presents all the aspects of a strumous case. It is sometimes impossible to distinguish between a syphilitic and a strumous condition. Thus a child that is syphilitic will after a time show symptom of a strumous cachexia. Syphilitic parents will present children sometimes with a strumous diathesis and no marked syphilitic manifestation.

Struma is defined by the latest authorities to be a constitutional state which is characterized by great vulnerability of tissue. The tissues are all liable to scrofulous inflammation, particularly the lymphatics, so that if there be any irritation, inflammation of the glands will occur. The cutaneous, mucous and connective tissues are liable to strumous inflammation. The periosteum is especially liable to be affected from slight causes, as a bruise or blow. Eye and ear are liable to strumous inflammation. Strumous conjunctivitis is characterized by photophobia and if continued unchecked will be followed by ulceration of the eye.

Treatment.—Of all the remedies employed in the treatment of the strumous diathesis of young children the oxide of iron seems to be the best. It should be given in doses of one drop for each year in the age of the child. This child can take three drops three times a day of the syrup of iodide of iron together with cod liver oil. With the suspicion that we have a syph-

ilitic cachexia being at the bottom of this case, I should apply for the relief of soreness in the lips and nose the mercurial ointment four or five times a day.

℞ Pulv. zinci oxidi..... 3 j
Ung. hydrargyri nitratis..... 3 ij
Vaseline..... 3 j

For the stomatitis present in this case I should use the following:

℞ Potass. chlorat..... 3 j
Tinct ferri chlorid..... 3 j
Glycerine..... 3 ss.
Aqua..... 3 ss.

One teaspoonful every three hours.

CASE III.—*Anæmic Neuralgia.*—Boy æt. 10 years. Has constant pain between epigastrium and umbilicus. Does not suffer from indigestion or worms.

On examination we find complete flexibility of the spinal column at every point. Hence we can exclude this as a cause of his pain, and as there is no indigestion or worms, either round or tape-worm, to account for this pain we have to consider it as an anæmic neuralgia. The treatment of such a case consists in administering any of the vegetable bitters with iron. The *mistura nigra* consists of the tartrate of iron and potassa. This can be given along with Huxham's tincture as follows:

℞ Ferri et potassii tartratis..... 3 j
Tinct cinch. comp..... 3 iv.

One tablespoonful three times a day.

There is formed in this mixture a tannate of iron.

CASE IV.—Boy æt. 8 years. Is affected on the left side with chorea.

We have a disease known as chorea major, which is rarely seen in this country, entirely distinct from our chorea, which is called chorea minor. Here there are irregular movements which occur in convulsions partly under the control of the will. Theories have been advanced as to whether chorea is a pure neurosis or has an anatomical cause. In London in one half the cases we find a causative relation between rheumatism, endocarditis and chorea. The same has been observed in Germany and France. In this country perhaps in about $\frac{1}{3}$ the cases of chorea we have a history of rheumatism, or valvular diseases, or both. This boy has never had rheumatism and there is no valvular disease. Hence we are able to exclude a theory which had many advocates a few years ago, viz., that chorea occurred in consequence of emboli which were detached from the valves and carried along the circulation and lodging along the nervous centres at some point deranged the nervous system. As we find no anatomical lesion in these cases of chorea we must consider them as pure neurosis. Fowler's solution may be given in 5 drop doses and increased to nine drops three times a day.

CLINICAL COMMENTS ON INCIPIENT PHTHISIS—PALPITATION OF THE HEART—LUMBAGO.

BY

ALONZO CLARK, M.D.

Professor of Practice of Medicine College Physicians and Surgeons, New York, Visiting Physician Bellevue Hospital, Consulting Physician St. Luke's and St. Mary's Hospital, etc.

CASE I.—Male, æt. 16. Has had a cough in the morning for several months. Expectoates some mucus but has never raised blood. Has no night-sweats. This patient has been examined outside and he was thought to have phthisis. I presume he may have prolonged expiration and probably on the right side, as

this is more frequently affected than the left. There may be a little increase in the volume of the voice sound. There may be a little dulness on percussion, possibly a little retraction of the upper part of the chest.

Inspection shows a little sharper pit on the right side than on the left—a slight beginning of a "bird's nest." There is prolonged expiration and there is a little rattling. There is dulness on the left side. The pitch of the voice is higher upon the left side but the resonance is less. That is usually the case. When the resonance diminishes the tone of the sound becomes higher. There is hardly any difference in the volume of the voice on the two sides. A good way to distinguish a cavity is to have the patient count in a whisper. The phrenisma or jar is about the same on both sides.

From these facts we have to infer that there is a little firmer lung on the left side than on the right. But the evidence is only from the dulness. It does not come either from the voice or any jar produced by speaking. The cough in the morning for the past few months is accounted for by the condition of the chest. The fact that it has increased of late and attracted the notice of his mother is perhaps owing to the fact that there are fine rales on both sides of his chest. The secretion into the bronchial tubes began probably about two weeks ago and that has caused a cough. It is still going on to a certain extent. He should take one half a pint of cream on hominy or oatmeal or on a baked apple three times a day.

CASE II.—Male æt. 27. Complaints of shortness of breath in walking and going up stairs. Sleeps on the left side and coughs a little, but has never coughed up blood.

There does not seem to be any evidence of consumption here, as the patient has not had a protracted cough and has never raised blood. He has no night sweats or fever in the afternoon. Patient has had rheumatism four years ago at the age of 23. Had an attack two years previous to that during which he was laid up in bed eight weeks.

A rheumatism that lasts eight weeks is very liable to implicate the heart.

I find on examination that the cardiac region is fuller than upon the right side. The apex is lower down and further out to the left. The aortic opening is at the third rib. I hear a murmur with the first sound at the aorta and also with the second sound. The heart beats irregularly and when the rapid beats come the sound is obliterated. The mitral murmur is considerable.

Treatment.—The treatment almost wholly consists in obeying the rule: Let your moderation be known to all men. He should eat slowly because the heart reacts very promptly at any disorder of digestion. He should never eat to a full stomach.

As to medicines there are two that occur to my mind that may possibly either of them steady the heart's action. The first is digitalis and the other is nux vomica. Digitalis has the reputation of making the heart beat more slowly and yet more firmly. It may be given either in tincture or infusion. The extract of nux vomica will sometimes do most marvelous things. I saw a gentleman who was very much water-logged. His breathing was very much oppressed from effusion into the pleuritic cavity, and ordinary diuretics did no good. I gave him $\frac{3}{4}$ gr. of extract of nux vomica and the heart became regular. The pulse was stronger and he began to secrete urine in large quantities, several gallons a day, so that in four

or five days he was free from dropsical effusion. Nux vomica is not a diuretic, but the quantity of blood sent to the organs from the heart was very slowly received while the heart beat irregularly. When the heart began to beat normally the circulation in the kidneys and other parts became normal. The patient did not get well, but he had some comfort for a while. He had in addition to heart disease a kidney complication. There appears to be no evidence of kidney disease in this case.

CASE III.—Male complained of pain in the back and burning sensation between the hip and ribs. Had sciatica six months ago.

A neuralgia arising from miasm is more curable than having its origin in other causes. The burning sensation in the skin may be associated with muscular pain. This is of the character usually known as lumbago.

I would advise the use of bicarbonate of soda in ten grain doses three times a day.

ORIGINAL ARTICLES.

AVENA SATIVA AS A SPECIFIC FOR THE OPIUM HABIT.

BY

H. H. KANE, M.D.

Almost since the first record of the opium habit appeared in the famous "Opiologia" of Wedel or Wedelius, in 1674, the history of the subject has been punctuated, here and there, by the appearance of various specifics by means of which a rapid and easy cure of this affection was assured. The uniformity with which these much-lauded nostrums or simples failed to accomplish that which was claimed for them seems to have been their distinguishing feature, and this peculiarity holds good in the case of those so often discovered at the present day. Not alone the history of this habit but that of medicine teems with records of the birth and death of just such specifics, and the severe blows thus often administered were unquestionable factors in so shaping the professional mind that rational medicine was able to attain and retain a foothold.

Had the cause of these so-called specifics, been championed by the weak-minded, ignorant or vicious members of the profession alone, we should feel less surprise than we do when we know that men whose ability and honesty were undoubted had, like the less able and less honorable, been their strong upholders.

To those who have studied the subject of the opium-habit at all carefully or thoroughly the fact that no one remedy can prove specific in the conditions that arise in the course of the sudden or gradual withdrawal of opium or morphia from one accustomed to its habitual use, is at once apparent. For we recognize during habituation, either a condition of diminished functional activity in the spinal and increased functional activity in the sympathetic nervous system or the direct opposite, according to the length of time taken, the amount used, idiosyncrasy of the individual &c., &c., passing at once, on deprivation, into a state (a) of sympathetic and cerebro-spinal irritation (b) of sympathetic paralysis and (c) of a return to the normal through a regularly graded stage of irritation or hyper-stimulation of

the sympathetic.* That any one remedy can meet and wholly overcome or prevent the appearance of the symptoms indicative of these conditions, is, upon the face of it, absurd. The very fact that this remedy is curative in both paralysis and epilepsy of traumatic origin should be sufficient to show that its physiological action must be such as to negative its usefulness in the opium habit!

In the cases offered by Dr. Sell as proof of the efficacy of *avena sativa* in the treatment of the opium-habit we find several of the usual sources of error. In the first place it has been proven beyond any question whatever that the word of a patient and that of a patient's friends, (whom she so often deceives) must never be taken as worth anything in matters of this kind, more especially as regards the question of the amount of morphia used, and the freedom of the individual from the vice. In one of his four cases, a very meagre showing upon which to base a claim for the specific action of any remedy in this affection, Dr. Sell takes the patient's word, in another, that of the patient's husband. If the doctor at the time of writing his article knew as much of the case of Mrs. L. as I do,† I do not think he would have offered it in his paper. What is meant will be seen from the following letter just received by me from a reputable and accomplished medical man who resides and practices his profession in the town where Mrs. L. lives.

"Dear Doctor:

"I have some doubt if Mrs. L., to whom Dr. Sell refers, has ever in the habit of using opium very largely, though very likely habitually.

"Mrs. L., is now getting from one of our druggists about every three weeks, a cholera mixture containing

R Tr. op.....	1
Tr. camphor.....	1
Tr. capsici.....	ssj
Ess. menth. pip.....	3 ss

"If this is all, the use is very moderate but still habitual, she having done this for three or four years at least. Of course the purchase does not prove that she uses it, but from the knowledge I have of the family and their surroundings, I have no doubt she uses it herself. I do not believe that she uses the drug very largely, but she may alternate between the druggists here (two) and so use double this quantity. Dr. Sell was here some six years ago. The cure was of very short duration.

"Mrs. L., is an excellent woman, widow of a clergyman, and is in very moderate circumstances, which may account somewhat for the moderate use of the drug," &c.

Cases 1 and 3 prove absolutely nothing.

Thus the efficacy of *avena* in this affection rests upon one case, the history of which is incomplete and unsatisfactory, and lacking that kind of proof that is necessary in so important a matter. To be absolutely certain that a person addicted to this habit is using no morphia, he or she must be in some public institution, having been thoroughly searched prior to or just upon entering, must be under the care and watch of a skilled nurse, day and night for at least one week, and

*For a complete study of the conditions of the sympathetic, vaso-motor, and cerebro-spinal nervous systems that obtain during the period of abuse and the three stages of abstinence, I would refer any one desirous of investigating the matter to my forthcoming work on "The Effects of Opium Abuse and Abstinence on the Nervous System" to which is appended the first annual report of the De Quincey Home.—(In Press).

†Dr. Sell, at my request, very kindly gave me the name and address of Mrs. L.

be seen several times daily by a physician who understands just how every particle of morphia influences pulse, temperature, pupil, urine, mental activity, &c., &c. Even then the cunning of the patient, far surpassing that of insanity, may serve to outwit the physician for a day or two.

Patients on entering our institution for treatment have had morphia concealed in the rectum, vagina, hair (women), sewed into the waist band of dresses, lining of corsets, and other parts of the dress. It has been cleverly substituted for the lead in a pencil, ink in stylographic pens, colored and used as tooth powder, and in many other quite as curious ways. This too, in the case of those who came voluntarily.

My attention was called to *avena sativa* about a year ago, and since that time I have tried it alone and with other remedies, in large and in small doses, in hot and in cold water, in mild cases and in severe ones, and invariably without any appreciable effect in anyway modifying the period of abstinence. In not a single case was a patient able to substitute the *avena* for the morphia, even when taking a little as four grains of opium daily, by the mouth (in the form of paregoric).

Against the four (three of which are wholly worthless) all of which are loosely observed and regarded, offered by Dr. Sell as evidence in favor of *avena*, I offer 29 cases, from which as nearly as was possible, every known source of error was eliminated. In not one did I obtain any benefit, and the temperature of the period of abstinence, that most delicate test, fell, suddenly rose, remained stationary, to fall gradually if no morphia was given, (very rapidly and below the average if any was obtained by cunning), until the temperature of health was reached, wholly unaffected by the use of large or small doses of *avena*. So, too, the pulse. I would say further that several of my nurses have watched these cases with me and can testify to their accuracy.

Even in the opium smoking addiction, that easiest of all forms of the habit to cure, no benefit was experienced. Indeed no effect whatever.

If the *avena* was what is claimed for it, its value to the poor, helpless victims of this habit would be incalculable and no one would welcome such a remedy more heartily than I would. It is and has been my daily labor and experiment and my nightly thought for the past four years to discover some such agent, and if I thought that it existed I would gladly close the doors of my institution and publish to the world this remarkable advance in therapeutics. I am here in no way endeavoring to impeach Dr. Sell's veracity or honesty of purpose, but I simply claim:

1st. That he has not tried the remedy in enough cases (even if all four were successful) to establish the virtues of the drug.

2nd. That the four cases are, for many reasons, inconclusive and have led him into error, and,

3rd. That Dr. Sell's mode of investigating and experimenting, his use of the drug in other cases, and his reasoning from them are unscientific and unreliable.

In conclusion, I would say that I have patients here now upon whom the drug has recently been tried and who can now be seen; that there are others here who would willingly try it until their sufferings became unbearable, (which should not be the case if the drug is what is claimed for it), and that any information bearing on this question will be thankfully received and duly sifted.

THE DE QUINCEY HOME, NEW YORK CITY.

HOSPITAL RECORDS.

NEW YORK HOSPITAL—NEW YORK.

STRICTURE OF URETHRA—PERIURETHRAL ABSCESS.

SERVICE OF

GEORGE A. PETERS, M. D.

C. L. T. *et.* 27; native N. S.; married; laborer; admitted to Hospital Sept. 9th. About five years ago patient noticed abnormal urination. At this time, from circumstances, he was obliged to hold his water, though with pain and inconvenience, three hours. When he had opportunity to empty the bladder a sharp stinging pain followed the act of micturition, felt both in the extremity of the penis and in the deep urethra. Patient noticed a change in the character of the urine. At first it became "milky," later it also contained blood. About three months ago a lump appeared on the under surface of the urethra. It was at first painful; later pain was felt only after micturition continuing five minutes. Has been examined for stone, instruments being passed with difficulty. No history of traumatism. No specific or venereal history. Inheritance good. Size of tumor variable.

Admission.—General condition good. No symptoms except local pain and frequent micturition. Within the limits of the scrotum is felt an enlargement along the urethra. Limits well defined; size 2" x 1". Sensitive to pressure. Testes atrophied. No. 20 passes into bladder.

Sept. 16th—Operation.—Ether; lithotomy position. No. 24 flexible bougie passed into bladder. No. 26 bougie à boule arrested at $2\frac{1}{4}$ inches. Urethrotome introduced $4\frac{1}{4}$ inches and dilated to 39 and stricture cut, after which No. 26 was passed to $3\frac{1}{2}$ inches, this stricture cut internally and No. 28 steel sound passed into bladder.

Incision was then made in median line of scrotum revealing a large abscess. Pus expressed and wound carefully dissected down to the urethra. Wound dressed. Quin. grs. xv administered and patient sent to ward. Sounds passed daily.

Nov. 6th.—Lump appeared in perineum; painful. Scrotum oedematous. Urine contains large amount of pus. Discharge from sinus free.

Nov. 20th.—Ether. Lithotomy position. Grooved staff passed into bladder and membranous urethra laid open upon this with scalpel introduced through fistula.

Dec. 13th.—Urine clear this a. m. for the first time. Wound touched with nitrate of silver. Very small amount of urine escapes through fistula.

Dec. 31st.—Lumps at peno-scrotal angle almost gone. Small fistula remains. Is desirous of going, so discharged improved.

SELECTIONS FROM JOURNALS.

INCONTINENCE OF URINE AS A PRE-ATAXIC SIGN OF LOCOMOTOR ATAXIA. BY WILLIAM A HAMMOND, M. D.

In a recent very interesting suggestive monograph Dr. Thomas Stretch Dowse, of London, has called attention to certain symptoms which he regards as among the earliest manifestations of locomotor ataxia. These symptoms occurring before the incoordination, which subsequently is the most prominent feature of

the disease and which gives it its name, are evidence of the existence of a condition which he calls the pre-ataxic stage, and which he regards as curable. I am able to confirm in the most positive manner the correctness of the views for which Dr. Dowse contends so vigorously, and which he has so clearly formulated in the brochure to which reference has been made. I have for many years been convinced of the curability of locomotor ataxia in its early stage, and have so expressed myself in my lectures and writings. Cases of cures have been brought before my classes at the University, and others are reported in the book cited below.†

But to Dr. Dowse belongs the credit of systematizing the whole subject, and of pointing out in the most emphatic manner the several symptoms and groups of symptoms, which by their presence go to show the incipency of a disorder which, when once firmly established, is well nigh, if not entirely, of hopeless prognosis.

The signs of the existence of this pre-ataxic stage are thus given by Dr. Dowse:

Inequality of the pupils; small pupils; paresis of left third nerve; cutaneous fulgurating pains; sexual excitement; transitory incoordination of the lower limbs; variable patellar tendon reflex rarely absent; spinal irritability; dyæsthesia, anæsthesia hyperæsthesia—very transitory; visual color changes; gastric and intestinal crises; temperament variable; retinal changes; mental depression; insomnia.

In the present brief paper I desire to call attention to another symptom—incontinence of urine—which not infrequently precedes any other sign of the approach of locomotor ataxia and is present for weeks, months or perhaps even years before the slightest defect in coordination is apparent.

My attention was first directed to the possible connection between incontinence of urine and locomotor ataxia about a year ago, but I was not aware of the full value of the sign till I became acquainted with Dr. Dowse's researches, and of course, it is not intended to imply that incontinence of urine, unaccompanied by other evidences of spinal disease, is always to be regarded as the precursor of locomotor ataxia. I am only desirous of pointing out that the symptom in question, occurring without obvious cause in an otherwise healthy person, should excite us to watchfulness and prompt to such treatment as is proper for the disease, of which it may be the fore-runner.

As an example of the point to which I refer, the following details of a case, some time ago under my professional charge, will not be uninteresting.

M. J., a gentleman aged thirty-five years, and residing in adjoining State, consulted me November 22, 1880, for incontinence of urine. He had been affected for several months and had been treated on various hypotheses by some half dozen physicians and surgeons. One had diagnosed stone in the bladder; another prostatic disease; a third congestion of the spinal cord; another reflex paralysis of the sphincter of the bladder; and still another "paralysis from local irritation."

Having satisfied myself that there was neither prostatic disease nor a stone, I perceived that there was a condition present that allowed the urine to pass involuntarily and that that was paralysis of the vesical sphincter. The bladder itself did not appear to be involved but as soon as an ounce, or so of urine accumulated

† A Treatise on the Diseases of the Nervous System; Seventh edition. Page 616 and 633. New York, 1881. Also to like effect in the previous editions.

ed in the viscus, it was discharged notwithstanding all the effort of the patient to prevent the occurrence. The contractility was not entirely lost, for a very small quantity of urine could be retained, but as soon as it passed the limit, relaxation at once took place.

There was no pain or other indication of irritability of the neck of the bladder. It was a sphincter-paralysis pure and simple. In all other respects the health of the patient was excellent. Upon thorough examination I could discover no evidence of paralysis in any other part of the body. There was no incoordination. The patient could stand with the eyes shut as well as any other person, and could walk in the dark without difficulty. The patellar tendon-reflex was normal on both sides. There had never been any fulgurant pains nor any sensations of numbness in any part of the body.

I could not conceive the probability of the existence of a central lesion of so limited an extent as to involve only that part of the cord from which are derived the nerve fibers that go to the sphincter of the bladder, and yet there was a bare possibility of such being actually the case. I was more disposed to regard the disorder as one of eccentric origin and consisting in a lesion of the nerves of the sphincter. I advised the direct application of the faradaic current and the internal use of belladonna.

The patient being unable to remain in the city for treatment, returned to his home with a letter from me to his physician. In this communication I gave my view of the case both as regarded diagnosis and therapeutics. But in the mean time a surgeon of some local repute was consulted and on making an examination of the patient, he was convinced that the case was one of enlarged prostate. The patient was accordingly placed under his care, but after treatment had been continued without effect for a month it was decided to abandon the idea of hypertrophied prostate and to carry out the measures I had recommended.

But now it was found that a new complication had arisen. What were regarded as "neuralgic pains" in the lower extremities were causing a great deal of suffering, so it was determined to send the patient to me for a second examination. As soon as he mentioned the character of the pains in his legs my suspicions were, of course, aroused. I ascertained that they had been giving trouble for about two weeks. They were the sharp electric-like pains so characteristic of locomotor ataxia. Upon asking the patient to stand and shut the eyes I found that he could not comply without staggering, and that upon attempting to walk with the eyes shut he wobbled greatly. On examination now I found the patellar tendon-reflex almost entirely abolished on both sides. The case was one of fully-developed locomotor ataxia.

I treated the patient with large doses of ergot and belladonna and with cauterizations over the lumbar and spinal regions. In a few days the tone of the sphincter began to show signs of improvement and in the course of two weeks the paralysis was so far relieved that the bladder could contain six ounces of urine without the necessity for passing it being very urgent. This amendment still continues, though there has been a steady advance in all the other symptoms of locomotor ataxia.

I am thoroughly convinced that had the real nature of the bladder affection been ascertained in the very beginning of its existence, the further development of the morbid process in the cord, would have been prevented. I base this opinion not only on this case, but upon others of similar import which have been under

my observation, as well as upon facts and arguments set forth in Dr. Dowse's admirable little book.

The remarkable fact about most of the cases that have been under my observation is that the incontinence of urine was in the most of them the only discoverable morbid phenomenon indicative of spinal disorder. Hence the importance of examining such with the utmost care in order to eliminate all other causes of incontinence of urine. When this has been done, it appears to me that there is well founded apprehension that the condition in question is the precursor of locomotor ataxia. Probably it indicates a very circumscribed lesion of a congestive character, a lesion which it is yet within our power to heal.—*New Eng. Med. Mon.*

LEPROSY AND THE LEPER SETTLEMENT, MOLOKAI, SANDWICH ISLANDS. By H. N. VINEBERG, M. D. (McGill), Portage La Prairie, Man.

On a sea-level plain, comprising about 20,000 acres, on the windward side of Molokai Island, hemmed in on one side by the waters of the Pacific, which, washing over the coral reef, from a foamy white line, and closed in on the other side by a perpendicular precipice 2,500 feet high, is what is known as the "Leper Settlement" of the Hawaiian or Sandwich Islands. Before taking my departure from these tropical isles, I paid a visit to this colony of misery. I left Honolulu on Monday evening in company with Dr. Neilson, the medical superintendent of the settlement, and Mr. Freeth, the superintendent of the Honolulu Water-Works, who was sent by the Board of Health to report upon the expediency of increasing the water supply of the settlement. The small coaster, the "Lebua," on which we took our passage, only touched on the leeward side of the island. This we reached about day-break, after a night's not very gentle rocking in the cradle of the briny deep, during which we were frequently refreshed by the spray from the waves washing over the bow of the craft. There were a few natives living on the beach where we landed, with whom we breakfasted on "poi and-fish," and from whom we hired saddle-horses to take us to the "pali" (precipice) overlooking the settlement, a distance of some ten miles. After riding about six miles, we came to the residence of Mr. R. W. Myers, the general superintendent of the settlement, an intellectual and highly-respected Hollander, but who had resided on the island for upwards of thirty years, and was the father of a large half-white family. We met with kind hospitality at his hands, and were made to partake of a more substantial breakfast than that we had already feasted on. Mr. Myers kindly accompanied us to the "poli," where we had to discard our horses, and make the descent of the perpendicular precipice as best we could, having at times to hang on literally with our "hands and teeth."

The view from the poli was one not easily to be forgotten, and which fully inculcated the meaning of a "living grave!" At our feet lay what appeared from that height (the grass being withered and dry) a sandy, arid plain, without a patch of green or a tree to relieve its barrenness. At either end of the plain were a number of small huts, most of which were white, some of a dark brown; beyond was the creamy surf line and the wild waste of waters of the Pacific, blending in the distant horizon with a wavy bank of fleecy white clouds. Just then not a living object could be seen moving about below, and the feeling of gloominess

and depression with which the landscape and its associations impressed one is not to be expressed in words.

After several narrow escapes of going down faster than might be compatible with the process of respiration, we succeeded in reaching the plain beneath. There we were met by three of the colonists on horseback, with the disease in an advanced state, who had come to greet us—having previously heard of our intended visit—and exhibit themselves as objects of curiosity. They seemed well pleased with my close observation of them, but did not conceal their disgust at my friend Mr. Freeth, who lost no time in putting himself at a safe distance on their windward side. One of these had the "leonine expression" well marked. The skin of the face was extremely hypertrophied; the eyebrows were devoid of hair, and every feature of the countenance was uniformly enlarged. Though only about 15 years of age, he had the appearance of an octogenarian, whose irregular and dissipated life had left its marks on the face by knobby and tubercular projections, and deep furrows. He seemed quite happy, and took no small degree of pride in the fact of my taking more interest in him than in his companions. The colony is divided into two settlements, "Kalawao" and "Kalapapa," about two miles apart. At Kalawao are situated the hospital buildings, the doctor's house, the dispensary, a Catholic church, and the residence of the Catholic priest, Father Damiens. The hospitals comprised a dozen or so small wooden buildings, situated on an eminence, quite close to the beach, and were closed in by a fence. When the disease has made such sad havoc that the lepers are unable to attend to their own wants, they are transferred to these, and are there waited upon by their fellow lepers. The sight here was truly pitiful and revolting. Squatted or lying prone on their respective mats were the yet breathing masses of the loathsome disease, whose glistening and vacant stare, where the eye was not an ulcerous mass, had a ghastly and horrifying look. Father Damiens, who accompanied me through the hospital buildings, every now and then would say, "Doctor, you have not yet seen the *worst*. I will keep that for the last." We finally did come to the *worst*, in the form of what was once a Chinaman, but whom the disease had so transformed that all one could recognize was the form of a human being. It is impossible to give a true picture of the spectacle that was squatted before us. Take a human skeleton, with its fingers and toes amputated, put it on the floor in a sitting posture, with the knees well drawn up and the thighs flexed, envelop it loosely with a dark skin, completely covered with sores or scabs, place in each orbit a round, ulcerous body, in the mouth the stump of a tongue, and give to this a weak respiratory act, and you will have some idea of the "leprous Chinaman." Father Damiens said to me, "John is much better than he was a fortnight ago! We thought then we would lose him by an exhausting diarrhoea, but by allowing him daily a little opium, to which he was accustomed, he has rallied, and is doing very well. The breathing skeleton moved its short stump of tongue, probably to express its gratitude to the father for his kind attention. There were over 40 patients in the hospitals. The total number of lepers in the settlement at the time of my visit was 723, of whom 440 were males and 283 females. Besides these, there were 60 "kokuas," the wives or husbands of lepers in the settlement, but who showed no signs of the disease themselves. Among the former were seven white people, who, different from the

natives, fully realized their position, and looked upon death as a blessing and the only relief to their sufferings and misery. The natives appeared quite contented and happy, and as many of them had horses, they amused themselves by racing up and down from one settlement to the other. On our first night, while sitting on Dr. Neilson's verandah, we were serenaded by the band of the colony. The band consisted of a large and small drum, and three "penny-whistles," the music of which one could scarcely distinguish from that supplied by so many fifes. They played very well, having belonged to the "Royal band" previous to their banishment. The two drum boys were each minus their four left fingers, and two of the "whistle boys" were wanting two and three fingers respectively of the right hand. On the second night we were serenaded by a band of choristers, but the cracked and husky voices of its diseased members were neither gratifying nor harmonious to the ear. The carpenter of the colony had his left hand entirely fingerless, but the heads of the metacarpal bones were enlarged, so that on bringing together that of the thumb and index finger a small opening was left, into which he would introduce, and so keep in position, the nail he wished to drive. It was highly interesting to note some of the ingenious expedients many of the fingerless unfortunates were driven to, but space will not permit me to give any more instances. The rations of food were ample and of good quality, being supplied by the Board of Health, and served out by Mr. Clayton Straune, the deputy superintendent, himself a leper. Each leper received weekly 21 lbs. *paioi*, the native food (the *arum esculentum* baked and slightly pounded), and from 4 to 6 lbs. of fresh beef. Other necessities of life the lepers or their friends had to pay for, and could be obtained at cost price at a store in the settlement, kept by the Board of Health. When a fresh batch of exiles come to the settlement, they are cast upon the hospitality of those who have preceded them, until such time as their friends erect a hut for them, the result of which is that all the huts are filled to overflowing. But this the natives rather like. Their chief complaint had been the want of water, and with a view to remedy that want the Board of Health had sent Mr. Freeth, who, after a thorough examination of the surrounding parts, came to the conclusion that an "artesian well" would be required. What action has been taken upon his report I am unable to say. The lepers from the various islands, after being certified as such by the Government physician of the district, are first sent to Honolulu, and when the number reaches 15 or 20, they are shipped in a schooner, kept for the purpose, to the settlement, Molokai. It occurred to me once to be present at the departure from the Honolulu wharf of the schooner with its living cargo. The lepers were sitting and lying about on the deck, and the wharf was thronged with the friends and relatives of the exiles. When the schooner weighed anchor, and was setting out into the stream, the loud and unearthly wailings of those on shore, and the husky cries and moans of those on board, were heart-rending in the extreme. The schooner occasionally meets with adverse winds, and the lepers are exposed to a wet deck for two and sometimes three days before reaching their destination. Such was the experience of the immigrants who landed a day before my visit, one of whom died from the exposure an hour after landing, and another jumped overboard when a day out, and so ended his misery. The embryo Hawaiian Government is severely burdened by the expense of maintaining

"the leper settlement," and though the state of affairs is not all one would wish, the Government is doing all it reasonably can for the poor unfortunates. If a portion of the immense sums that have been collected from all parts of the civilized world to Christianize the Hawaiian race were devoted to ameliorating the condition of the lepers, more practical good, at least, would be obtained. The natives, as I have already said, appear tolerably contented, but the condition of the white lepers is very sad indeed. One poor fellow in particular was an object of pity and commiseration. He was of American extraction, and had resided in the settlement for six years. The disease had rendered him helpless, but he had no other attendance than that which a neighbor leper favored him with at times, and the frequent kind services of Father Damiens. His abode consisted of a small, low, dingy room, the only furniture of which was a roughly constructed bed, on which the dirt-blackened clothes lay all in a heap, a rough deal table, a box, and a wooden chair. The sun's rays were pouring unmercifully through the uncurtained and dirt-begrimed window, and the heat of the room could only be compared to that of a heated furnace. A week or two before he had an attack of dysentery, and told me he surely would have died from want of proper nourishment were it not for the Catholic priest, who used to bring him every day delicacies prepared by his own hand. He wanted to know if I was an American, and he thought if I would only state his case to the United States authorities, they would see to his comfort for the short period he was destined to exist in this world. I informed him of my nationality and inability to move the U. S. Government on his behalf, but promised to make his case public at the first opportunity that presented itself.

Here let me say a few words about Father Damiens, the Catholic priest, whose name so frequently figures in this paper. When one sees a missionary at the head of a wealthy sugar plantation, and surrounded by all the luxuries of civilization, he may be pardoned if he has some suspicions as to the sacrifice and martyrdom of missionaries in general. But here was a case where the most worldly and cynical could make no slurs. With youth, health, culture, refinement, and every prospect of advancement in the church, this man voluntarily exiled himself to this abode of misery eight years ago. During my stay of two days in the settlement I had good opportunities of making observations, and I noted that for every one, indiscriminately, he had a kind smile and a word of sympathy, and all—Catholics, Protestants and heathens—looked upon him as upon a common father. Miss Bird, herself a Protestant, in her book entitled "Seven Months among the Sandwich Islands," writes thus of him: "It was singular to hear the burst of spontaneous admiration which his act elicited. No unworthy motives were suggested, all envious speech was hushed; it was almost forgotten by the most rigid Protestants that Father Damiens, who has literally followed the example of Christ by 'laying down his life for the brethren,' is a Romish priest, and an intuition higher than all reasoning hastened to number him with 'the noble army of martyrs.'" When one takes into consideration that at the time of going to the settlement he had strong opinions upon the contagiousness of leprosy—which he still held,—one can readily conceive with what feelings he entered upon his duties.

The question of leprosy is growing to be a very serious one in the Sandwich Islands, and considering their proximity to the States and the inter-travel between the two places, it is one also which should engage the

attention of this continent. The disease is spreading rapidly on the Islands, and the number in the settlement does not represent one-third of the lepers that are free and mixing with their fellow-beings, both colored and white. His Excellency H. A. P. Carter, the Minister of the Interior, made praiseworthy efforts during last summer to weed out all the lepers that were free, and have them sent to the settlement for isolation, but in this he was thwarted by the natives themselves, and in a less degree by the head of the Government. For some inexplicable reason, a native would sooner undergo any other form of banishment than that to the island of Molekai. Instances are known where they have lain crowded in caves for years rather than allow themselves to be taken by the authorities and forwarded to the settlement. Some have become so desperate as to shoot at the official who tried to effect a capture. During my term of a year as government physician in the large district of Kuco, on the island of Hawaii, only two lepers were brought to me by the deputy sheriff for examination and certificate. We knew of many more in the district, but they were never to be seen when the sheriff or his police were in the neighborhood.

It was in 1865 that the Hawaiian Legislature first passed an act to prevent the spread of leprosy, and in the year following the "leper settlement" was established. I found it impossible to obtain from the authorities any figures on the subject, and those following were obtained from outside sources. Between 1866 and 1874, 1,145 were sent to the settlement, of which number 442 died during that period. At one time in 1875 there were 703. Through the kindness of Dr. Emerson, the former resident physician, I am enabled to give full figures for the year 1879:

Number adult males in the settlement Jan. 1, 1879,	469
" " females " " "	302
" children under 10 years—Males,	14
Females,	15
" births during the year, - - - - -	6
" lepers arriving during the year—Males,	66
Females,	31
" kokuas proclaimed lepers during	
year— - - - -	Males, 8
Females,	8
" deaths during the year—Males, - - -	124
Females, - - -	79

The origin of the disease on the Islands is enveloped in considerable obscurity, but from all available accounts, traditional and written, it appears that the first case or cases were observed somewhere about 1840 and 1842. It is known by the natives as "mai alii" or "mai paki." "Mai alii" signifies *chief's disease*, and it received this cognomen from the tradition that the first case was recognized (1842) in a chief named "Maca," the uncle of the present Queen Dowager Emma. "Mai paki" means *Chinese disease*, and this epithet receives two explanations. One is (the most likely one) that the disease was first recognized by a Chinaman, who had seen similar cases in his own country; the other, that the Chinese imported the disease. I may say that the former explanation is that given by foreigners and intelligent natives and half-castes, while the latter is held only by the ordinary natives. An odd case, after the above, was observed here and there until 1857, when an epidemic of small-pox instituted throughout the Islands indiscriminate vaccination. The act was performed by any and everyone, and lymph was taken from arm to arm. Within a few years after this it was discovered that cases of leprosy were cropping out pretty thickly all over the

Islands, and the disease has been gradually and steadily adding to the number of its victims ever since. There can be no doubt, I think, as to its propagation by vaccination. Most authorities on the subject admit that as one of the modes, and several cases on the Islands have been directly traced to that source. The older medical men on the Islands, who have had considerable experience with the disease, are very decided and unanimous upon this point. Cohabitation with a leper is also known to be a fruitful source of infection, and it would appear that when the disease is contracted in this way, syphilis forms an inexplicable factor, being, in the majority of cases, a precursor of the genuine malady. So much is this the case, that some of the older physicians of Honolulu regard leprosy as simply an advanced state of syphilis. Dr. McKibbin, surgeon to the Honolulu Hospital, and an active practitioner for over 20 years on the Islands, told me that he had seen, time and again, pure unmistakable cases of syphilis followed by leprosy. Under an anti-syphilitic course the symptoms of the former would disappear, while those of leprosy would only be confirmed. In the majority of his cases the symptoms of leprosy would only show themselves after the disappearance of the syphilitic symptoms, but in some they would go hand in hand, and modify one another to a more or less extent. The custom of herding together, and eating with their fingers out of a common calabash, and smoking the same pipes, are other modes of spreading the disease. But, admitting this, it is difficult to explain the immunity from the disease many of the "kokuas" experience. I have already said that the term "kokuas" applies to the non-lepers in the settlement, who have followed to the place of banishment their wives or husbands, as the case may be, rather than break the conjugal tie. But it would be wrong to infer from this that the tie is very strong among the natives. At the time of my visit there were sixty kokuas, some of whom had resided in the settlement, since it was instituted, but who showed no signs, subjective or objective, of the disease. I will give notes of a few of these cases.

No. 1.—Kuloa, aged 55, female; in 1854, married a leper, with whom she lived five years, and had four children. Has lived in settlement since 1866 with her present husband, and with whom she has had also four children. All her children died before attaining the age of 12 months. Had syphilis two years after first marriage. Shows no signs whatever of leprosy, and is apparently in perfect health.

No. 2.—Kulchua, aged about 40, laundress for the hospitals for the past seven years. Lived as wife to a leper for 13 years. Has had four children, two of whom died at the respective ages of 2 months and 3 years. The second child is a leper, and is 15 years of age; the fourth is 12 years, and is quite healthy. Shows no traces of leprosy, and is robust and hearty.

No. 3.—Pukoku, aged 45, male; lived with a leprous woman for 12 years, and has resided in settlement 8 years. Has no suspicious symptoms of leprosy, and apparently is in the best of health.

But, on the other hand, it must be borne in mind that they do not all enjoy this immunity. A glance at the above figures for 1879 will show that in that year 16 were pronounced lepers by the resident physician. Several cases of cure of the disease are reported on the Islands; but as at that period the symptoms are very obscure, and often are not to be distinguished from those of syphilis and other skin diseases, much room is left for doubt. I saw several cases in the Honolulu Hospital of a doubtful nature, but who

were undergoing the treatment of leprosy. Many of these, I thought, might safely have been put into the category of tubercular lupus of the face. I saw a couple of cases in whom the ulnar nerve had been stretched by Dr. McKibbin for contraction of the little finger and the adjacent one (an early symptom of leprosy), with marked benefit for the time at least. That was as much as the doctor expected. The treatment of the cases in the hospital was of an alternative nature, combined with local applications, chiefly caustics, to the patches of eruption, and the use of electricity in cases of defective enervation.

I am keenly alive to the deficiencies of this paper, but if it move a few charitably-inclined people to take an interest in the poor unfortunate victims on the Sandwich Islands, and awaken the profession to the danger of the disease invading this continent, it will have served its purpose.—*Canada Med. and Surg. Journal.*

DEATH FROM LEAD-POISONING.

Public and medical attention can hardly fail to be given to the facts of an inquest held by Mr. George Collier at Hoxton on Saturday, April 1st, respecting the death of Hannah McCarthy. Mary Eason, nurse at the Shoreditch Infirmary, and Dr. Donald Forbes, the resident medical officer, testified that, through the deadly trade the young woman had been engaged in, she bore the appearance of being between forty and fifty years of age, whereas she was only twenty-seven. She was a single woman, living with her friends, and some few days since was brought to the infirmary suffering from lead-poisoning, and was so ill as to be at once admitted to the infirmary, where she died on Thursday. The *post mortem* examination made by Dr. Forbes showed symptoms of lead-poisoning. The gums, where they joined the teeth, were blue all along, and the cause of death was effusion into the ventricles of the brain consequent on this poisoning. Dr. Forbes stated that he had had at least sixteen cases under his treatment during the past twelve months from the different factories in the neighborhood; and the nature of the occupation was so deadly that, in one case, a young woman who had been in the lead works only two weeks was so poisoned, that it took five months' stay in the infirmary to cure her. The coroner stated that these cases were, unfortunately, not uncommon, the powdered lead obtaining access to the lungs, and so poisoning the body; and in the case where the material used was wet, it became absorbed into the system through the skin. He thought that men were in some measure protected by their whiskers and moustaches from taking in the powder into their lungs; but, in the case of women, the manager of these works ought to be compelled by law to provide them with respirators. Several of the jury, who delivered a verdict of death from lead-poisoning, stated their opinion that the masters ought to be compelled to look after their workpeople, and see that they were better protected against the evils of such a trade. The coroner said he could only take that as their opinion, for the managers were not compelled by law to take any steps, nor need women work in these places unless they liked. Dr. Forbes remarked that, from his experience, the workers at these noxious trades ought to be better protected by law.

The following directions and regulations relating to factories, work-shops, and timber-yards, where the manufacture or manipulation of lead and its compounds is carried on, are prescribed by law in France.

They have recently been forwarded to us by M. Gautier, and this is an appropriate moment at which to call attention to them.

Workshops where white lead, yellow lead, and red lead are manufactured, should be easily ventilated, swept, and thoroughly scrubbed throughout. The operations of clipping, cleansing, and rolling white lead and yellow lead should be performed under water, or on materials just taken dripping out of the water. The rubbing down and sifting of white, yellow, and red lead should be done in closed apparatus with sides of rivetted iron plates. The scraping, crushing, grinding, and brushing of these substances should, as far as possible, be effected by mechanical means. Direct manipulation with the shovel, and transport in open carts and wheelbarrows, are prohibited in the case of dry materials. Roasting furnaces may be constructed in workshops, on the condition that all necessary means for carrying the lead dust and fumes into the outer air shall be adopted. Every week, the wood-work, walls, and floors of the workshops should be thoroughly scrubbed, so as to carefully remove all noxious particles. A water-pipe, with tap for the use of at least three men, should be placed at the entrance of the workshops, so that the workmen can attend to personal cleanliness at least twice a day. The foremen of works should see that the working coats and other working garments of the workmen should be left at the factory whilst the operative go out to get their meals. These garments should be brushed and beaten several times a week out of work-hours, and at a distance from the workshops. The use of oil in the manufacture of white lead diminishes in a very efficacious manner the objections noted in manufacture of dry or moist white lead. A special register, inspected daily by a medical man, should show whence the workman comes, his pathological precedents his previous occupation in the factory, the nature of his present employment, and his state of health at the time of the daily visit. The workshops and yards of house-painters, color-grinders, polishers, etc., should be well ventilated and very open to the air wherever dust is produced by the grinding, pumicing, and burning of lead paints and colors. These openings should be left wide open, whenever white-lead paintings are hung on the walls and furniture, until they are quite dry. The siftings, changes from vessel to vessel, and mixtures of colors, should not be made in the localities where the workmen usually live. All parts of the factory should be thoroughly scrubbed whenever noxious dust is produced and deposited on the walls, wood-work, furniture, etc. The master, or, in his absence, the foreman, is responsible for strictly superintending the carrying out of these precautions, and of assuring himself that his workmen, before going to take their meals, should remove their working coats and use the necessary precautions of cleanliness. The grinding by hand of white lead is utterly condemned, as well as its mixture with oil by means of the grindstone. This practice is the cause of a large number of accidents. It is preferable by far, in order to grind the white lead with the different colours, to take that which has previously been mixed with oil in factories. Wherever lead, its alloys, and other preparations, are handled, the foremen of workshops should avoid everything which would uselessly bring the workmen into contact with crude lead and its compounds. They should watch over the minute cleanliness of the workshops, and by repeated cleansings exclude from them all lead-dust. They should, as far as possible, avoid all beating, shoveling and shaking about in close

rooms where the men work; these operations produce and diffuse dangerous lead-dust. In any case, the workman will not be required to grind or sift lead-preparations such as enamel-powder, flint-glass, tin-putty, paint-lead-ashes, white lead-colors in powder, in any other way than in closed vessels. The workmen should not be allowed to remain, or still less to take their meals, in situations where dust containing lead is known to become disengaged. Workmen who handle any form of lead whatsoever, metal, alloys, soluble or insoluble preparations, should consider it as a certain fact that the absorption of the poison may be effected by simple contact with the skin, and that it especially takes place by the mouth, the nostrils, and the mechanism of respiration. They are, consequently, under an obligation for the common weal to prevent any disengagement of lead compounds in the condition of dust, and to avoid all useless direct contact with lead and its preparations. The cleanliness of their persons, clothing, tools, and especially of their hands, face, and more particularly their mouth, at meal-times, is an indispensable condition as regards their health. These precautions, joined to nourishing diet, especially if all excess be avoided, and notably in the abuse of alcoholic drinks, would suffice to render their occupation very nearly harmless. Every workman leaving a white lead factory, lead-works, house-painting works, glass works, enamel-works, should, therefore, wash the hands, face, nostrils, and rinse out the mouth with the greatest care. For this purpose, after having sharply rubbed the hands, arms, and nails, with sand or rottenstone provided by the master, he will sluice himself with running water. He will then go on to wash his nostrils, mouth and face, brush his out-of-door garments, sponge his foot gear, etc. Every workman, leaving a workshop or factory, retaining on his hands, arms, or clothing, lead dust or spots, is liable to absorb the poison, either by the lungs or the mouth, when he takes his meals. No food whatsoever should be kept or eaten in the factory or workshop. Workers in white lead, painters, and enamellers, should, above all other artificers, avoid all debilitating agents, the most dangerous of which is the misuse of alcoholic drinks. It is earnestly pressed on the medical attendant of the factory to place on the sick list all workmen who show the smallest blue line on the gums, fetid acidity of the breath, sleeplessness, dry colic, lead paralysis, or analgesia, and only to allow to go to work again when all these symptoms have perfectly disappeared. If a fresh attack of lead-poisoning should appear, the medical attendant should definitively send away the sufferer as unfit to undertake this dangerous kind of occupation. Workmen who handle lead and its compounds, should have recourse to a generous and substantial diet; use a great deal of slightly sweetened milk, eat salted provisions, and avoid acid food. Sulphur or soap baths, taken every week, are very useful. So soon as untoward symptoms show themselves, the workman should go to the doctor, who will form his opinion of the necessary precautions to be taken, and of the right time for the internal administration of iodide of potassium, which, carefully prescribed, produces the best results. This drug, which is used as a prophylactic in many of the north of France and Belgian factories, should only be taken by the prescription of, and under the superintendence of a medical man. The use of sulphuric lemonades and drinks cannot be recommended.—*Brit Med. Journal.*

FORMULARY AND POINTS IN PRACTICE.

SOOTHING AND CLEANSING BATH IN SUB-ACUTE ECZEMA AND PSORIASIS.

- R Potass. carbonat..... ʒ iv
Sodii. carbonat..... ʒ iij
Pulv. boracis..... ʒ ii

M. Use in a thirty gallon bath with half a pound of starch. Gelatin, one pound, may be substituted for the starch, or bran, a pound or two soaked in a muslin bag.

COMPOUND SULPHUR BATH, STIMULATING AND ANTI-PARASITIC. (LONDON SKIN HOSPITAL.)

- R Sulphuris praecipitati..... ʒ iij
Sodii hypsulphitis..... ʒ i
Acid. sulph. dil..... ʒ ss
Aqua..... O j

M. For a 30 gallon bath.

MERCURIAL BATH, STIMULATING AND ANTI-SYPHILITIC. (LONDON SKIN HOSPITAL.)

- R Hydrarg. chlorid. corros..... ʒ iij
Acid. hydrochlorici..... ʒ j
Aqua..... O j

M. For a 30 gallon bath.

IODINE BATH, STIMULATING AND ABSORBENT.

- R Iodinii..... ʒ j — ʒ ii
Pot. iodidi..... ʒ i — ʒ ii
Aqua..... O j

M. For a 30 gallon bath.

IN INDURATED AND ROSACEOUS ACNE.

- R Pot. acetat..... ʒ ss — ʒ i
Tinct. nucis vomicae..... ʒ iij
Ext. rumicis radice fl..... ʒ iv

M. Sig.—Teaspoonful half an hour before meals largely diluted.

CORRECTIVE IN DYSPEPSIA, ACNE AND ECZEMA.

- R Bismuthi subnitrat..... ʒ i — ʒ ii
Sodii bicarbonat..... ʒ ii
Pulv. zingiberis..... ʒ ii

M. et div. in pulv. No. xii.

Sig. One powder after meal.

SEDATIVE IN DYSMENORRHOEA.

- R Hoffman's anodyne..... ʒ j
McMumm's elixir opii..... ʒ iij
Liq. ammonia acet..... ʒ ivss

M. Sig.—A teaspoonful every hour if needed.

ACUTE RHEUMATISM.

- R Acetate potash..... ʒ ss
Bicarb. potash..... ʒ i-iss
Nitrate potash..... grs. x

M. Sig.—To be given in free solution once in four hours or half the dose once in two hours.

MEDICAL NOTES AND NEWS.

Dr. Erskine Mason.—WHEREAS, It has pleased God in his providence to remove from amongst us our late friend and associate, Dr. Erskine Mason, and WHEREAS, This Board has, for many successive years, profited by his advice and counsel,—

Resolved, That the Board of Trustees of the Physicians' Mutual Aid Association hereby records its sorrow at his untimely death in the midst of a useful and honorable career, in a profession to which he had devoted the best years of his life, with earnestness and fidelity.

Resolved, That by his death this board loses a member who was always prompt and faithful in his attention to his duties, fully sensible to the trust committed to him, and watchful in guarding the interests of the Association, kind and courteous to his fellow-members, considerate of the claims of the needy, and wise in his suggestions for their relief.

Resolved, That this faithfulness which he showed as a trustee, was carried into all the associations of his medical life, with the same zeal and conscientious devotion to whatever he undertook, giving us all an example worthy of imitation.

Resolved, That these resolutions be inserted in the medical journals, and a copy of them transmitted to his bereaved family with the sincere sympathy of the Board.

GEO. A. PETERS,
GEO. G. WHEELLOCK,
DANIEL LEWIS, } Committee.

Erskine Mason M.D.—At the stated meeting of the New York Pathological Society held May 10th, 1882, the following was unanimously adopted.

"This society has heard with profound regret of the death of Dr. Erskine Mason, at one time its presiding officer. For many years an active member, he took a deep interest in the work of the Society, and was a regular attendant at its meetings, presenting many valuable specimens, and taking part fully in its discussions.

"He will long be remembered for the clear and intelligent manner in which he presented his cases and for the valuable lessons he deduced from them. By the death of Dr. Mason, this Society has lost one of its most active and efficient workers, and a member who, by his kindness of manner, had endeared himself to his associates. Strong in his convictions he was, nevertheless, always courteous in discussion to those who held different opinions, seeking the elucidation of the truth rather than endeavoring to enforce his own ideas.

"Strictly honorable in all his professional relations, he had won the respect of his brethren both as a man and as a surgeon.

"In him we have lost one who set us a bright example of energy and industry, of careful and thoughtful study, and of professional honesty and courtesy."

"*Resolved* that the above minute be entered upon the records of the Society."

(Signed) ROBERT WATTS,
J. H. RIPLEY, } Committee.
E. L. KEYES,

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BOOK REVIEWS.

Health Aphorisms; and an Essay on the Struggle for Life against Civilization, Luxury and Æstheticism. By Frank H. Hamilton, A. M., M. D., LL. D., author of the "Principles and Practice of Surgery," Treatise on "Fractures and Dislocations," Treatise on "Military Surgery and Hygiene." Late Professor of Surgery in Bellevue Hospital Medical College and Surgeon to Bellevue Hospital, New York, etc., etc. Birmingham & Co., New York: 1882. Price 50 cents.

This little book is directed to lay, rather than professional, readers. Its object is to disseminate a knowledge of the laws of health among the people. The first part consists of a collection of aphorisms expressive of the simple yet little understood laws of hygiene, for the preservation of health and life, with comments on some of the factors in modern life which operate against such laws. Such subjects as the following are tersely discussed, viz.: Air, temperature, moisture, ventilation, hot air furnaces, plumbing, sewers, etc., light, residence, dress, bathing, exercise, sleep, food, stimulants and narcotics, burns, drowning, vaccination, medicine and doctors, etc.

Many popular errors regarding these subjects are pointed out. Many practical suggestions are made,

which, if adopted, would in a short time improve the health and physique of the present generation.

The second part embraces an essay on "The Struggle for Life against Civilization, Luxury and Æstheticism," which was read before the New York Academy of Medicine, and abounds with hints regarding house sanitation and its relation to disease.

The eminence of the author adds force to the opinions expressed on health subjects. No time could be more fitting for their presentation. Popular interest and alarm have been justly awakened and need just such direction as this in these matters. The book is tastefully bound, and in every respect merits perusal and approval. The price is such as to render it obtainable by all.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, MAY 4th, 1882.

The President, Dr. Fordyce Barker, presided. The minutes of the previous meeting were read and approved.

The Librarian's report was read and accepted.

The Statistical Secretary informally reported the death of Dr. James R. Wood.

Dr. Barker said that by the death of Dr. Wood the public, the profession, and the Academy had met with a great loss and that appropriate action would be taken by the Academy.

Report of Section on obstetrics was read and accepted. The Chair announced that he had received a communication from the chairman of the section on practice of medicine, stating that owing to the death of their secretary the list of members had been lost, and asking that all who wished to become members of this section would send their names to Dr. Wm. M. Carpenter.

The committee on admissions recommended for admission Drs. Johnson, Satterthwaite, Mason, Winters, Sayre, Billings and Gorman Blake.

Dr. Adams read a memoir of the late Dr. James Otis Pond.

A portrait of Dr. Pond was presented to the Academy by the family, some of whom were present at the meeting.

The adjourned discussion of Dr. McBride's paper on

"THE EARLY DIAGNOSIS OF CHRONIC BRIGHT'S DISEASE."

was opened by Dr. Wm. H. Draper, who read an interesting paper on the Etiology and Diagnosis of Granular Kidney. Drs. Barker, A. H. Smith, S. O. Vanderpoel, F. P. Kinnicut and McBride participated in the discussion.

The following is a brief summary of Dr. Draper's remarks:

Mr. President and Fellows of the Academy: It is a striking tribute to the genius of Bright and at the same time a mark of the slow progress of pathology, that we still term all the known diseases of the kidney "Bright's Diseases." We, however, most often apply that term to designate the two forms of large white kidney and their varieties. The form to which Dr. McBride called attention to in his paper was the granular kidney of which there are no marked early symptoms. There can be no doubt of the essential entity of the granular kidney, nor of its insidious nature. There are several points in the etio-

logy of this form of kidney. I would mention first and most important, *heredity*, and in this respect the history of diabetes is not more wonderful than that of granular kidney. Second, the *gouty habit*. Dr. Todd first described the shrivelled granular kidney as the gouty kidney. Gout being regarded by some as merely coincident with the kidney disease. But this is on account of the narrow definition of gout by pathological anatomists. The granular kidney I believe to be one of the results of the gouty diathesis. In considering gout we must consider also the digestive, urinary, nervous and trophic affections, which are a great part of it. Gout is a universal disease, and has a universal cause.

The next point in etiology is *senility*. The granular kidney is a disease of advanced years, usually 50-60, rarely occurring under the age of 20. But senility is not recognized by years, but by decay, by the general failure in the process of nutrition, which in some comes at an early age. The granular kidney is only a part of a general atrophic process induced by heredity and the wear and tear of life. It is a manifestation of a general (not a local) disease.

Dr. Draper next alluded to the correlation of heart disease with that of the kidney. This correlation of the vascular system in renal disease did not escape the observation of Bright, who regarded the heart disease as the result of the renal disease. Dr. Draper maintained that both were the results of a common cause. He then passed to the discussion of Dr. McBride's paper, commenting on it as follows: The most interesting part of Dr. McBride's paper was that in which he attempted to establish the means of early diagnosis of chronic Bright's. But the ordinary symptoms of renal disease when they appear are evidences of irremediable lesion. Pulse tension, which Dr. McBride considered of special significance, is not constant and can not be a certain means of diagnosis. The condition is one of many brought about by the irritation of the circulatory system by impure blood through an excess of nitrogenous elements.

How far persistent high specific gravity of urine may be considered an early symptom of chronic Bright's remains to be proven. It is the condition which precedes the exploding of acute gout. If it is persistent, it may be justly asked, has not the lesion already begun? The question of heredity here is as important as in phthisis and is still more important in the early recognition of the gouty habit. It is doubtful if we shall ever arrive at more than a conjectural diagnosis of granular kidney, since when symptoms appear the disease is already in its *formed* and not in its *formative* stage.

Dr. Fordyce Barker said: 22 years ago the subject of Bright's diseases was before the Academy for discussion, and the discussion contributed largely to the scientific standing of the Academy among the profession at home and in Europe. The discussion of Dr. McBride and Dr. Draper shows that great advances have been made in etiology and diagnosis. I only regret that the therapeutics of the disease has not received as much attention as it deserves. I would ask one question in this connection. What is the therapeutic value of digitalis in the heart lesions of this disease associated with albuminuria? In acute albuminuria a most powerful means of restoring the kidney is by the action of digitalis on the heart, but there is a class of cases of albuminuria in which digitalis is contraindicated.

Dr. A. H. Smith, apropos of Dr. Barker's question, recalled Fothergill's statement that digitalis acts as a

diuretic only where it increases arterial tension. He had been much gratified by the results of milk diet and oxygen in the treatment of albuminuria. Excess of urea and uric acid depended largely on imperfect oxidation and therefore it was natural to expect that means favoring oxidation would tend to relieve this condition. Whether the artificial addition of oxygen to the inspired air was advisable and practicable was not yet settled. He inquired if gout when it exists in free form, as in the horse racing gentry of England, was as liable to be associated with disease of the kidney as when occurring in those of sedentary habits?

Dr. Vanderpoel discussed the causes of albuminuria, maintaining that the most constant and the one important cause was lowered blood tension. The term red granular he considered a misnomer, it was not Bright's disease but the result of general diathetic disturbance. The disease of the kidney was only one of a series of factors or results in this lithæmic condition. The heart trouble begins as early as the kidney trouble. There are no pathognomonic symptoms by which the disease could be early recognized. Patient usually had the disease for many years before the symptoms are marked and he applies for treatment. It is a strictly diathetic disease. The granular kidney belongs to sedentary people who are high livers. Digitalis is rarely applicable in this form of Bright's except in the later stages when the cardiac tension is decreased.

Dr. Kinnicut said: "It seems to me important to recognize if the cardinal symptoms are present in the early stages of granular kidney. If polyuria, increased arterial tension and hyaline casts. The presence of hyaline casts alone should be regarded as an important symptom. The occurrence of these casts in lithæmia is suggestive from an etiological standpoint. Polyuria is an early and important symptom."

Dr. McBride said the important point to determine was if we could establish a stage of early occurrence characterized by a sufficient number of symptoms to permit of appreciation. At present our diagnosis was based on sp. gr., quantity, and tube casts. If before this it could be said that there were a set of symptoms which could be recognized a great deal would be gained. We owe to Dr. Draper the suggestion of a plan for the regulation of diet in conditions of suboxidation.

Dr. Draper closed the discussion. The strictly chemical view of disease he believed was daily gaining ground. Digitalis is not applicable to the early stages of this disease while the heart tension is increased. Morphia is a more valuable heart stimulant in the later stages of granular kidney than digitalis.

The Academy then adjourned.

MEETING OF THE MEDICO-LEGAL SOCIETY, MAY 3, 1882.

THE EVIDENCES OF INSANITY DISCOVERABLE IN THE BRAINS OF CRIMINALS AND OTHERS WHOSE MENTAL STATE HAS BEEN QUESTIONED; WITH SOME REMARKS ON EXPERT TESTIMONY AND THE GRAPPOTTE CASE. BY EDWARD C. SPITZKA, M. D.

The following is a brief resume of Dr. Spitzka's paper:

Within the past few years, this Society and the legal and medical fraternities at large have repeatedly had their attention directed to the question of medical testimony in relation to disputed mental states. If impartial lay observers have come to the conclusion that such testimony is of no great value, we of the medical profession cannot, in view of recent developments, deny that such a conclusion has some justification.

Medical testimony on questions of insanity in American courts of law has come to be regarded with doubt, if not with contempt, partly on account of the enunciation of evident perversions of truth, partly on account of the unpalatable nature of some of the established dogmas of mental medicine.

Alluding to the European plan of calling experts, Dr. Spitzka said: I grant that if, with the plan as it stands on paper, we could also import the laboratories, the matured educational institutions, and the excellent medico-legal literature of France, Germany, and Italy, there should not be a moment's hesitation about its adoption. But until this can be done, unless the exotic can be transplanted with enough of its roots and soil to insure a healthy domestic growth, the most pertinent subject for your consideration will continue to be the one suggested by your President in his inaugural address, namely: the best means of determining the competency of experts. This is, after all, the fundamental question.

Contradictory as on first sight it may seem to many, I regard a judicious, thorough, and pertinent cross-examination of the medical witness as the method best calculated to solve this problem. I mean an inquiry closely directed to the physician's knowledge of the teachings of his masters, of the existing state of science, and of his record as an expert. Within these limits, the more searching the cross-examination, the better for the dignity of science, the true ends of the law, and for the expert himself, if he be an honest and scientific one.

The question which I propose to discuss this evening naturally falls into several sub-questions. The first is: Whether insanity is always associated with visible evidences of brain disease? The answer to this question is, No! The second is: Whether the morbid appearances found in the brains of insane persons are ever found in the brains of persons known to have been sane? The answer to this question is, that some of the appearances described by certain authorities as related to insanity, are found in every sane adult, and still other of the common findings in the insane brain, are found occasionally in the brains of persons of ordinary soundness of mind. The third is: Whether there is any constancy in the association of any special disease of the brain with special forms and stages of insanity? The answer to this question is, that with some forms of insanity, the *post-mortem* almost attains the value of an exact test of the diagnosis, while in others it does not; this is owing to the constancy of certain signs of brain disease in some forms, and their inconstancy with other forms of insanity.

The following citation indicates the state of opinion in Germany and France: "In turning to pathological anatomy for enlightenment, it cannot be suppressed that in a certain number of *post-mortems* of the insane, palpable morbid appearances of the brain are absent. . . . Experience teaches that it is almost exclusively the primary forms, the first stages of insanity, in which we find nothing palpable in the autopsy, and

must content ourselves with assuming anomalies of innervation, blood-distribution, and chemical composition."

Quotations of a like character might be multiplied, but they would only serve to show the unanimity of the most eminent specialists, now living, on this question.

Summarizing the teachings of the master minds in pathology, of reliable observers generally, and my own experience, I consider myself justified in saying that positive and indisputable evidence of insanity cannot be found in more than thirty per cent. of the insane, that in another thirty per cent. slight changes are found, not differing in character, though perhaps in extent, from what we observe in some sane subjects, while, in the remainder, there is no visible deviation from the normal standard of any kind.

If, then, insanity has been set up as a defence, in a criminal trial, or advanced as a ground for voiding a contract or breaking a will, or as an explanation of a suicidal act, the absence of lesions in the brain of the deceased subject, whose mental integrity is impeached, does not weigh as a straw in the balance in favor of the contrary litigants. I say of insanity in general; it is different with special forms of insanity.

Dr. Spitzka having cited cases in point continued as follows: While the cases, here briefly cited, show that *post-mortems* have been made on the brains of the insane, sometimes to complete the chain of evidence, sometimes merely to test the truth of an opinion in the abstract, while the negative findings in the cases of some deceased criminals and suicides have been erroneously thought to support the view that they had been sane, and the positive evidences in others demonstrated the correctness of the opinion of those pronouncing such persons insane, I know of but a single case where the record of actual findings in the brain of a person whose mental state had been questioned, was distorted or suppressed.

On March 4th, 1876, one Francis Grappotte killed one Simon Hoover, near Le Roy, Jefferson County. He was tried before Judge Noxon at Watertown, and convicted of murder in the second degree; the prisoner committed suicide by hanging, in his cell, the following night. At the trial several persons, including prominent physicians of Watertown and its vicinity, testified to the insanity of the prisoner. The prosecuting counsel called to his assistance as an expert a physician, who subsequently read the paper referred to before this Society. In that paper it was stated that the prisoner had been feigning insanity at the time of the trial, that in his, the reader's, opinion, the prisoner was sane, and that the *post-mortem* examination confirmed his view. Let us therefore examine the facts of the case, the nature of the testimony given, and the report of the *post-mortem*. From a transcript* of the stenographer's minutes he then gave the facts of the case and the *post-mortem* examination demonstrating beyond cavil the insanity of Grappotte.

But enough of this picture, reflecting as it does so little credit on that branch of our profession to which it would seem the insane would first look as their natural guardians. How does it contrast with another, where one of the best legal minds in our land appears, consciously or unconsciously, as the boldest and best advocate of medical truth, and where that truth was fortified by incontrovertible evidence obtained by an examination after death?

The case of the negro, Freeman, was here cited.

*Kindly loaned to me, at the instance of Dr. H. G. P. Spencer, of Watertown, N. Y.

After detailing the facts, Dr. Spitzka continued : At the trial, the excited multitude in the court-room were not backward in loudly propounding the inquiry : "Who will dare come forward in defence of this negro?" "Let us see the man who will dare raise his voice in his behalf?" It was generally believed that counsel would have to be assigned by the Court, and that some junior member of the bar would be selected, but it was doubtful whether any one could be found with sufficient nerve to accept the appointment, and attempt even a weak and formal defence. It was after the queries above enumerated as to whether Freeman had counsel, when the Court inquired, "Will any one defend this man?" that amid the death-like stillness pervading the court-room, there stepped forward, no young fledgling with nothing to lose and all to gain, no reckless adventurer or desperate gambler at law, but one who had been Governor of the Empire State, its most prominent and courted lawyer, who afterwards became one of the chief lights of the Senate, the rival of Webster and Calhoun, and later still, the Secretary of State of this land at the most critical period of its existence. Repudiated by his party, in the face of the entreaties of his friends, and the threatening demonstrations in the court-room, he rose, on behalf of the prisoner at the bar, and made so eloquent and philosophical a vindication of mental science that it would to-day put to the blush some of those whom mental science has a better right to claim as votaries. That man was WILLIAM H. SEWARD, and one of the brightest leaves in his chaplet is his vindication by the post-mortem report on the insane negro's brain. It is a brief record, at least in the shape in which I have had access to it, but it is certified to by the six leading physicians of Auburn that Freeman's brain was the seat of disease truly remarkable in its extent.

Although the post-mortem test of insanity can only be utilized in certain classes of cases with any prospect of obtaining results of a positive nature, yet, in view of such revelations as have been furnished by the occasional examination of the brains of criminals and suicides, it seems desirable that such examinations should be more regularly made. There are a number of problems of equal interest to the lawyer, the physician, and the sociologist, not indicated within the limits of this paper, which await a solution; and there is every reason to believe that the methodical analysis of the criminal insane and suspected insane brain will contribute to such solution in no slight degree.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, MAY 10TH, 1882.

The President, Dr. E. C. Seguin, presided. The minutes of the previous meeting were read and approved. Dr. Nathan Bozeman presented three specimens taken from the same patient,

"SUB-PERITONEAL UTERINE FIBROIDS," "CYSTIC DEGENERATION OF THE OVARY," AND "THROMBUS OF FEMORAL VEIN."

Patient æt. 53, enjoyed good health till the summer of 1880, when she first noticed enlargement of the abdomen, which grew rapidly till summer of 1881, when she applied for treatment, and ovarian tumor was diagnosed, and tapping done by Dr. Smith. The tumor was tapped three times, 80 pounds fluid being drawn away. The diagnosis was clear; the operation was done, a large cyst removed, and the pedicle secured by double ligature. The left ovary

was the size of a pullet's egg, and was composed of multilocular cysts. In the uterus there were six sub-peritoneal fibromata; in the cervix, a sub-mucus polypus. The tumor removed weighed 40 pounds. The silk ligatures used were found completely covered by lymph. The left femoral vein was occluded by a thrombus. Death occurred from acute peritonitis. There was nothing peculiar in the after treatment, the progress being most satisfactory up to the seventh day. Up to that time, temperature had not risen above 100½°. After the reactionary fever, the temperature came down to 99°. Patient was nourished by beef juice, brandy, quinine and opium. On the third day she complained of numbness in the right side, leg and arm, and aphasia was subsequently developed, and pricking sensation over the whole body. These symptoms gradually disappeared. On the seventh day the sutures were removed, and the patient carried into the cottage. Forty-eight hours after the sutures were removed there was a sudden rise of temperature, the patient gradually growing worse till the fifteenth day, when she died. On autopsy both femoral veins were found occluded, the left completely, the right partially. There were lesions of old pleurisy and emphysema. About a quart of fluid was found in peritoneal cavity. Peritonitis supervened from septic influences after the removal of the sutures.

Dr. Seguin asked if the brain had been examined. He thought the condition was one either of embolism or else a rare case of transfer of a small thrombus from the veins to the right side of the heart. This is the usual cause of thrombosis in the first or second week of the puerperal state.

Dr. Liautard presented a specimen of

FRACTURE OF THE SPINE IN A DOG.

The fracture was at the 11th dorsal vertebra. The dog had fallen suddenly to the floor in a fit, and on coming to was paralyzed, and remained so till the third or fourth day, when she began to recover, and in one week regained control except in her hind quarters. She was nourished by beef juice, lime salts, etc., and put on nerve tonics. Under this treatment sensation also was regained. *Post-mortem* : All the organs were found healthy except the intestines, and the spine was fractured at the eleventh dorsal vertebra.

Dr. Newman presented a specimen of

MEMBRANOUS DYSMENORRHOEA.

Patient æt. 26, married 3 years, no children. Came under treatment three years ago. Three years ago she was thrown down and kicked in the left side. In April last again came for treatment for membranous dysmenorrhœa. A distinct tumor was found, which was entirely disconnected from the uterus. In August, after severe pain in left side she felt something give way, and a copious discharge of blood from the uterus followed. She was relieved until October, 1881, when she was troubled with flooding and expulsion of membrane at her monthly periods, which were, however, regular. She was treated by dilatation of the uterus, applications of carbolic acid and tincture of iodine. She was then well until March, 1882, when she passed such large pieces of membrane that some physicians told her she was pregnant and wanted to confine her for child. The masses expelled were found to be exfoliated intestine, which had been passed per rectum. The interest of the case was in the diagnosis.

Dr Newman presented a second specimen

CARCINOMA OF THE TESTICLE.

The patient's trouble first began as an epididymitis.

When first seen the testicle was large, swollen and exquisitely tender to the touch and drawn up. There was indefinite fluctuation on palpation. The left testicle was normal, the cord hard, there were no enlarged inguinal glands. No syphilitic history, hernia or hydrocele. The patient grew gradually worse, being finally unable to sleep. The scrotum became enlarged to twice its natural size. Extirpation was advised and done April 13th. Before operating three ounces of conglutated blood were let out by a trocar. The cord was tied, the testicle enucleated and removed. There was healing by first intention except where the drainage tube was inserted. The ligatures came away on the 17th day. Dr. Newman remarked that he had never seen any unpleasant results from ligation of the cord. Dr. Seguin remarked that it was the theory of a distinguished gentleman of New York, that compression of the cord cured neuralgia of the testicle.

Dr. Willard Parker, jr., presented a specimen of
EPITHELIOMA OF THE PENIS.

The patient came to his office in April. Antecedents good, health good till 20 years old, when he contracted chancroid. Was treated for this satisfactorily, since then has had a spot on the penis, peculiarly sensitive to irritation. Last November developed a point of tenderness which looked like a venereal sore, but did not yield to treatment, and began rapidly to increase in size. April 3d, the large epithelial growth was removed from the penis by Dr. Hutchinson. The patient recovered rapidly and satisfactorily with a stump $1\frac{1}{2}$ to 2 inches long when perfectly healed. The growth had involved the glans and a large part of the spongy portion of the urethra. As to the frequency of malignant trouble in the penis, Dr. Parker had looked up the authorities. Dr. Walshe out of 10,000 cases of cancer cited only ten of the penis. The results of microscopic examination of the growth removed were given in detail.

Dr. J. C. Peters said that a few cases were reported in the bulletin of the society. Dr. Abbe had presented a case. It was a rare affection and difficult of diagnosis. Dr. Liautard said it was a common affection among horses.

Dr. Ferguson presented a specimen exhibiting the lesions of
PERITYPHLITIS FROM CHERRY STONE IN APPENDIX VERMIFORMIS.

May 1st, 1881, the patient awoke with violent pain, right iliac region. There was no history of traumatism. On the ninth day of his illness, which had been chiefly characterized by persistent vomiting and pain, he came into the New York Hospital. Respirations shallow, pulse feeble, temperature 102, face anxious. On examination a tumor was found 6 x 4 inches, exquisitely tender. It was elicited that the day before his illness he had eaten cherries and swallowed the stones. He died 24 hours after admission.

On *post-mortem* pus was found in the peritoneal cavity, and a large sac in the wall of the ileum, and appendix filled with pus.

Dr. J. Lewis Smith presented a specimen of
INTESTINAL INTUSSUSCEPTION.

Negro girl æ 7., health good till 5 months ago, then complained of colicky abdominal pains which soon became more frequent and severe. Dr. Smith saw her Mch. 13th; the pulse was normal, there was no marked febrile movement. In intervals of the pain she was apparently in good health. Evacuations one or two daily, were

of a diarrhœal character. There was no evidence of a tumor, though the patient was examined carefully for intussusception. There were fugitive pains in other parts of the body. Intestinal catarrh and neuralgic pains were diagnosed. She gradually lost strength and died from exhaustion. There had been at no time marked vomiting. On opening the abdomen attention was drawn to the appearance of the small intestine which was markedly congested as a result of enteritis. The ascending and transverse colon were not in view at all. In intussusception the starting point is prolapse of the ileum through ileo-cæcal valve or inversion of the caput coli. This commenced in the former way. The displacement must have existed from 3 to 5 months. If the diagnosis had been made the patient might have been relieved. Dr. Smith had found that if intussusception occurred after the age of $2\frac{1}{2}$ there would be found some antecedent disease of the intestine. In answer to an inquiry of Dr. White he replied that he regarded water better than air for the expansion of the intestines in these cases.

Dr. Janeway remarked apropos of the periodicity of the pain in Dr. Smith's case that this periodicity of pain was often wrongly attributed to malarial origin.

Dr. Beverly Robinson presented a specimen of
PERICARDITIS

with exudation on parietal and visceral layers. The point of interest in the case was that the most marked symptom was severe dyspnœa, the patient dying of uræmic symptoms when no albumen could be detected in the urine by the most careful tests. It was probably a case of respiratory uræmia. Dr. Robinson presented a second specimen

HEART WITH BOTH AORTIC AND MITRAL STENOSIS

and gave the history of the case in detail.

Dr. Janeway remarked that he had met with cases of uræmic dyspnœa. It might be the first symptom of Bright's disease.

Dr. Wyeth presented two specimens. 1st. The
SPINES OF THREE VERTEBRÆ REMOVED FOR NECROSIS

after abscess. 2nd. Piece of silk suture discharged from abscess forming five months after Syme's operation.

Dr. Janeway presented a specimen of
PRIMARY EPITHELIOMA OF CÆCUM WITH SECONDARY INVOLVEMENT OF LIVER, LUNG, OMENTUM AND CERVIX UTERI

accompanied by the history. The condition was apt to be mistaken for floating kidney but in the latter the motion possible was from behind forward, in this it was from below upwards. The society then went into executive session.

LECTURES.

CLINICAL COMMENTS ON CHRONIC DIFFUSE NEPHRITIS—CALCULUS—CHRONIC BRONCHIAL CATARRH,

BY

ALONZO CLARK, M.D.

Prof. Practice of Medicine College of Physicians and Surgeons, New York, Visiting Physician Bellevue Hospital, Consulting Physician St. Luke's and St. Mary's Hospital, etc., etc.

CASE I.—Chronic Diffuse Nephritis.—Male, has legs and face swollen; dyspnœa on exertion. Works in a sugar refinery, does lifting and hoisting. Has a sense

of oppression in the cardiac region. Has a feeling of suffocation. Urine is pale; sp. gr. low.

I do not see any prominence on the left side. The heart beats normally and there is no murmur at the apex or at the base. I hardly get the impact of the apex against my fingers. If this oppression does not come from the heart it may come from passive effusion into the pleuritic cavity.

Examination in the Back.—The voice is more distinct on the right side a little below the inferior angle of the scapula than on the left. There is dulness at the same place. Percussion dulness is nearly one inch above where the breathing fixes it. This is because the breath sounds are conducted by the walls of the chest. He has double pleuritic effusion of the passive sort and the water occupies more than one third the breathing space. There is resonance two inches below the angle of the scapula. There is a difference of level in the dulness when the body is horizontal. This occurrence is frequent. When there is albumen in the urine and when the urea circulates with the blood more than it should it is not at all uncommon to have pleuritic effusion, and when it occurs from this cause it is almost always double. It is much more apt to occur where there is regurgitation at the mitral valve. In this instance the heart seems to be sound, and the case shows therefore that this double pleuritic effusion may occur where there is no regurgitation of blood. It is so much more apt to occur with valvular murmur because the blood is sent back upon the lungs and congests the vessels belonging to that system, inducing effusion of fluid there.

The case appears to be one of simple Bright's disease and not very far advanced. There are little pits on the bone. The treatable part of his case is this effusion. He can in all probability get rid of that, and then he will be a good deal relieved in his breathing. The temperature of his room should be about 72° F. and he should not expose himself to the cold air of winter. I should advise him to take diuretics. Lemon juice with potash is more agreeable to the stomach than the acetate of potash alone. A dessert-spoonful of the infusion of digitalis three times a day and twenty grain doses of acetate of potash should be given every few hours. As to the kidney affection which seems to be very recent, dry cups over the loins and india rubber top cups are the best, because they can be applied frequently and do not make the parts sore. They can be applied three or four times a day and any member of the family can put them on.

CASE II.—Calculus of the Kidney.—Patient has pains in the side and back and top of head. When he suffers from this sharp pain he tosses about. Has severe pain in the region of the kidney; cannot lie still. This is a good point in diagnosing calculus. A neuralgic pain does not impel a person to tossing. Walking does not increase the pain. This is a point of considerable importance in the diagnosis of an imprisoned calculus. Walking brings into action the psoas muscles, and these push against the ureter, causing pain. There is sometimes a severe pain in the testicles. The retraction of the testes is another very useful guide to diagnosis. The fact that the pain extends down to the testes, and the probable fact that the testis is drawn close up to the body, renders the diagnosis more easy, especially as he gets the pain when he wakes up and after lying down is relieved. The diathesis is an aid to the diagnosis. I think it is safe to say that he has calculus either at the opening of the left ureter or in the pelvis of the kidney near the opening of the ureter, and that that causes the pain. Now, how can we relieve him?

There is nothing that will dissolve it in its position, and it is out of the reach of surgery. There is no swelling, and no extraordinary tenderness on the left side in the back, and therefore there is nothing to lead to the conviction of abscess. The question of prescription for these things is in general answered by the indications of his countenance. I should say that he needs tonics. I should advise him to take some chalybeate. Chocolate lozenges containing 2½ grs. of the protocarbonate of iron should be given. He should take the bicarbonate of soda, and should provide himself with test paper to test the alkalinity of the urine. The urine should not remain alkaline very long.

CASE III.—Chronic Bronchial Catarrh.—Male, has a regular cough in the winter. It is probable that the cold he has is a simple catarrh. Patient has never coughed up any blood. About three weeks ago sweated a few nights.

There is nothing here that could not be accounted for by a catarrh, in the rational symptoms presented. Night sweats occurring occasionally are much more frequently to be accounted for by the amount of bed-clothes that the patient has than by consumption. The night sweats of consumption come in successive nights until checked. They are commonly associated with a fever that begins in the afternoon, occasionally preceded by a chill. Notwithstanding his catarrhal cough, I hear no rales in the back. Frequently there are none that can be heard, especially after the patient has just coughed and raised some phlegm. If there are any in the ordinary catarrh they will be coarser. I think for this patient the best prescription would be three ounces of the syrup of senega and one-half ounce of paregoric, a teaspoonful every four hours, and then friction in the morning over the chest.

SELECTIONS FROM JOURNALS.

LANDMARKS IN THE OPERATION OF LAPARO-ELYTROTOMY.

Dr. William M. Polk recently demonstrated certain anatomical points bearing upon the operation of laparo-elytrotomy, before the New York Obstetrical Society. The remarks made by Dr. Polk on that occasion appear in an amplified form in the May number of the *New York Medical Journal*. The specimen shown, taken from the body of a woman who had been murdered in the seventh month of pregnancy, was a dissection showing the relations of the pelvic contents during the latter part of gestation, and especially the course of the ureter. Practicing the operation upon this and other cadavers, the author has found that the ureters do not follow the pelvic wall to a point near the ischial spine, as in the non-pregnant condition, but that, crossing the pelvic brim at the common iliac bifurcation, the left just behind, the right just in front of, that point, they descend into the canal to the brim of the bony pelvis, the point being about the synchondrosis. In this course they accompany the internal iliac artery, the right in front of the vessel, the left crossing it obliquely. Reaching the bony brim (the ilio-pectineal line), they leave the pelvic wall, emerging from beneath the base of the broad ligaments (in pregnancy about on a level with the pelvic brim, and carried back on a line with the synchondrosis), and take a course downward, forward, and somewhat inward, passing about midway between the pelvic wall and the cervico-vaginal junction, but approaching very closely the antero-lateral wall of the

vagina, as they turn more decidedly inward, on a lower plane, to strike the base of the bladder three-quarters of an inch below the cervix, terminating in the bladder at a point (the subject being on the back) just two inches below the spine of the pubes. A line drawn from the bifurcation of the common iliac to the spine of the pubes corresponds in the main to the line of the ureters. Along this line they have the following relations to the pelvic brim (in the recent state): At the bifurcation, half an inch below, at the extremities of the transverse diameter of the pelvis, about an inch; and at the spine of the pubes, two inches below. As a whole, the tubes in the pelvis are situated upon a higher plane than in the non-pregnant condition, having been carried slightly upward while being separated from their close relations with the pelvic wall by the ascending uterus. How far they may be elevated in a case of extreme pelvic deformity with a pendulous abdomen, and the uterus correspondingly displaced, the author is unable to say, but thinks it probable that, the bladder being empty and not dragged upward, thus preserving the normal position of the vesical end of the tubes, the displacement would not be such as to bring any part of them much above the points indicated.

Another matter which Dr. Polk took occasion to investigate was the ground of the objection to operating upon the left side. In view of the strong probability that the operation can be done on the same side but once, this, he remarks, is a very important question. He did the operation upon the left side, the vessels being injected with plaster and the rectum distended. He found that the rectum offered no such obstacle as is commonly supposed, and that the operation was as feasible upon one side as upon the other. After the operation the organ was carefully examined, and found in no way disturbed. In looking at its position this was readily accounted for; it lies behind the broad ligament. In entering and leaving the pelvic canal we cross the brim between the base of the broad ligament and the posterior surface of the bladder. This latter is about on a line with the ilio-pectineal eminence, while the former is as far back as the synchondrosis; here is ample space for manipulation and extraction.

The important structures that Dr. Polk regards as most likely to suffer are the vessels going to the uterus through the broad ligaments. These, by being stretched and dragged upon in extraction, might be torn if the sides of the incision were not carefully supported in cases requiring powerful traction.

SIMULTANEOUS TRACHELORRHAPHY AND PERINEORRHAPHY.

In a clinical contribution, published in the *New York Medical Journal*, for May, 1882, Dr. James B. Hunter, gives a number of cases of prolapsus uteri and of laceration of the cervix and perineum, remarking that extraordinary cases are sure to be fully described, while those of every-day occurrence are often passed over as of little consequence. In the belief that the latter possess some interest and value to many readers, he purposes to present, from time to time, sketches of a few cases as they occur in his service. In regard to the performance of Emmet's operation for laceration of the cervix and the operation for lacerated perineum, both at the same time, he states that several years ago he tried this method in a hospital patient, who could not remain long enough to have the operations done at the usual interval of two or three weeks. It suc-

ceeded so well that he has since done the double operation frequently, both in hospital and private practice, and has never had occasion to regret it. If, however, the laceration of the cervix is very extensive, or any condition exists that renders hemorrhage probable, he always does the operations separately. Sometimes, too, it is not desirable to keep the patient long under ether, in which case the operations should not be done at the same time. The disadvantages of the double operation are: that it is impossible to reach the cervix if it should be necessary, without sacrificing the new perineum; that the patient is longer under the influence of ether; and that the sutures can not be removed from the cervix so soon. The advantages are: that the patient takes ether only once, and that she and her friends are spared the preparation (always somewhat formidable in a private family) for two operations; that there is an economy in time, as she lies in bed no longer than if the operation on her perineum alone had been done; that a delicate patient suffers less fatigue, and is less emaciated, than she would be after having gone through two separate operations. He usually removes the sutures from the perineum on the eighth day, and those from the cervix two weeks later, though with care the latter may be safely taken out earlier; while, on the other hand, there is no objection to letting them remain a month if it is convenient to do so, as they cause no irritation or inconvenience if the twisted ends of the wire are properly bent over and out of the way. While, therefore, he does not recommend the double operation as a rule, he considers it entirely practicable in many cases, and often prefers to do it.

PROLONGED GESTATION.

In the May number of the *New York Medical Journal* Dr. Louis A. Rodenstein, of New York, reports four cases of prolonged gestation, and remarks that the number of cases cited upon undoubted authority by every writer on obstetrics, and the cases constantly reported as occurring under the personal observation of general practitioners, go to show that prolonged gestation is not a myth, and especially that it should not be explained away by questioning the virtue of the mother. How long the duration of the period of gestation can extend beyond the normal time is not yet determined, perhaps can not be determined, but that it may extend over two months is apparently settled. The same principle is involved, whether the uterus tolerates the presence of the child three days or one hundred and forty-five days (Professor Meigs' "Report") after the natural term of gestation has expired. He believes that, after the uterus has performed its physiological function of gestation for the natural term, it rests from the work of gestation proper. Why does it not, then, exercise the function of expulsion? That question he does not attempt to answer, but believes that after gestation has performed its proper and peculiar work the growth of the child is complete, and it thereafter lies dormant in the womb. Otherwise the child would grow to huge size, and its delivery in the natural way would be impossible; whereas in the cases cited the size of the child at the expiration of the period of prolonged gestation was normal.

THE PARASITIC NATURE OF TUBERCULAR CONSUMPTION.

Professor Tyndall has communicated to the *London Times* an account of results obtained by Dr. Koch, of

Berlin, in the investigation of the etiology of tubercular disease, as set forth by him in an address delivered, March 24, before the Physiological Society of Berlin.

It was the aim of Dr. Koch to determine the precise character of the contagium which previous experiments on inoculation and inhalation had proved to be capable of transferring and reproducing tubercular consumption.

In pursuing these investigations Dr. Koch subjected the diseased organs of a great number of men and animals to microscopic examination, and found in all cases, the tubercles infested with a minute, rod-shaped parasite, which, by means of a special dye, he differentiated from the surrounding tissue. It was, he says, in the highest degree impressive to observe in the center of the tubercle cell the minute organism which had created it. Transferring directly, by inoculation, the tuberculous matter from diseased animals to healthy ones, he in every instance reproduced the disease. To meet the objection that it was not the parasite itself, but some virus in which it was embedded in the diseased organ, that was the real contagium, he cultivated his *bacilli* artificially, for long periods of time, and through many successive generations. With a speck of matter, for example, from a tuberculous human lung, he infected a substance prepared, after much trial, by himself, with the view of affording nutriment to the parasite. Here he permitted it to grow and multiply. From this new generation he took a minute sample and infected therewith fresh nutritive matter, thus producing another brood. Generation after generation of *bacilli* were developed in this way without the intervention of disease. At the end of the process, which sometimes embraced successive cultivations, extending over half a year, the purified *bacilli* were introduced into the circulation of healthy animals of various kinds. In every case inoculation was followed by the reproduction and spread of the parasite and the generations of the original disease.

In the course of his experiments Dr. Koch determined the limits of temperature between which the tubercle bacillus can develop and multiply to be 86° Fah. and a maximum of 104°.

He concludes that, unlike the *bacillus anthracis* of splenic fever, which can flourish freely outside the animal body, in the temperate zone animal warmth is necessary for the propagation of the newly discovered organism. In a vast number of cases Dr. Koch has examined the matter expectorated from the lungs of persons affected with phthisis and found in it swarms of *bacilli*, while in matter expectorated from the lungs of persons not thus afflicted he has never found the organism. The expectorated matter in the former cases was highly infective, nor did drying destroy its virulence. Guinea-pigs infected with expectorated matter which had been kept dry for two, four, and eight weeks respectively were smitten with tubercular disease quite as virulent as that produced by fresh expectoration. Dr. Koch points to the grave danger of inhaling air in which particles of the dried sputa of consumptive patients mingle with dust of other kinds.

Commenting upon this important communication from Prof. Tyndall, the London *Times* points out the significant fact that though the experiments of Dr. Koch seem as yet to have been carried no further than to the repeated cultivation of the tubercle bacillus in its original virulence, they will speedily be followed, as a matter of course, by attempts at cultivation in diminished intensity. The evidence, even now, the *Times* continues, does not rest upon the labors of Dr. Koch

alone, for Prof. Klebs, five years ago, declared the infective property of tubercle to be due to the presence of a microphyte (practically a synonym for bacillus), and Dr. Schuller, of Greifswald, a resume of whose investigations was given by Mr. Simon to the International Medical Congress, has proved that the microphyte which characterizes tubercle characterizes, also, certain affections popularly called scrofulous, such as diseased joints and glands, and that inoculation from any of them, or with a fluid in which their microphyte has been cultivated, will infect with general tuberculosis. Dr. Schuller, according to the same authority, has also made proposals for the treatment of tubercle on the basis of its micro-parasitic origin, and has shown the successful results of such treatment upon animals which he has inoculated.

OOPHORECTOMY.

The subject of oophorectomy has now for a considerable time been before the profession, and, although it was so fully and fairly discussed at the recent International Congress in London, it will still require a long time before many points in connection with it, which are now *sub judice*, can be satisfactorily solved.

The three main points to consider are, its safety, its facility, and the selection of the cases suitable for its performance. First, its safety can now be said to be established. Without being able to draw a line above which its mortality would be considered high, and at or below which it would be considered normal, I do think the maximum mortality ought not to exceed 5 per cent. Dr. Robert Battey recently prepared a table of all the cases that he could obtain information of, and he found the mortality to be about 18 per cent. In my practice I have had forty complete cases, with a result that all have recovered from the operation, and I believe that nearly every one has been cured of the disorder for which the operation was undertaken.

Since it is a well established fact that increased experience in abdominal operations, perhaps more than any other branch of surgery, tends to increased success, there will always be, as it were, two kinds of mortality—a heavier mortality, the result of a general statistical record, including therein all operators, the less experienced and the experienced; and the lighter mortality of those surgeons who have had considerable experience, and who have been enabled by their special skill to reduce the death rate to its lowest limit.

Secondly, the facility of oophorectomy is a point requiring a few words. Some operators consider that it is both more difficult and more dangerous than ovariectomy. I myself, am of the opposite opinion; although, exceptionally, as all know, nothing may be more easy of performance than a certain case of ovariectomy.

As regards the special details of the operation itself, three different methods of reaching the ovaries have been recommended. (a.) The vaginal incision. The earlier cases were generally performed by this method, and most probably the high mortality spoken of above may be largely due to it. When we consider the unavoidable difficulties, and the liability to septic danger connected with this method, and also the ease of the abdominal method, the wonder is that it has not been discarded altogether. It is still practiced in America, and I believe also to some extent on the Continent. There is no case that could be done by the vaginal method that could not be more easily and safely done through the abdominal wall; and, certain-

ly ovaries that could not be removed by the abdominal incision, where everything is open to view and space is abundant, could not be removed through the vaginal roof where space for manipulation is necessarily very limited, and the sense of touch is alone our guide. In addition, in opening the vaginal roof there is a great danger of wounding the intestine.

(b.) The direct lateral incision, *i. e.*, an incision on each side of the abdominal wall over the corresponding ovary. This is not now practiced. It is more dangerous and troublesome than (c.), the median incision, which is the one usually practiced as being safe and simple.

It has been advised of late that the tubes should be removed in all cases where practicable, as a step more likely to secure the results desired from the operation than if they are left behind. I take it that the additional benefit of removing the tubes over and above that of only removing the ovary is, that it involves inserting the ligature more deeply down in the broad ligament, and so affecting the supply of blood to the uterus. Mr. Spencer Wells has recently endeavored to show that this result is obtained. I think it must be by the effect which is produced by the ligature of the ovarian artery; the uterine artery would be affected only indirectly, through its anastomosis, as it would be too far away to be caught by the ligature.

Thirdly, as to the selection of cases suitable for oophorectomy. Here we are confronted with considerable difficulty. In fact this is the point upon which there is the principal dispute and criticism between the advocates and the opponents of the operation. The combined experience of those who have been engaged in this special work has not up to the present, been able to define very exactly the limit and extent of its usefulness. Since it is an operation of election, time must elapse and results must be known, before we shall be able to say exactly what class of cases should, and what should not, be subject to it. Dr. Robert Battey, the originator of the operation, and by whose name it is sometimes called, gives a safe rule which is embodied in the three questions:—is this a grave case? Is it incurable by any of the resources of the art short of a change of life? Is it curable by the change of life? If all three of the questions can be answered affirmatively, the case is a proper one. If not, the operation is not to be justified. The question of the occurrence of menstruation after the removal of the ovaries is not yet quite cleared up. A few cases have been met with where it has continued after the operation: I believe that these are to be looked upon as quite exceptional, and that beyond the slight metro-taxis shortly after the operation, catamenia do not reappear. This is providing the tubes and the whole of the ovaries be removed. It may appear strange even to raise a doubt as to the whole of the ovary not being removed, but the mesovarium is sometimes so short as to be with difficulty ligatured, except deeply down in the abdominal cavity, and, when a ligature is applied, there is found to be so very little tissue on the distal side, that it is easy in one's anxiety to leave enough for safety, the knife or scissors may encroach on ovarian tissue; and when this happens the operation is *pro tanto* a failure, and that it does occur sometimes is I think likely. This being so it must affect the secondary result of the operation. I am very sorry that I have not preserved more accurate notes of my earlier cases, in reference to the question of subsequent menstruation. In them I was in the habit of removing the ovary alone, or the ovary and tube together, according as it was easier, or appeared more conveni-

ent, and I have met with few cases of the series where menstruation afterwards has been observed: but I am not able to identify them sufficiently for scientific accuracy. Of late, I have endeavored, in every case, to remove both ovary and tube, both to avoid menstruation and for more completely effecting the object in view for which the operation was undertaken. I have not seen, in one of the cases, any subsequent menstruation. It is therefore, only an impression, but a strong one, made upon my mind, that if both tube and ovary are removed, no menstruation will follow, but that it may be expected to do so if the ovary alone is removed, the tube being left behind.—*Thomas Savage, M.D., M. R. C. P., Lond., in Birmingham Med. Review.*

POST PARTUM HEMORRHAGE. By JOHN BASSETT, M. D., PROFESSOR OF MIDWIFERY IN QUEEN'S COLLEGE, BIRMINGHAM.

Understanding that the term uterine hæmostatics may be construed broadly, and as comprehending the consideration of the causes and prevention, as well as the treatment, of flooding after delivery, I venture to offer some remarks with the object of ascertaining, as far as may be, the cause which induce an unnatural loss of blood at near the time of delivery, and then of inquiring whether we have any means in our power of preventing such occurrences.

It is admitted by all obstetric writers that hemorrhage at the time of delivery is one of the most formidable of complications which beset the parturient woman, not only from its frequently having a fatal termination, but also from the great damage which it occasions to the general health, and the liability to the development of latent hereditary tendencies, which displays themselves under the debility occasioned by great losses of blood. Further, such cases are a cause of so much anxiety and perturbation to the accoucheur, that he requires to be armed with all the foreknowledge which a careful examination of the subject can furnish.

It is assumed that the loss of more than a limited amount of blood at the time of delivery is an unnatural circumstance, and one that brings any case in which it occurs within the domain of pathology.

Hemorrhage at or near the time of delivery may be roughly divided into four orders: first, those cases in which it occurs from an unusual situation of the placenta, secondly, those cases where it happens from lacerations and injuries to the uterus or placenta, or to the utero-placental vessels; thirdly, those cases in which it is brought about from certain circumstances which transpire during the progress of the labor and delivery; and, fourthly, those cases in which it is produced by constitutional states of the mother, such as diseased conditions of the liver and kidneys and other important viscera, but more especially by general anæmia, and more rarely by a too plethoric state of the system. It is no part of my present purpose to dwell upon other causes of hemorrhage, such as the association of pregnancy with fibrous tumors, or cancer, or obliquities of the uterus; nor shall I dwell upon the first two of the divisions which I have named. With reference to the third, I observe that a variety of circumstances transpire during the course of an otherwise natural labor which have a strong tendency to disturb the uniform and rhythmical action of the womb. The well-known influences of hope and fear are under daily observation; and, among other causes, are the tendency which exists in certain classes of society to administer alcoholic stimulants, whereby the force

and frequency of the circulation are greatly increased; the tendency which has existed, and does still exist, to help the labors by the use of the finger and the too frequent use of the ergot of rye; also, too rapid emptying of the uterus, from diminished power of resistance, or too rapid delivery by the forceps, or, on the contrary, undue delay in the use of the forceps. Errors in the management of the delivery of the child and of the placenta, are fruitful sources of hemorrhage, in not permitting the womb to expel the trunk of the child slowly; in not following the nates by the hand, so as to get the placenta detached at the same time that the child is expelled; in not allowing the womb a suitable interval of rest after the expulsion of the child; in pulling at the umbilical cord to ascertain if the placenta be detached; in forcibly extracting the placenta without the concurrent action of the uterus; in not dealing promptly with the placenta when it has become partially detached and the womb is being filled with blood; in not administering ergot of rye and opium, when their use is plainly indicated by the paralyzed or spasmodic state of the womb. These various causes are quoted as having a direct tendency to bring about an irregular and imperfect contraction of the womb, whereby hemorrhage is greatly promoted. In nearly all such cases, a spasmodic state of the womb has been established, in which one set of fibres is acting, perhaps, violently, whilst others are either passive or relaxed. Blood is poured out, which in its turn becomes a source of irritation to the interior of the uterus.

By far the largest number of cases of hemorrhage come in the fourth division which I have named, and arise from an altered state of the blood, which induces a weakened condition of the muscular fibre of the body. This may be due to visceral unsoundness, or to malassimation and defective nutrition. It is now well known that very frequently, during pregnancy, the blood undergoes chemical and physical changes which alter its vital relations. These changes vary in degree and kind in different cases; and if they are associated with defective secretion and excretion, a pathological state of a dangerous character may be established. In former days, these changes were always regarded as being of a plethoric order. Now we know, from an analysis of the blood, that during pregnancy it contains an excess of water; that the serum is deficient in albumen; that the red corpuscles are diminished in number; and that the fibrine and extractive matters are in excess. This is a condition which, in other words, is one of anæmia—a state which, according to my experience, is comparatively common in pregnancy, and one which is associated with those severe floodings which arise from imperfect and insufficient contraction of the womb after delivery. It is well known that in anæmia and chlorosis the muscular fibre of the body is in an incompetent condition, that the action of the heart is most irregular, either from its fibres being weak, or from the blood not imparting its natural physiological stimulus to the walls. It has been shown by Dr. Goodhart, in a paper read before the Hunterian Society, that anæmia may be a cause of heart disease, and that it produces fatty striation of the muscular fibres. I have met with three or four cases in which heart-disease has been established during a pregnancy which has been associated with anæmia; and I doubt not that, when the muscular fibres of the uterus come to be examined carefully and critically in those cases of hemorrhage which prove fatal, they will be found to be imperfectly organized, from defective nutrition, and that this,

with the altered vital properties of the blood, will be recognized as the principal factors in producing this form of uterine hemorrhage.

The second issue raised in this paper is, whether cases of uterine hemorrhage can be prevented? My reply to this is, that in very many instances they can: first, by avoiding unnecessary interference during the progress of the labor, by permitting the delivery to take place slowly, by following the uterus with the hand as it expels the nates, by using expression rather than traction for the removal of the placenta, and by the not too liberal use of the ergot of rye; secondly, in all those cases where, from previous knowledge, I have reason to expect flooding, or where, from a careful examination of the patient, I detect signs of imperfect nutrition and general debility, I adopt a tonic treatment, into which the administration of iron usually enters, with a carefully regulated diet, and suitable hygienic surroundings. By these means, the tone of the health is raised, the muscular fibre of the body is strengthened, and the nervous system is braced, so that nature is able to perform the task she has in hand in a satisfactory manner; in other words, I have for some years paid the strictest attention to the health of pregnant women, and have not the slightest hesitation in declaring that I have seen the greatest possible benefit result therefrom.—*Brit. Med. Jour.*

FORMULARY AND POINTS IN PRACTICE.

IN SLIGHT CASES OF GOUT.

- ℞ Vini colchici 3 1½
Magnes. carbonat. grs. 120
Spt. ammon. aromat. 33
Tr. hyoscyami. 34-6
Aque camphoræ ad. 38
M. Sig.—One-sixth part night and morning.

IN GOUT WITH HEAT AND DRYNESS OF THE SKIN.

- ℞ Vini colchici 32
Potass. chlorat. grs. 120
Liq. ammoniæ citrat. 320
Aque camphoræ 38
M. Sig.—One-sixth part three times a day.

IN THOSE CASES IN WHICH OPIUM IS NEEDED, BUT WHERE IT IS NOT WELL BORNE OWING TO ITS PRODUCING HEADACHE, SICKNESS, ETC., THE FOLLOWING WILL OFTEN WARD OFF THESE UNPLEASANT RESULTS.

- ℞ Ext. opii grs. 1-2
Capsici fructus. grs. 2
Ext. hyoscyami. grs. 4
Make into two pills, to be taken at bedtime.

IN TROUBLESOME COUGH.

- ℞ Syrupi scillat. aa 310
Syrupi rhædos. mm. 25
Aque laurocerasi. mm. 25
Tr. benzoini co. 33
Liq. morphinæ hydrochlorat. 31
Sig.—A small teaspoonful to be taken frequently.

VERY USEFUL IN THE URIC ACID DIATHESIS, IN ACUTE RHEUMATISM, ETC.

- ℞ Potass. bicarbonat. 5 ¼—½
Syrupi limonis. 31.
Aque ad. O 2.
Mix for the day's drink.

SALINE LEMONADE IN CHOLERAIC DIARRHŒA.

R Sodfi chloridi	grs. 200.
Potass. chlorat.....	grs. 240.
Sodæ tartrat.....	grs. 100.
Sodæ phosphat.....	grs. 50.
Succi limonis recentis.....	℥ 6.
Syr. limonis ad.....	℥ 14.
Aquæ.....	O 7.

M.—Sig. To be taken ad libitum iced or not as is most agreeable.

MEDICAL NOTES AND NEWS.

Dr. R. E. Van Giesen has stated to the Health Board that the vapor and exhalations from the cream of tartar works at Greenpoint-ave, and West-st., are extremely injurious to children suffering from diarrhœal diseases. Dreyfus, Aron & Co., owners of the works, have directed Winchester Britton to sue Dr. Van Giesen for \$50,000 unless he retracts. To this the physician replies that he cannot retract, and that while he does not covet a law suit, yet for the public good he is willing to make this a test case, to see if private citizens have any right to unpolluted air.

M. Pasteur—The new academician was born at Dole, in the Department of the Jura, in 1822. He entered the University at the age of eighteen as usher in the College of Besancon, and was admitted three years later a pupil of the Norman School. He was Doctor in 1847, Professor of Physics at the College of Dijon in 1848 and Professor of Chemistry in the Strasburg Faculty of Sciences in 1852; next Director of iSciences at the Normal School, Professor of Geology, Physics and Chemistry at the School of Fine Arts and Professor of Chemistry at the Sorbonne. M. Pasteur has received many marks of distinction for his labors. In 1852 he was elected a member of the Academy of Sciences in the section of Mineralogy. The Royal Society of London awarded him the Rumford medal in 1856 and the Copley medal in 1874. A prize of 10,000 florins was conferred on him by the Minister of Agriculture in Austria for his discoveries in the maladies of silkworms. A prize of 12,000f. was awarded to him in 1873 by the Societe d'Encouragement, and the Nation Assembly voted him in 1874 a life pension of 12,000f. The Emperor Napoleon made him a Senator on the 27th of July, 1870, but the decree was never promulgated. M. Pasteur has written many papers in the "Recueil des Savants Etrangers" and "Annales de Chimie et de Physique," and is the author of some important works on spontaneous generation. He has long suffered from paralysis of one of the hemispheres of the brain.

The Proper Time for Work.—The habit of writing and reading late in the day and far into the night, says *The Lancet*, "for the sake of quiet," is one of the most mischievous to which a man of mind can addict himself. The feeling of tranquility which comes over the busy and active man about 10.30 or 11 o'clock ought not to be regarded as an incentive to work. It is, in fact, the effect of the lowering of vitality consequent on the exhaustion of the physical sense. Nature wants and calls for physiological rest. Instead of complying with her reasonable demand, the

night-worker hails the "feeling" of mental quiescence, mistakes it for clearness and acuteness, and whips the jaded organism with the will until it goes on working. What is the result? Immediately, the accomplishment of a task fairly well, but not half so well as if it had been performed with the vigor of a refreshed brain working in health from proper sleep. Remotely, or later on, comes the penalty to be paid for unnatural exertion—that is, energy wrung from exhausted or weary nerve-centres under pressure. This penalty takes the form of "nervousness," perhaps sleeplessness, almost certainly some loss or depreciation of function in one or more of the great organs concerned in nutrition. To relieve these maladies—springing from this unexpected cause—the brain-worker very likely has recourse to the use of stimulants, possibly alcoholic, or it may be simply tea or coffee. The sequel need not be followed. Night work during student life and in after years is the fruitful cause of much unexplained, though by no means inexplicable, suffering, for which it is difficult, if not impossible, to find a remedy. Surely morning is the time for work, when the whole body is rested, the brain relieved from its tension, and mind power at its best.

The Care of the Eyes.—At the recent Sanitary Convention at Ann Arbor, Mich., Dr. C. J. Lundy, of Detroit, read a paper on "Hygiene in Relation to the Eye," which should have the widest circulation, especially among teachers and school officers. A fruitful shown to be the excessive strain upon the muscles and is source of eye troubles nerves of the eyes due to faulty educational methods, the ill-planned and insufficient lighting of school rooms, poor ink and fine print in school books, and other causes, which education might correct.

In conclusion, Dr. Lundy lays down the following rules for the better care of the eyes:

1. Avoid reading and study by poor light.
2. Light should come from the side, and not from the back or from the front.
3. Do not read or study while suffering great bodily fatigue or during recovery from illness.
4. Do not read while lying down.
5. Do not use the eyes too long at a time for near work, but give them occasional periods of rest.
6. Reading and study should be done systematically.
7. During study avoid the stooping position, or whatever tends to produce congestion of the head and face.
8. Select well-printed books.
9. Correct errors of refraction with proper glasses.
10. Avoid bad hygienic conditions and the use of alcohol and tobacco.
11. Take sufficient exercise in the open air.
12. Let the physical keep pace with the mental culture, for asthenopia is most usually observed in those who are lacking in physical development.

Reorganization of the Medical Staff of Bellevue Hospital.—At a meeting of the Commissioners of Public Charities and Correction held May 12th, it was resolved to reorganize the Medical Board of Bellevue Hospital. The new board will consist of 28 members, made up of seven representatives of each of the three colleges and of the profession at large. A new class, that of gynæcologists, has also been created. The board is to be divided into 12 visiting surgeons, 12 visiting physicians, and 4 physicians for gynæcology or diseases of children. Each of the medical

colleges named is invited to nominate as its representatives on the board, to be approved by the Commissioners of Charities and Correction, 3 physicians, 3 surgeons, and 1 physician for the department of gynecology. Whenever a vacancy occurs in the representation of any college it is to be filled by a candidate nominated by the college and appointed by the Commissioners, who will consider no nominations except from that college. The remaining provisions of the new plan are as follows:

The services of the hospital shall be divided as nearly as possible into four equal parts, which shall be assigned, one for each, to the four classes of visiting physicians and surgeons, the assignment to be made by lot or otherwise as the said classes may agree.

Each of the four classes represented in the Medical Board shall be entitled to elect one of its representatives as President of the board, to serve for one year, once in four years.

All committees of the Medical Board shall consist of four members each, each class represented in the Medical Board electing its own representative on such committees.

The Medical Board shall have no power to restrict or to interfere in any way with the clinical lectures in the hospital, and each college shall have the right to retain the honors for clinical lectures which it has used for the past year.

Each college represented in the Medical Board shall be entitled to nominate for appointment by the Commissioners of Public Charities and Correction, after competitive examination in such college, its proportion of members of the house staff of the hospital, such members to be attached to the division belonging to the college making such nominations.

The Commissioners of Public Charities and Correction will appoint, in addition to the college appointments, three physicians and three surgeons and one physician in gynecology or diseases of children who are not connected with either of the three colleges represented in the Medical Board. Vacancies in this class shall hereafter be filled from non-collegiate physicians and surgeons by the Commissioners or nominated by the Medical Board of the hospital.

Should any member of the non-collegiate class officially connect himself with any of the three colleges represented in the Medical Board, his position in the Medical Board of the hospital shall become vacant thereby.

The non-collegiate class shall be entitled to nominate for appointment by the Commissioners of Public Charities and Correction, after competitive examination by itself, its proportion of members to the house staff of the hospital, such members to be attached to the non-collegiate division of the hospital.

The present board is constituted as follows: Alonzo Clark, A. L. Loomis, Austin Flint, Jr., W. T. Lusk, E. G. Janeway, William Polk, W. H. Thomson, Francis Delafield, A. Jacobi, H. F. Walker, J. P. White, Lewis A. Sayre, Stephen Smith, J. W. S. Gouley, A. B. Mott, W. F. Fluhsen, C. McBurney, E. L. Keyes, C. Phelps, L. M. Yale, L. A. Stimson, and R. F. Weir. The members of the new Medical Board have already been selected by the various colleges and approved by the Commissioners of Charities and Correction. They are as follows:

BELLEVUE HOSPITAL MEDICAL COLLEGE.

Physicians—Austin F. Flint, Jr., E. G. Janeway, A. A. Smith.

Surgeons—E. L. Keyes, J. D. Bryant, F. L. Demis.
Gynecologist—W. T. Lusk.

UNIVERSITY MEDICAL COLLEGE.

Physicians—Alfred L. Loomis, William H. Thomson, F. R. S. Drake.

Surgeons—Stephen Smith, L. A. Stimson, J. Williston Wright.

Gynecologist—W. M. Polk.

COLLEGE OF PHYSICIANS AND SURGEONS.

Physicians—Alonzo Clark, F. Delafield, A. Jacobi.

Surgeons—R. F. Weir, C. McBurney, T. T. Sabin.

Gynecologist—G. L. Peabody.

NON-COLLEGIATE CLASS.

Physicians—James J. Williams, W. G. Wylie, H. F. Walker.

Surgeons—W. S. Gouley, William C. Hunter, Frederick Lange.

Gynecologist—Walter R. Gillette.

Drs. L. A. Sayre and A. B. Mott, of the present board, retire, but become members of the Consulting Board. Drs. Mason and Wood died recently, and Drs. White and Yale do not become members of the new board.

Dr. James R. Wood.—The faculty of the Bellevue Hospital Medical College, desirous of expressing and placing on record their sense of the calamity which has befallen them in the death of their beloved colleague, the late Professor James R. Wood, hereby adopt the following resolutions:

Resolved, That the name of Prof. Wood will ever be identified with our College as one of its founders, and to whose services it is greatly indebted for its prosperity and usefulness.

Resolved, That, in the death of our lamented colleague, the medical profession has lost an eminent and loyal member, the community a public-spirited citizen, students of medicine a faithful friend, and his colleagues one whose estimable qualities of mind and heart endeared him to them by the ties of a true brotherhood.

Resolved, That words are inadequate to express the sorrow of the faculty in the reflection that they will no longer, in this world, enjoy his genial companionship and profit by his wise counsels.

Resolved, That the faculty sympathize most deeply with the family of their late colleague in the bereavement with which it has pleased Divine Providence to afflict them.

ISAAC E. TAYLOR, M.D., President.

AUSTIN FLINT, JR., M.D., Secretary.

May 8, 1882.

Dr. Erskine Mason.—*Resolved*, By the faculty of the Bellevue Hospital Medical College, that in the untimely death of the late Prof. Erskine Mason they mourn the loss of a distinguished surgeon and teacher, cut off in the prime of life, having entered upon a brilliant career of honor and usefulness, and of a colleague whom they held in great respect and affectionate esteem.

Resolved, That the faculty tender to the widow of their late colleague and other members of his family, heartfelt sympathy in the irreparable loss which they have sustained.

ISAAC E. TAYLOR, M.D., President.

AUSTIN FLINT, JR., M.D., Secretary.

May 8, 1882.

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EDITORIAL.

It sounds rather extraordinary to hear medical educators like Prof. William H. Draper, of the College of Physicians and Surgeons, declare, as he did at the banquet of the Alumni Association the other evening, that the idea of demanding a higher standard of preliminary attainments for admission to a medical school is impracticable under existing circumstances. Young men cannot be prevented, he said, from wishing to enter the medical profession, nor is it practicable to exclude them from medical schools because their preparatory studies have not entitled them to the degree of A. B. He thinks the reformers are pursuing a will-o'-the-wisp in seeking to impose this condition upon medical colleges, and that the real advance that is desirable is a fuller and more thorough training in the colleges themselves—a longer term and more extensive didactic and clinical studies.—*N. Y. Times*, May 21, 1881.

Dr. Draper does not deny the utility of preliminary training; but he says it is impracticable to enforce this demand, and that the reformers are pursuing a "will-o'-the-wisp" in seeking to impose this upon the medical colleges. He suggests a more thorough course of medical instruction; but probably all of the colleges have for a long time been improving their means of instruction, and some have lengthened their terms. That the remedy does not lie in this direction is made plain by the fact that the number of graduates is steadily increasing; and we see no reason to suppose that the mass of those who graduate are any better qualified than they were 30 years ago. The same reason which renders the proposed rule, demanding pre-

liminary education, "impracticable," renders a more rigid final examination impracticable—namely, it will not pay.

Dr. Draper is one of our most distinguished physicians, a thorough scholar, and a very able teacher of clinical medicine. His opinions on this subject are therefore entitled to respect. He knows as well as anyone whether what is plainly desirable is "impracticable;" but why is it impracticable? To this question no possible reply can be given except that under such a rule in proprietary medical colleges, to which class the college with which he is connected, and all other medical colleges in this city belong, the number of students would be diminished, and teaching would be rendered less remunerative. No doubt this would be the effect; but is Prof. Draper willing to say that the interests of the colleges are to be considered, rather than the interests of the public.

Fortunately the supply of doctors is already much greater than the demand, and the consequence is that their services are given to the public at a rate which is far from being remunerative, and of which the poorest citizen has no cause to complain. If therefore so good a school as the College of Physicians and Surgeons were compelled to close its doors, and disband its faculty, the public would not be likely to suffer for some years to come. Certainly it would do no harm, except to the teachers, if the numerous well known shoddy factories closed their doors permanently.

What we need—and this ought hereafter to be stated plainly—is endowed medical colleges, and all the needed reforms will come almost as a matter of course.

On the occasion of the announcement of the death of our late distinguished citizen, Dr. James R. Wood, in the N. Y. Academy of Medicine, May 18th, the President, Prof. Fordyce Barker, spoke substantially as follows:

Dr. Wood had spent his life in devotion to his profession. He was not accustomed to write much, but he was in every sense a practical man; and this was shown quite as much in what he said as in what he did. If called upon to speak publicly to medical men he either declined to speak, or, as was most often the case, he related only his personal experience, which was always pertinent to the subject under consideration. His method of stating a case, and of declaring his opinions, was peculiarly effective. In illustration Professor Barker referred to the last occasion on which he took part in the discussions of the Academy. Dr. J. Marion Sims was to read a paper on "the treatment of gun-shot wounds of the abdomen, in relation to modern peritoneal surgery;" and Prof. Barker had invited Dr. Wood to take part in the ensuing discussion. At first Dr. Wood declined, on the ground that the discussion was likely to extend to the question of the treatment of the late President's wound, and he did not consider it proper to enter upon such a discussion at present. Dr. Wood was however present at the reading of the paper, and listened to the enthusiastic terms in which the distinguished gentleman, Dr. Sims, spoke of the application of peritoneal surgery, as practiced to-day by ovariologists and gynecologists, to the treatment of recent gun-shot wounds of the abdomen. There was no reference to the case of the President, except as Dr. Sims took occasion to say that this was plainly not a case, as the facts of the autopsy proved, for the application of the rules which he was advocating. His remarks were only intended to apply to those cases of gun-shot wounds in which the ball was lost in the peritoneal cavity.

At the close of Dr. Sims' remarks Dr. Wood arose and stated explicitly, and in a manner which gave to Prof. Barker new light upon the whole subject, his objections to Dr. Sims' views. His criticisms were made, however, in a pleasant, courteous and respectful manner.

Gynæcological experience, said Dr. Wood, could not properly be applied to the treatment of recent gun-shot wounds of the abdomen. In the removal of ovarian and other tumors of the abdomen the exact situation of the tumor was known; whilst in the case of a ball lodged in the same cavity, nothing could be known as to its location before the search was made. It could not be known even whether it was within or without the peritoneal cavity. (Such was the fact in the case of the President.—ED.) In a case of ovariectomy there could be some delay, and advantage could be taken of the period of time when the patient was in the best possible condition; while in the case of a recent gun-shot wound the incisions and explorations would have to be made when the patient was in the worst possible condition for such proceedings, namely, when the patient was laboring under shock, which is almost always present in the case of belly wounds; and when reaction had taken place it would be too late. The mischief would have been done.

Dr. Wood might have added that if, on prolonged search for the lost ball with the knife and hands, it should be found at last that the ball had indeed entered the cavity of the peritoneum; but that it had then passed out and buried itself in the muscles, the operator would in all probability have sacrificed his patient without even the grim satisfaction of having found the ball.

It is well that Dr. Wood, who had always the courage of his convictions, lived long enough to express publicly his disapprobation of the dangerous precepts sought to be inculcated by Dr. Sims; which opinions are all the more dangerous because to the careless reader they have a certain degree of speciousness; and because of the great and deserved reputation of Dr. Sims as a gynæcologist. He has, however, evidently gone out of the region of his special study and experience in this attempt to instruct surgeons as to the treatment of gun-shot wounds; and Prof. Barker has done a service to practical surgery by calling the attention of the Academy to those last public words of the great New York surgeon.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, MAY 18th, 1882.

The President, Dr. Fordyce Barker presided.

The minutes of the previous meeting were read and approved.

Drs. Detmold, Parker, Sayre, Barker and others paid a tribute to the virtues and many brilliant scientific and social qualities of the late Prof. James R. Wood.

The scientific speaker for the evening, Dr. H. J. Bigelow, of Boston, was introduced, and in an informal talk gave the Academy a most interesting description and explanation of lithotripsy and the instruments by which it was made practicable, from the earlier ones in use to those most highly perfected. Dr. Bigelow illustrated his remarks by sketches and the exhibition of the instruments described, showing the operation of

the crude evacuating tubes formerly in use, and that which was recently perfected and which was best adapted for removing calculous debris.

The following is a summary of Dr. Bigelow's remarks and the discussion subsequently elicited.

When your distinguished President was kind enough to ask me to make some remarks upon this subject I felt that it was an old one and that I could offer little of interest in relation to it. I felt however that it might be discussed with advantage in the light of the experience of New York surgeons. I can not forget that it was in New York that this subject first received distinct appreciation by practical experiment and in print. The subject is purely a surgical, I might almost say simply a mechanical, one. It deals with the operative surgery of lithotripsy. It has occurred to me that the pure mechanics of the subject made lithotripsy what it is, and there are one or two points in this connection I wish to exchange views about. More than any other subject in surgery this one deals with physics, with air, water, and solids. Any of the old instruments will break a stone, but it is important to determine which instrument will do this best.

After the exposition of Sir James Paget in London, 1878, it seemed as if no further progress could be made in this operation, and yet we do it better now-a-days. The whole subject is embraced in breaking the stone and getting it out through the urethra. When Civiale first began its practice he took half an hour to do the crushing, but gradually decreased this time to three minutes. The accident of inflammation is not due to the operation itself, but to the presence of fragments, not to instrumentation. The old difficulty in lithotripsy was to remove the fragments. It is a singular fact, and one that leads us to doubt everything, that the tolerance of the bladder was so long unsuspected. The object was to hold the urethra open to draw out the fragments. The catheter of the original Clover instrument was too small, only 20. The catheters of the new instrument are from 25 to 31, larger than this would be dangerous, smaller would be useless. The features of the new instrument are a large catheter in combination with efficient suction.

Dr. Bigelow preferred the straight to the curved catheter, as it could be more easily introduced. The tube should have a projecting lip and blunted orifice. If there be too great declivity of slant of orifice of tube it is likely to engage fragments. The next point is to obtain the fragments. All evacuators return $\frac{1}{3}$ to $\frac{1}{2}$ at each stroke. To obviate this valves and traps of various kinds have been devised. It is desirable to have the axis of the bulb in a line with the axis of the catheter. As to stand to hold the bulb I prefer it, others do not.

Dr. Bigelow said he wished specially to show the manner in which regurgitation took place through the evacuator. (This was exhibited to the Academy). He then continued: It is important to recognize the fact that all bladders are not of the same size or elasticity. When during the operation you get the sensation of a fish bite it means that you are not using enough water. (The instrument, finally settled down upon as the most perfect was next exhibited and its operation shown). Dr. Bigelow then discussed the question of the kind of lithotrite to be used, saying that he knew every operator would use the instrument he was partial to, but he would show the one he personally preferred as being best adapted to the easiest motion of the hand, namely, that of rotation. A lithotrite with sections at right angles would be theoretically best, but practically it had to be rounded to accommodate itself to the

urethra. In passing the instrument through the prostatic portion of the urethra it is slid through upon its heel.

Dr. Bigelow in conclusion alluded to the size of the instrument used, in this connection paying a tribute to Dr. Otis for having demonstrated the capacity and tolerance of the urethra.

In the discussion which followed Drs. Keyes, Weir, Otis, Sands, Gouley, and Detmold took part.

Dr. Keyes, after gracefully complimenting the speaker of the evening, alluded to the great contrast between old and new lithotripsy. He thought too much stress had been laid on the instruments, and too little on the method of operation. He did not think any operator had secured better results than Sir Henry Thompson who, without the use of the latest improvements in instruments had only 3 per cent. mortality. Dr. Keyes used the fenestrated instrument. He thought the straight tube better for the young subject, the curved for the old. He preferred small bulb with no stand. A small tube, no air and a good washer were the factors of a successful operation.

Dr. Weir spoke briefly in commendation of the perfection attained in the latest instrument, etc.

Dr. F. N. Otis said he wished to express his sense of personal obligation to Dr. Bigelow. He was in favor of Bigelow's operation in the majority of cases. A great deal had been said about the tolerance of the bladder and very little about that of the urethra. The tolerance of the bladder had been long ago demonstrated, the condition of the urethra was perhaps the most important fact for the surgeon to determine. The deaths following this operation had come from injury of the urethra, and it was in the highest degree important to look first to the urethra and if necessary prepare it for the operation. The surgeon should see to it that the orifice was sufficient and the canal behind it cleared from obstruction. He had seen rupture of the urethra occur at $3\frac{1}{2}$ inches down on the attempted passage of the instrument when proper care in preparing the urethra for operation had not been exercised.

After alluding to the progress made in the instruments for operation, Dr. Otis said what was wanted now was facility in operating. The surgeons who did not pretend to do this operation three or four times, but perhaps only once or twice a week, wanted to learn how to keep their hand in. In this connection he narrated the anecdote of Sir Henry Thompson which credits him with carrying his lithotrite and a bowlful of stones about with him in his carriage and practicing crushing to keep his hand in.

Dr. Sands said he was very happy to hear Dr. Bigelow's explanation of his method and his description of instruments. He thought it was time now for him to stop improving his instruments lest he ruin the instrument makers and the surgeons who tried to make and buy his improvements.

Drs. Sayre and Detmold spoke briefly, after which the Academy adjourned.

LECTURES.

CARDIAC HYPERTROPHY COMPLICATING GRAVES' DISEASE.

BY

J. M. DA COSTA, M.D.

This patient was admitted yesterday, and tells us that he is twenty-six years of age. According to his

own statement his family history is good. He denies specific disease. He has never had rheumatism or dropsy. During the war he was a drummer and was consequently exposed to great excitement. Since the war he has been a hard-working man. In the year 1877 he strained himself in lifting an unusually heavy weight, and about Christmas day of that year he first became conscious of some palpitation of his heart and of slight swelling of the front of his throat, soon afterwards his eyes grew prominent. The swelling, as you see, involves the entire thyroid gland but principally the right lobe. In April of the year 1878, his symptoms increased in severity, and dyspnoea began to trouble him. In the following July, while out in a sail boat in the river, the boat upset and he had to swim a great distance in order to reach the shore. This swimming so exhausted him that he has never felt strong or well since. In October last he had to give up work entirely and the tone of his voice began to change. Since he has stopped work his heart has not palpitated so much, and the swelling in his throat has, he thinks, decreased in amount. His appetite is good and his sight, as yet, unimpaired, although his eyes are so prominent. Let us examine the case carefully. The patient, we notice, is not anæmic; on the contrary is fairly well nourished. The color is good in his lips, gums and ears. His respirations this moment are as high as 40 to the minute, but this state of things is no doubt the result of a temporary flurry, for the resident physician tells me that in the wards the respirations average not higher than 28 to the minute. His heart is beating away at a great rate, thumping so as to move my hand as I place it over the heart. His pulse now is 120. In the wards it averages about 106 to the minute. When I examine the cardiac region more closely, I find this state of things present; the impulse is visible in three of the intercostal spaces. The apex beat of the heart is felt two inches to the outside of the nipple, and in the sixth interspace. This impulse is forcible as well as extended. Percussion dulness begins at the third rib and extends to the seventh rib, while the transverse dulness is marked from a point two inches outside of the left nipple, almost to the right of the sternum. There plainly exists here a very considerable amount of cardiac enlargement. If you want to have the measurements accurately, I will state that the transverse diameter of the cardiac dulness is six inches, the perpendicular diameter six inches and a quarter, and the oblique diameter eight and a half inches. Certainly the patient's heart is very much enlarged, and as the enlargement is mainly towards the left I should say that the left ventricle was the one chiefly affected. Let us study the heart sounds. The first sound is dull and heavy, and towards the apex is partially replaced by a systolic murmur which is short and not harsh. This murmur can be traced upwards, and disappears as we come to the left base. At the right base it is barely perceptible. The second sound of the heart is everywhere distinct. There are some other points to which I would like to call your attention. In the arteries of the neck I can hear the systolic murmur harsher and louder than over the heart itself. This aortic murmur is also perceptible very feebly in the radial artery and in the brachial artery at the bend of the arm. The swelling in the man's neck does not pulsate although it transmits to some extent the pulsation of the arteries lying beneath it. I will ask the patient to sit up and so complete the examination by stating that there is no disease of the lungs, and no enlargement of the spleen. There is no enlargement of the liver, and the resident physician

has examined the urine and found it to be entirely normal. You all know what is the matter with this patient—the palpitation, the enlargement of the heart, the swelling of the thyroid gland, and the protrusion of the eyes, all point unmistakably towards Graves' disease, or exophthalmic goitre. It is a case of exophthalmic goitre, and of which, if we may trust the history, the first symptoms were palpitation and swelling of the thyroid gland, the eyes not becoming prominent until a later stage, in which the swelling of the thyroid gland has now somewhat subsided but in which there is present a most obvious cardiac enlargement. What are we to do for the man? How are we to get rid of the dyspnoea of the swollen gland, of the prominent eyes? We can accomplish nothing until we succeed in controlling the action of the heart. The cardiac hypertrophy is the key to the case. The other symptoms are merely consequences of the disturbances of the heart, even if it is not their actual cause. With this end in view of controlling the action of the heart, I propose to put the patient on a very moderate diet. In fact, I wish to feed him almost exclusively upon milk, allowing him some oysters and an egg or two occasionally. He will not be allowed to drink any tea or coffee, or to take any stimulant of any kind. In other words, I propose putting him upon a bland diet, which shall nourish but not excite the heart. I shall also insist that the patient spend most of his time in bed; he may get up and change his position now and then, but otherwise the rest must be as absolute as that which we should enjoin in a case of aneurism. Now, as regards the remedies which we shall employ. For the purpose of controlling the action of the heart, I shall give the patient *veratrum viride*, gtt. j. of the fluid extract every three hours, diminishing or increasing the dose according to the effect produced. I shall give the *veratrum viride* in ginger syrup and water. In addition to this the man shall take thirty grains of the bromide of potassium every night before retiring. This for its quieting effect on his nervous system. I do not think that you will find any difficulty in understanding this treatment. Under its influence I think that we shall soon be able to note some decrease in the size of the heart. What can we do for the thyroid gland? Is iodine as applicable locally in this condition as it is in simple goitre? No, it does not do so much good. Ergot, administered hypodermically, would be of much more service to us, but I regard the unusual amount of cardiac hypertrophy here present as a decided counter-indication to the use of ergot. I shall, therefore, content myself with applying a bladder of ice over the man's throat several times daily, and keeping it on until it becomes inconvenient. This ice treatment will cause some shrinkage of the gland I believe. For the eyes, I shall do nothing but give an occasional saline purgative. Purgation relieves congestion, and is always followed by better vision. Now, you must not take for granted that what I have thus lined out is always my treatment of exophthalmic goitre. It is only my treatment where there is a large increase in the size of the heart, as in this case. In cases of Graves' disease attended with anæmia, iron is indicated—a long course of iron—but iron would be out of the question here. So, too, as regards the use of arsenic and of the continuous current to the neck. These do good in some cases, but are not indicated in this. I want to make some general remarks to you on the subject of the pathology, prognosis and treatment of Graves' disease, but as my time has expired, I shall

have to postpone what I have to say until I see you again.

* * * * *

This is the patient with Graves' disease whom I lectured upon last Saturday. His case is about as marked a one as we could well find. You can always recognize this disease at a glance from the prominent eyes, the enlargement of the thyroid gland, and the overaction of the heart. In addition to these symptoms there is often present considerable nervous disturbance—emotional tendencies. I do not know that any such exist here, though the man is evidently of a nervous temperament. Exophthalmic goitre or Graves' disease, is a condition with clearly recognized clinical symptoms, which is pre-eminently prevalent among women. Indeed I have met with practitioners who have never seen a case occurring in the male sex. My own experience does not allow me to go so far. I can state, however, that the vast majority of the cases which I have seen have been in women. No doubt the highly emotional nature of women has something to do with the greater prevalence of the disease among that sex. We very often find in women of an emotional nature some uterine, or ovarian irritation co-existent with the nervous tendency. A fair number of cases are on record where the disease has dated from some shock received. Fothergill tells us of a case where the disease developed in a lady as a consequence of a shock caused by hearing of the death of a near relative. The reason why I am trying to develop this part of the etiology of the disease is because I wish to make some remarks on its pathology. Is this disease one in which we possess a definite knowledge of the true initial lesion? In its immediate consequences, yes; in its remote consequences, no. The ultimate cause which starts the disease is unknown. Some relegate this ultimate cause to the sympathetic nervous system, holding the initial lesion to be one of the sympathetic ganglia of the neck. This they reason is the immediate cause of the cardiac disturbance and so of the other symptoms. This opinion would seem to gain some support from autopsies made, in which the ganglia of the neck were found to be enlarged, and to have undergone fibroid and fatty changes. These records are no doubt correct but there is always something behind which remains unexplained. Still adhering to the nervous origin of the malady, others have claimed that its ultimate cause consists in some disturbance of the sympathetic ganglia of the heart, which gives rise to the cardiac distress, but this is pure theory. We may conclude, I think, that the exact seat of the disease in the nervous system is unknown. As bearing upon the disorder of the vaso-motor system always present in exophthalmic goitre, Trousseau some years ago called attention to a symptom which is present in this case. You notice that, as I rub my nail across the patient's forehead I leave a permanent red band behind. This symptom is noticed in some diseases of the brain, and in those disorders of the vaso-motor system in which the capillary circulation is paralyzed, or disturbed. Trousseau laid great stress upon this symptom as a sign of the evident disturbance of the vaso-motor system present. I think that our investigations thus far have shown us that the pathology of this disease is exceedingly obscure, but that its clinical features can be clearly recognized. Turning then from the pathology, our knowledge of which is thus far purely theoretical, let us take up the clinical phenomena in order, and first the heart. Will you usually find the heart enlarged in cases of exophthalmic goitre—dilated hyper-

trophy as here, with no valvular disease? No, this is not the general rule. Generally the heart is at first simply disturbed functionally. This disturbance is nothing else than overaction. Then from the constant overaction we get gradually a moderate degree of hypertrophy. Such marked enlargement as we find here is very unusual, and represents a very far advanced stage of the cardiac enlargement. However started, the enlargement of the heart is always a consequence of its persistent overaction. Still in connection with this subject of the heart, what do the organic murmurs, occasionally found to be present, mean? They are simply inconstant murmurs and do not as a rule represent persistent valvular disease. In a certain number of cases these valvular murmurs do exist as incidents, but in most instances there is no valvular disease present. If there is any disease of the valves in any particular case, it has followed the dilated hypertrophy of the heart—some valve has become affected by the distortion of the heart. This brings us to the *thyroid gland*. The thyroid gland in this instance is a very typical one. It is not enlarged on both sides equally. This has also been my experience. Again, this gland is not painful. It is, however, subject to great variation in size—that is, it will swell up under the influence of any temporary excitement. The enlargement of the thyroid gland in exophthalmic goitre is usually not so great as is the case in simple goitre. The *eyes* are prominent because the vessels supplying the cushion of tissues on which the eyes rest are full of blood. Then, too, there has been no doubt an increased formation of fatty tissue behind the eye. The eyes sometimes protrude so much that the eyelids will not cover the eyes—they do not cover them completely in this case. As Von Graefe has pointed out, this protrusion of the eyeballs is frequently so great that it gives rise to conjunctivitis, keratitis, and ulcer of the cornea. Has an ophthalmoscopic examination thrown any new light on the subject in this instance? No; there is some fulness of the vessels at the root of the eye, but no disease of the optic nerve present. The clinical symptoms are all a direct consequence of the disturbance of the heart, and there is some obscure nervous lesion at the bottom of the disease. *Prognosis*.—I think that a large proportion of cases recover. I have seen a few permanent recoveries. In process of time the eyes and thyroid gland have gone down and the heart has only shown unusual activity under the spur of some excitement. The prognosis is always favorable when you see the case before it has gone to the extent of organic changes in the heart. When, as here, there is hypertrophy and enlargement the prognosis is not so favorable. Still we may, by careful treatment, reduce the enlargement, although we can never cure the case completely. *Treatment*.—We have to divide the cases into several classes. No one treatment will answer in all cases. Where there is anæmia present, iron should be administered, besides other remedies. Iron has been very much abused in the great number of cases of exophthalmic goitre. There is no anæmia here, and there is none in quite a number of cases of the disease. Iron must only be used in anæmic cases. Of other remedies I have derived the most decided advantage from the administration of digitalis and belladonna. I usually maintain my patient upon a course of these remedies alone or in combination when there is no marked cardiac enlargement. In this instance I am giving veratrum viride, because there is a large amount of cardiac enlargement present. I have found that veratrum viride gives better results than aconite. Digitalis is not applicable where the cardiac enlarge-

ment is extensive. This man is now taking grt.j of the fluid extract of veratrum viride thrice daily. Under its influence the heart has decreased in force and frequency. In addition to the veratrum viride or aconite, rest in bed is an all-important item of treatment. In this respect I treat the case just as I would a case of aneurism. What can we do for the enlargement of the neck? As I have already told you, we have been applying ice. Under this treatment the resident physician tells me that the neck decreased in circumference *one-quarter of an inch* during the first *forty-eight hours*. We will keep up the ice. The man's diet must be light, and he shall have an occasional purgative.

CLINICAL REMARKS ON PROLAPSE OF THE UTERUS, RECTOCELE AND CYSTOCELE—HEMORRHAGIC ENDOMETRITIS.

BY

PAUL F. MUNDE, M. D.

Clinical Lecturer on Diseases of Women, College of Physicians and Surgeons, Visiting Physician Maternity Hospital, Etc., Etc.

CASE I.—Patient was operated on for laceration of the cervix several weeks ago. The other operations which are required to be done are such as are necessary to keep up her prolapsed uterus, for which she sought treatment originally. She knew nothing about the lacerated cervix. I sewed it up in order not to put back and retain a uterus itself diseased, which would probably give trouble sooner or later and require a secondary operation. We see nothing now but simply a linear fissure instead of a lacerated, eroded mucous membrane. We have a uterus two and a half inches long, perfectly normal in size and shape, but not in position. This patient has a prolapse of the posterior wall of the vagina and rectum, together with anterior wall of vagina and bladder. These conditions are called respectively rectocele and cystocele. I shall probably have to perform two operations: To narrow the posterior wall first, and then the anterior wall. If I narrow only the anterior wall she will still have rectocele, and sooner or later the anterior wall will come down. You must get support from the posterior wall below. The perineum is not in itself a support to the uterus, nor perhaps the vagina. The perineum simply keeps up the vagina. If the vagina were still too large it would come down more or less after all, and draw down the uterus. It is the downward traction upon the uterus which causes displacement downwards. I must narrow the vagina, if it be too dilated, and then the uterus will be supported because there will be no more traction upon it. The uterus is, as it were, suspended in the pelvis by its ligaments, which are simply folds of peritoneum. These are supported again by cellular tissue. There are six ligaments which suspend the uterus; the round ligaments merely prevent the uterus from retroverting. We cannot restore the cellular tissue nor shorten the ligaments when once stretched. We must supply the want of support afforded to the vagina by the perineum below. In this way we must also restore the prolapse of the posterior wall by restoring the normal perineum.

I shall now perform perineorrhaphy, with its modification of narrowing the posterior wall of the vagina chiefly. Narrowing the anterior wall of the vagina is a very simple matter.

The old operation for lacerated perineum consisted simply in removing a strip of mucous membrane and skin from the outer margin, and was a very insufficient

and incomplete method compared to the present extensive inclusion of the posterior vaginal wall in the new perineum.

CASE II.—Hemorrhagic Endometritis.—This patient, gentlemen, has had hemorrhages for the past twelve years. I introduced Thomas' blunt wire curette and I gently drew it up and down in various directions and then removed it and with dressing forceps and piece of cotton wiped out the blood in the vagina. On examining the blood thus removed I found a number of little bodies of the size of a millet seed scattered through it, which I have no doubt are the cause of the hemorrhage. They are pathognomonic of the peculiar condition known as villous or polypous endometritis, or polypoid degeneration of the mucous membrane of the uterus, also called hemorrhagic endometritis. I then took a Sims' slide applicator, wrapped it with absorbent cotton, saturated the latter with iodine, and passed it up to the fundus uteri. • I made this application of iodine to act as a styptic and absorbent upon whatever hyperplastic mucous membrane might be present. Iodine is one of the best applications, as styptic and alterative, to the uterine mucous membrane. I left the cotton in the uterine cavity to increase the styptic effect, and also as a direct tampon by direct pressure against any hemorrhage that might result within the next six hours. I then removed it and found some trifling oozing, which is due to the shedding of the slight eschar formed by the iodine on the mucous membrane. I shall aim to prevent the return of these growths by applying the iodine once or twice a week for several weeks.

Now what is the cause of these little vegetations? Have the fibroid tumors which are also present in this case anything to do with the formation of the vegetations? Not directly except so far as fibroids increase the hyperæmia of the uterus and are likely to produce hyperplasia or enlargement of the mucous membrane, with an increase of development of its cellular and glandular elements and blood vessels. The increased development of blood vessels causes hemorrhage, and the hyperplasia of the glands causes increased discharge from the uterus, not bloody but mucous, hence catarrh of the endometrium. There may be very much the same condition in the cavity of the uterus as there is in a "granular ulcer of the leg."

I have curetted 150 or more cases of the kind without ever having had the slightest bad effects from this operation. The sharp curettes are more or less dangerous. I have seen a few cases of pelvic cellulitis following their use. The dull curette should always be used for diagnosis in every case where you can find no other cause for the menorrhagia or metrorrhagia. Acute and sub-acute inflammations of the parametrium are, however, contra-indications for curetting. Sarcoma of the cavity of the uterus is utterly incurable. Sarcoma of the cervix alone very seldom occurs. There are only two cases on record so far as I know.

ORIGINAL ARTICLES.

EMPYEMA WITH PERFORATION OF LUNG CURED BY FREE INCISION.

BY

L. M. GATES, M. D., Scranton, Pa.

In a late number of the "GAZETTE" were reported several cases of empyema treated by free incision un-

der antiseptic precautions. Lest it might be thought that the good results were due to the antiseptic method I will report a case equally severe with equally good results treated without any antiseptic precautions. With our advanced views as to disease and its tendency to subside regardless of the physician's remedies, cases are so rare in general practice when we can say with *certainty* that we have saved human life that this one seemed like an oasis in the desert.

August 30th, 1880, I was called for my opinion upon Charles L—, aged 10, of healthy German parentage, sick for seven months. The child was extremely emaciated and so weak that he could not be raised from the pillow. Pulse 140 and feeble, temperature 102°, stomach intolerant of food and diarrhœa. Breath short and cough troublesome, raising occasionally frothy mucus streaked with very fetid pus. He lay constantly on the right side, and any attempt to roll him over or raise him up produced violent coughing and dispnœa, making the breath so fetid no one could remain near.

Upon examination of chest found right side bulging, oedematous, and skin reddened. Dulness on percussion and breath sounds absent in lower part. Left side exaggerated breath sounds. From the parents I learned that the patient was at first taken with high fever, wild delirium and some cough, and was pronounced brain fever by the attending physician. In about four weeks he began to have violent fits of coughing, and at times would raise large quantities of fetid matter. Dr. S. attended case for three months and gave it up as hopeless. Two months later Dr. W. saw the boy and pronounced left lung all gone and no hope. At this time (two months later), the parents had given up all hope, and it was only after much urging that they permitted the attempt to save his life by an operation. To relieve stomach and bowel symptoms gave bismuth and pepsine, followed by small doses of quinine.

Sept. 2d.—Confirmed diagnosis of empyema by introducing hypodermic needle withdrawing thick fetid pus.

Sept. 3d.—Stomach retaining food, and bowels better. Aspirated, withdrawing nearly two pints of pus, the last part of which was mixed with air. This gave great temporary relief.

Sept. 9th.—General symptoms again becoming more severe, chest again filling. Drew off a pint of pus with aspirator in order to relieve symptoms and prepare patient for radical treatment.

Sept. 12th.—Free incision without anæsthetic, made just below and in front of angle of scapula, and drainage tube inserted. The cavity was not washed out. In a few days pus became sweet and healthy, and gradually diminished in quantity. Temperature became normal, appetite returned and diarrhœa ceased.

Sept. 25th.—Drainage tube came out the night before. Granulations quite filled the incision between the ribs, lung expanded and breath sounds heard at the base of lung. The tube was with difficulty replaced, only a few drops of serum coming from it. That night drainage tube was again expelled.

Sept. 27th.—Found patient dressed and sitting up, lung fully expanded and incision closed, breath sounds normal.

Although it was feared that the chest might refill, concluded not to replace tube. From this time, as from the time the incision was first made, he rapidly regained flesh and strength, and is to-day as healthy and rugged a boy as can be found.

The only antiseptic precautions used was that the

drainage tube was lubricated with carbolized oil. The wound was treated by simply laying cloths over the end of the drainage tube to absorb the matter as it came.

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK.

FROST BITE OF FEET—GANGRENE—AMPUTATION.

SERVICE OF

HENRY B. SANDS, M.D.,

J. F., æt 40. Native of England. Pedler, married, admitted to Hospital Dec. 30th. Patient exposed to cold this a. m. while intoxicated, and came to the Hospital with frost-bitten feet.

Admission.—Toes of left foot blue, cold and without capillary circulation. No pulsation in dorsalis pedis. Both feet swollen. Right foot less involved than left. P. 80. R. 16. T. 96.4°.

Treatment.—Ordered tr. capsicum and feet dressed with thymol. In p. m. symptoms of delirium tremens developed. Hot bottles and U. S. morphinæ sol. mxv. q ½ hour for 4 hours.

Dec. 31.—Left foot warm, covered with blebs, dark purple in color on dorsum and white on sole. Right toes swollen and warm. Blebs opened and dressing continued. P. 108. R. 24. T. 100.4°. Ordered opium pills and Knapp's tonic continued.

Jan. 1st.—Left foot lighter in color. Blush running up the leg. Foot covered with blebs. Vomiting. Ord. lot. pb. et opii to leg and acid muriat. dil. mx t.i.d.

Jan. 2nd.—Skin on left foot sloughing; large piece removed from sole of foot. Blush on leg increasing. Has nausea and anorexia. Ord. pepsin grs. x. before meals, and carbohc poultice.

Jan. 6th.—Sloughing of outer ⅔ of foot, the line of limitation running from base of great toe to external malleolus. Sloughing deeply above the ankle leaving skin intact about malleolus. Dressed with carbolized jute and rubber tissue.

Jan. 11th.—Sloughs removed. Foot granulating. Undermining of foot and leg up to middle ⅓ of leg, more marked on outer than inner aspects.

Jan. 18th.—Foot and leg up to middle ⅓ covered with granulations; has had no hemorrhage. Ord. lot. pb. et opii et oleum ricini in p. m.

Jan. 22nd.—Ether, dorsal decubitus, leg amputated in upper ⅓ by lateral skin flaps and circular cut. Lister precautions observed throughout. Patient recovered from ether well. P. 96. R. 20. T. 98.4°. Ord. spt. vini gal. 3 ij. q. hr.

Jan. 23rd.—Dressed under spray: doing nicely.

Jan. 30th.—Sutures and drainage removed. Some discharge and superficial ulcer.

Feb. 6th.—Dressed without Lister, wound almost healed.

April 21st.—Small ulcer exists at upper anterior part of wound. Probe leads down to exposed bone. Some fragments dead bone removed since last note. General condition good.

May 7th.—Discharged cured.

SELECTIONS FROM JOURNALS.

DIABETIC COMA.

There can be no doubt that the termination of diabetes by coma is by no means so uncommon as the

comparative novelty of the subject might lead us to suppose; while the suddenness of its onset, the obscurity of its principal phenomena, and the valuable contributions which have recently been made towards their elucidation, both from a clinical and a pathological point of view, continue to render it at the present day one of the most interesting subjects of medical inquiry. Its history may be very shortly told. Prout, Foster and others had described rapid and sudden deaths occurring in diabetes, especially after travelling. In 1874, Kussmaul described, for the first time, the clinical features of diabetic coma, and attributed it to intoxication by acetone, which had been discovered in the blood and urine of a diabetic patient by Petters so long ago as the year 1837, and regarded by him as the cause of death. Petter's observation was confirmed not long after by Kaulich; but from that time till the appearance of Kussmaul's paper, the subject attracted no attention. Kussmaul endeavored to support his hypothesis by experiments on animals by injecting acetone into the rectum, or under the skin, and observed that it produced intoxication, stupor, and slow respiration; but the quantity required to effect this was relatively large. He suggested that the long-continued production of acetone in the blood might induce a state of chronic poisoning, which in weak conditions of the nervous system might some time assume an acute form, just as chronic alcoholism in drunkards suddenly breaks out into delirium. But in several cases competent observers have found no acetone in the blood, and in others only faint traces; while Rupstein has maintained that free acetone does not exist in the blood, but is produced by the splitting up of ethyl-diacetic acid, thus:



Sodium Ethyl-
Diacetate. Water. Acetyne. Alcohol. Sodium Hydric
Carbonate.

One of the peculiarities of the urine in many cases of diabetic coma is the presence of a substance which gives a red coloration with ferric chloride, which so far resembles acetic ether, and does so furthermore by breaking up into acetone and alcohol. But, according to Quincke (*Berlin. Klin. Woch.*, January 5th, 1880), it differs from it by the facts that urine giving this reaction does not smell of acetic ether; it cannot be extracted from it by shaking with ether; and, if present in combination with something, this was found to be neither an alkali nor grape-sugar, nor any normal constituent of urine. Experiments on animals performed by Quincke showed that they died with marked dyspnoea, but the urine in only one instance gave a reaction with ferric chloride, and the breath never smelt of acetic ether; so that, apparently, it is rapidly destroyed in the body.

A. Deichmüller (Liebig's *Annalen*, Band ccix, p. 22) failed to obtain alcohol from forty litres of diabetic urine, and in a series of determinations found acetone present in quantity varying from .003 to .147 per cent. As the ferric chloride reaction points to the presence of a compound allied to ethyl-aceto-acetate, and as no alcohol was separable from the distillate, he concludes that the compound is free diacetic acid. Tollens (*Ibid.*, p. 30) confirms this, and adds that, when diabetic urine is shaken with ether, there is only a trace of the ferric chloride reaction with the ether extract; but when he added to the urine one-tenth of its volume of a one to one and one-half per cent. solution of ethyl-aceto-acetate, the latter was readily extracted by ether.

It seems, therefore, that there is still considerable

doubt as to the chemical nature of the compounds present; and Quincke is of opinion that the toxic phenomena are not always quite identical in character, or produced by one and the same substance.

In 1877, Dr. B. W. Foster read a paper on Acetonemia at the annual meeting of this Association at Manchester, in which he drew attention to the peculiar cream-like nature of the blood, which, under the microscope, was found to contain molecular material insoluble in ether; and having, in conjunction with Dr. Saundby observed that acetone breaks up the blood-corpuscles so as to produce a similar molecular condition, he suggested that the state of the blood was due to the action of the acetone, and the symptoms were the result of the destruction of the blood-corpuscles. Von Jaksch has published a similar case in which the blood-corpuscles were broken up, and the blood looked milky, although there was no fat present.

In 1879, the publication of a paper (*Edinburgh Medical Journal*, July, 1879), by the late Professor Sanders of Edinburgh and Dr. D. J. Hamilton, on a case of diabetic coma with milky blood, due to the presence of a large quantity of fat, and with fat embola in the pulmonary capillaries, opened a new line of inquiry by suggesting that the symptoms were caused by capillary embolisms of the brain and lungs.

Dr. Louis Star (*New York Medical Record*, May 1st, 1880), has described a case in which the blood was milky during life, giving rise to certain ophthalmoscopic appearances described by Dr. A. J. Heyl, and in whose lungs a few so-called fatty embola were found after death. But there was also croupous pneumonia, sufficient, in the author's opinion, to cause death.

Dr. Arthur Gamgee has published (*Physiological Chemistry*, vol. i, p. 169) the notes of a case of diabetic coma, under the care of Dr. William Roberts, in which the blood contained 13.45 parts of fat per thousand; but Dr. Dreschfeld was unable to find any embola in the lungs, kidneys, or brain. In a second case, which exhaled an intense etherial odor, and terminated by dyspnoea and coma, the blood was found to possess, after death, the acetone-like odor, and analysis showed it to contain only 1.88 parts of fat per thousand.

Dr. Frederick Taylor (*Guy's Hospital Reports*, vol. xxv, p. 158) says that the results of the examination of the viscera for fat embola in three cases of diabetic coma, with milky blood, were completely negative.

Dr. R. H. Fitz (*Boston Medical and Surgical Journal*, February 10th, 1881) has reported a case in which a few fatty embola were found in the lungs.

In one case, published by Dr. Marshall J. Brown, a collection of small white clots filled the pulmonary artery, and these, on microscopical examination, were reported to consist wholly of fat. This sort of pulmonary infarction is different from that suggested by Sanders and Hamilton. So far, there has been very little evidence to confirm their hypothesis. It seems certain that all cases of diabetic coma not milky blood; probably, also, all cases of milky blood are not due to the presence of fat; while there is strong evidence that, even when fat is present in large quantities, it does not always cause embola, and when it does so they appear to be neither more numerous nor better marked than may be seen in the lung of cases of fracture which have died without having presented any special symptoms.

Besides acetone and fat in the blood, excess of sugar, and alterations in the somatic relations of the blood and the tissues, have been assigned as causes of the morbid phenomena.

Ebstein (*Deutsches Arch v*, Band xxviii) has drawn

attention to the necrosis of the renal epithelium in diabetes, which he regards as by no means unfrequent, and as a cause of the retention in the blood of these poisonous substances (acetone, sugar, etc., which when accumulated in sufficient quantities, give rise to dangerous and fatal symptoms; but he admits that these products might be present in quantities too great for even healthy kidneys to excrete them.

Dr. Schmitz of Neuenahr (*Berliner Klin. Wochenschr.*, January 31st, 1876) has described fatty heart as an extremely common condition in diabetes, eighty out of one hundred patients presenting the objective signs of this condition, which is one that would favor the onset of the symptoms we are considering by tending to lower the blood-pressure and to impair the circulation in the brain, the lungs, and the kidneys.

Finally, Dr. Teschemacher of Neuenahr (*Berlin Klin. Woch.*, August 1st, 1881) has recorded a case of diabetic coma, and draws attention to the resemblance of its main features to those of traumatic shock, and suggests that the cause is to be found in some lesion of the sympathetic system. According to Goltz, shock is probably due to reflex paralysis of the vaso-motor nerves, especially the splanchnics, so that the blood accumulates in the great abdominal venous trunks, and leaves the peripheral vessels and other organs bloodless.

The symptoms present in diabetic coma have been sketched by Senator (*Ziemssen's Encyclop.*, vol. xvi, p. 916) in the following words. "Sometimes suddenly, without any premonition, sometimes after a first stage of agitation, with general uneasiness, oppression, anxiety, and pain in the region of the stomach, the patient becomes somnolent, moves about restlessly, generally groaning loudly. The pulse becomes frequent; the arterial tension is low; the breathing is hastened and deep, although there is no impediment in either the upper or the lower portions of the respiratory apparatus. The extremities become cool, and even the general temperature of the body falls below the natural, and finally death ensues amidst the deepest coma, sometimes after the supervention of twitchings."

Dr. Cyr (*Archives Gen. de Med.*, 1877, p. 601, and 1878, p. 31) says that coma is the final and most constant phenomenon, but is usually preceded by excitement and dyspnoea, more rarely by nausea and vomiting. The excitement is analogous to that seen in chloroform narcosis; the patient is a little incoherent, more vivacious than natural, and speaks rapidly; at the same time, he usually complains of *malaise*, and headache is occasionally present. This is followed by dyspnoea, which comes on generally suddenly and with violence; the inspirations are deep; both inspiration and expiration are prolonged, the air passes well into the lungs, but apparently does not oxygenate the blood. This stage may come on at once, without being preceded by excitement. The attacks of dyspnoea may recur several times, but finally the patient becomes less conscious of what is going on around him, and gradually sinks into coma, which becomes more and more profound until terminated by death. Here again, the coma may supervene suddenly, even during a period of apparent health. The length of time occupied by the stages above described has varied in the cases hitherto reported from ten or fifteen hours to three days or more, but the average has been about thirty-six hours.

Senator speaks of "twitchings" in the final stages of the coma; but at the time when Cyr wrote these had never been observed, and accordingly their absence

gave to the condition a negative character, distinguishing it, for example, from uræmia. Dr. F. Taylor says that nothing like a fit has been observed in any case at Guy's Hospital; but it is certain that convulsive phenomena are sometimes present.

The premonitory symptoms, when present, are: unusual weakness or exhaustion, loss of appetite, constipation, slight drowsiness, breathlessness, headache, sleeplessness, pain in the abdomen, epigastrium, and loins. Dr. Frederick Taylor lays especial stress on pain, usually at the epigastrium and violent in character, as an early indication of the supervention of coma. No fewer than sixteen out of his forty-three cases had this symptom of pain; and he points out that if an opiate be given to subdue it, the coma which supervenes may be wrongly attributed to the drug, either by the physician or by the patient's friends.

Professor Lepine has directed special attention (*Lyon Medical*, 1882, No. 10) to the rapid pulse as an important premonitory symptom, and states that experiments on animals with acetone or ethyl-diacetic ether cause very frequent pulse, slow respiration, and lowering of the body temperature.

Diabetic coma is undoubtedly more common in the young than in persons of more advanced age. Dr. Frederick Taylor shows that, while of all cases included in his statistics those under thirty form 45 per cent., they form 53½ per cent. of the fatal cases, and 69 per cent. of those dying from coma. It is liable to come on at any period of the disease; but the more rapid cases—those terminating under a year—generally die of coma; and, conversely, the majority of those dying of coma are cases which have existed for less than twelve months.

Treatment, or its absence, seems to have no distinct influence upon the occurrence of this mode of death. Constipation appears, with good reason, to be thought to have something to do with it. Teschemacher's case, for instance, was constipated for five days before the outbreak of excitement amounting to mania, which preceded the fatal coma. There is a very general consensus of opinion as to the direct effects of bodily fatigue in bringing about this condition. A diabetic patient, as Prout said, lives on the brink of a precipice; and a journey to London to consult a physician, or a journey to a foreign bath in search of health, or even the more every day occurrences of hurrying to catch a train, to escape from a shower, or too long a walk, have been followed immediately by fatal coma.

Dr. Gamgee has described a case in which recovery took place temporarily, though the symptoms returned some time after; and probably no condition can be attended by a more grave prognosis. So far, treatment seems to have been very unsuccessful. At Guy's Hospital, stimulants, either internally or subcutaneously, and the intravenous injection of saline fluids, have been attended with no encouraging success. Dr. Foster has suggested the administration of thymol or some other antiseptic, to check the formation of acetone. The indications seems to be to relieve the constipation freely and as rapidly as possible, and to give diluents and stimulants by the mouth or veins.—*Brit. Med. Jour.*

CASES OF ANTISEPTIC LIGATURE OF ARTERIAL TRUNKS IN THEIR CONTINUITY.

Dr. Hector C. Cameron, of Glasgow, read notes of all the cases of antiseptic ligature of arteries in their continuity in which he had performed such an operation, whether for aneurism or for accidental wound.

The material employed was antiseptic catgut (prepared by one or other of the methods suggested by Mr. Lister), of medium size, and tied in a reef-knot with sufficient tightness to ensure division of the internal and middle coats of the vessel. Very accurate coaptation of the cutaneous margins of the wound was practised by stiches of carbolized silk or silk-worm gut, with an occasional stitch of thick silver wire for purposes of relaxation where that seemed desirable. Free drainage was effected by means of India-rubber drainage-tubes in all the cases except one, in which a number of strands of carbolized catgut were employed. The operations, as well as the subsequent dressings, were conducted with rigid antiseptic precautions. The first case was one of traumatic aneurism of the brachial artery. A laborer, aged 38, in good general health, had a large aneurism of the lower and inner part of the left arm. About six months before he had been struck by a riveting-hammer in that situation. The brachial artery was tied with carbolized catgut in the first part of its course. In ten days the wound was sound, having furnished throughout only a slight sero-sanguineous discharge, and having been free from any pain or swelling. In the following winter, he suffered from a limited mortification of one or two toes, from which he also made a good recovery. His arm, he said, was as strong and useful as ever. The second case was one of large diffuse popliteal aneurism. An old soldier, aged 44, had a large popliteal aneurism, extending as high as the junction of the lower with the middle third of the thigh on its inner side. A month before he noticed a small pulsating tumor at the back of the knee, which he felt suddenly give way six days before treatment, while he was at work. On examining the part, he found that the swelling had greatly increased, while the pain became so severe as to make him discontinue work. From that date the tumor had steadily increased in bulk. Pulsation could be distinctly seen and felt in it, and was controlled by compression of the femoral. There was some oedema of the foot and leg. The femoral artery was ligatured at the apex of Scarpa's triangle with carbolized catgut. On the second day afterwards, the drainage-tube was removed. On the tenth day the wound was soundly healed. The tumor decreased in size very slowly, and he was not dismissed for two months. The discharge from the wound was, throughout its healing, serous in character, and there was no constitutional disturbance, except a slight rise in temperature during the first few days after the operation. Two months afterwards he returned to show that the last traces of the tumor had disappeared, and to report himself as being in excellent health. The third case was one of popliteal aneurism. Mr. H., a commercial traveler, aged 32, had an aneurism, about the size of an orange, which occupied the right ham. It was said to be distinctly increasing, and occasioned much uneasiness in the limb. He had always been a robust man, but was unusually corpulent. Dr. Cameron tied the femoral artery at the apex of Scarpa's triangle with antiseptic catgut, when all pulsation ceased in the tumor. At the third dressing, on the eighth day, the wound was found firmly healed, except where the drainage tube had lain; and in a few days this spot was also cicatrized. The temperature was normal throughout, and the patient's general health undisturbed. When he returned home (eighteen days after the operation), the aneurism was much reduced in size. He was now quite well, and attended to business without inconvenience. The fourth case was one of femoral aneurism. T. L., aged 43, had an aneurism of the femoral artery just

under Poupart's ligament, extending both above and below that structure. He was a janitor of a boys' school, but had been for many years in the navy. He had once been laid up by an attack of jaundice, and had suffered from syphilis in youth. Eight months previously, he first noticed a pulsating tumor, about the size of a marble, in the groin, which gradually increased. Dr. Cameron tied the external iliac artery with a piece of antiseptic catgut given to him by Mr. Lister, and which had been prepared by a method described by him in the *Lancet* of Feb. 5th, 1881, both chromic acid and carbolic acid being used. The patient progressed without any fever or pain in the wound. The wound was healed throughout, except where the little piece of drainage-tube lay. The aneurism became firmly consolidated, and underwent a marked decrease in size. In a week afterwards, on removal of the dressing, cicatrization was found to be complete; and, on the thirty-third day, he was allowed to leave his bed. Ten days afterwards, he returned home. He lately consulted Dr. Cameron on account of a slight tendency to the formation of a hernia at the outer end of the cicatrix, for which the use of a truss was recommended. All trace of the aneurism was gone, and he was in excellent health. The fifth case was one of aneurism of the arch of the aorta and innominate artery, for which Dr. Cameron performed simultaneous ligation of the right subclavian and carotid arteries. Mrs. W., a widow without family, aged 57, had a pulsating tumor just above the right sterno-clavicular articulation. Dr. Finlayson, at the Western Infirmary, saw and examined her on March 22nd, and had furnished the following note of her case: "There was a very distinct pulsating tumor, involving apparently the innominate artery. It could be felt as a movable tumor, sliding, to some extent, behind the sterno-mastoid on being handled. Pulsation continuous with it extended into the sternal notch, and in that position had a heaving character. An obscure shock, coincident with the second sound of the heart, could be felt in the upper part of the sternum and contiguous part of the chest-wall, but no heaving impulse. On auscultation, the most prominent fact was the greatly deepened quality of the second sound, but no murmur was audible in any part of the chest. There was a pronounced area of dulness, extending from the right sterno-clavicular region towards the cardiac dulness, and measuring about two inches transversely. There did not appear to be any marked cardiac hypertrophy. The radial pulses were as nearly as possible equal, and there was no difference in the size of the pupils. No pressure-signs were recognizable, and the patient did not appear to suffer much inconvenience from the disease. The signs seemed to indicate clearly an aneurism of the arch of the aorta of considerable size, and specially involving the innominate artery." On March 24th, Dr. Cameron tied the right subclavian and carotid arteries with antiseptic catgut given to him by Mr. Lister. It had been prepared by immersion in a one per cent. solution of chromic acid for twelve hours, and afterwards for twelve hours in the solution of sulphurous acid of the *British Pharmacopæia*. Both ligatures were placed in a watery solution of carbolic acid (1 to 20) for about half an hour before being used. The wounds were dressed four times (on March 26th, 29th, April 2d and 5th), and on the removal of the last applied dressing, on April 12th, were found to be healed. There was no constitutional nor local disturbance, the temperature continuing normal throughout. On April 12th, Dr. Finlayson again examined her, and reported

as follows: "The incisions are healed. The defined tumor described as existing behind the sterno-mastoid muscle cannot be recognized; but there is marked pulsation in this situation, and the pulsation extends towards the sternal notch in a very pronounced manner, and is associated with much heaving there. Indeed, the heaving pulsation at this point seems to me to be more marked than before the operation, although the whole pulsating area is, no doubt, less. The dulness on percussion in the upper part of the chest, the deepened second sound, and the sense of shock on application of the hand, still continue very distinct. The radial and temporal arteries do not pulsate on the right side." In these five instances of aneurismal disease, six large arteries were ligatured. In each, complete and permanent occlusion of the vessel was obtained without any constitutional or local disturbance, without any rise of temperature (if the case of different popliteal aneurism during the first six days be excepted), and without the formation of a single drop of pus. In each case, the last dressing was applied respectively on the fourteenth, tenth, eighth, eleventh, and twelfth days after the operation; and in each, on the removal of that dressing, the wound was discovered to be thoroughly sound. On similar principles, the radial artery was ligatured four times, the ulnar artery twice, and the popliteal artery once, with equally satisfactory results. In the last case, however, the anterior part of the foot lost its vitality, and ultimately required amputation. The vein, as well as the artery, was injured, by the wounding instrument.—*Brit. Med. Jour.*

SUGGESTIONS FOR THE TREATMENT OF SPECIAL CASES OF EMPYEMA BY THORACENTESIS AND THE SIMULTANEOUS INJECTION OF PURIFIED AIR. BY ROBERT W. PARKER, M. R. C. S. ENG.

The author commenced his paper with the record of a case of empyema in a child aged $3\frac{3}{4}$ years, who had been in the East London Children's Hospital under the care of Dr. H. Donkin. The physical signs pointed with great clearness to a very large effusion; but, on attempting aspiration, only four ounces could be withdrawn. A few days later, a further attempt was made, and with no better result, although the chest-wall was punctured in two or three places. Finally, a free incision was made, when between forty and fifty ounces of fluid were removed. The child ultimately recovered with hardly any deformity, although she had an attack of small-pox while the empyema was still discharging. The mechanism of tapping was then referred to. It was *vis à tergo* which expelled the fluid, rather than *vis à fronte*. Either the lung re-expanded, or the diaphragm rose, or the chest-wall fell in. There were cases, however, in which, owing to rigidity of the chest-wall and binding down of the lung, this expulsive force was reduced to a minimum, and additional means became necessary in order to empty the abscess-cavity. Dr. Bouchut of Paris had published a case similar to Mr. Parker's, and had proposed to forcibly expand the lung through a tube introduced into the bronchus. Instead of this somewhat heroic treatment, it was suggested that filtered and carbolized air should be introduced into the pleural cavity in order to displace the fluid. A suitable apparatus for this purpose was shown, and its mode of use demonstrated. At the completion of the operation, the air in the empyema-cavity ought to be somewhat

less dense than the external air, so that the lung might be in a position to re-expand from the first; while the gradual absorption of the air would keep up that advantage during the period of cure. It was contended also that the presence of air in the chest under such circumstances, by supporting the vessels, would tend to hinder the reaccumulation of fluid, which a condition of vacuum, as under ordinary circumstances, would rather tend to promote. A case under the care of Dr. Symes Thompson at the Brompton Hospital, in which this plan of treatment was successful, was referred to. Cases also were mentioned in which there had been difficulty in withdrawing the fluid, depending on other causes; and particular stress was laid on them, for in such cases the injection of air into the pleural cavity would not suffice to overcome the difficulty. The author pointed out that his plan of treatment was adapted chiefly for those cases in which the difficulty of removing the fluid depended on rigidity of the wall of the cavity. This condition was most likely to occur in adults, although the case mentioned at the commencement of the paper was a typical one, occurring in a young child. He recommended its trial before free incision, which was a somewhat severe measure was adopted. Symes Thompson said that, in the case under his care which had been mentioned, the results were very satisfactory. The removal of the fluid and the introduction of air were unattended with any discomfort to the patient. He thought that, instead of making a double opening, air might be admitted by the same passage as that by which the fluid escaped. The method proposed by Mr. Parker seemed to be suitable for cases in which the chest-walls were inelastic. It would probably be of advantage where the fluid was serous; but, in cases of purulent effusion, he believed that a free incision was preferable, so as to remove the fluid as quickly and as completely as possible. Mr. Marshall had advised the making of the opening at a point anteriorly, where spontaneous discharge generally took place; and had pointed out that it was undesirable to make the puncture far back, where the diaphragm could close the wound. Dr. Thompson thought a middle course best, the puncture being made neither far back nor far forward.—Dr. Douglas Powell thought that the case operated on by Mr. Parker at the Brompton Hospital was peculiarly adapted to the proceeding. Dr. Hicks, the resident medical officer at the hospital, had done an analogous operation in another case, in which the fluid could not escape in consequence of the lung being diseased and incapable of expansion. It was a question whether the same object might not be gained by opening the chest-wall under the carbolized spray. He thought that there must be some fallacy in Mr. Parker's case, as to the reason why the fluid did not escape from the pleura. He had seen a case in which fluid was retained after tapping, probably in consequence of some layers of fibrinous exudation not being cut into at the same level as the external wound, and therefore closing it. In his case there was a sudden escape of fluid from the wound during the night, probably from softening and removal of a flake of lymph. He thought that it was not desirable to remove all the fluid in case of serous effusion; it gave rest to the pleural surfaces. In purulent effusion, free incision and rapid removal was the best plan.—Dr. Reginald Thompson thought that Mr. Parker's cases did not support the value of his suggestions.—Dr. Coupland thought Mr. Parker's proposal of some value. It would have been useful in a case of pleuritic effusion in the Middlesex Hospital, in which the lung was bound down by adhe-

sions; in this case, the fluid became purulent, and the patient died.—Dr. Warner thought Mr. Parker's method useful. When free entrance and exit of air was allowed, rest was given to the lung.—Dr. F. J. Hicks had introduced air into the pleura in a case of chronic pleuritic effusion at the Brompton Hospital; the effusion returned, but in smaller quantity. In another case, of acute empyema, air was introduced alternately with the withdrawal of the fluid. In a third case, air was introduced with success, to prevent dragging and rupture of the lung; here also the air was admitted alternately with the withdrawal of the pus, and the pleura was afterwards washed out with Condy's fluid. This was necessary, as, by the admission of air, the mechanism was altered, so that the whole of the fluid could not escape. He showed an apparatus which he used for the purpose. The introduction of air undoubtedly prevented the cough which followed the operation for the removal of fluid; but the same effect might be produced by applying an elastic bandage around the lower part of the chest.—The President could not understand that escape of fluid from the pleura was entirely prevented by rigidity of the chest-walls; the abdominal viscera might push up the diaphragm, and the other lung might expand. He thought that experience showed that air was absorbed very rapidly. A fluid might be used for injection; some one had recommended oil for that purpose. More extended observations were required as to the utility of Mr. Parker's suggestions in cases of rigidity of the chest-walls.—Mr. Parker said that free incision was an efficient means of treating abscess-cavities in general; but in some cases in children it was not sufficient. In certain cases of serous effusion, the fluid again collected, and the patients lived for some time in that condition. It was, however, perhaps easier to carry air in the pleura than fluid; and he thought that, probably, air was not very quickly absorbed. Empyematous cavities ought to be treated like ordinary abscesses.—*Brit. Med. Jour.*

FORMULARY AND POINTS IN PRACTICE.

TO BE TAKEN OCCASIONALLY WHEN THERE ARE PAR-
OXYSM OF PAIN FROM STRUCTURAL DISEASE.

R	Spiritus ætheris.....	min. 40—	3 i
	Ext. opii liq.....	min. 10—	15
	Tinct. castorei.....		3
	Aquæ menth. pip. ad.....		3 12.
	Make a draught.		

IN GREAT OPPRESSION FROM FLATULENCE.

R	Spiritus ætheris.....		
	Spiritus chloroformi.....	a a	3 3
	Tr. card. co.....		3 6
	Spts. myristicæ.....	3 2	
	Olei carui.....	min. 12	
	Mucilag. tragacanthæ.....	3 3	
	Aquæ menth. piperitæ.....	ad	3 8

M. Sig.—Two or three tablespoonfuls as required.

IN SPASMODIC DISEASES, ANGINA PECTORIS, ETC.

R	Spiritus ætheris.....	min. 90
	Spiritus ammon. aromat.....	3 2
	Tr. belladonnæ.....	min. 30
	Tr. cantharides.....	min. 80
	Tr. chloroform co.....	min. 40
	Aquæ camphoræ ad.....	3 4

M. Sig.—Two tablespoonfuls every half hour until the pain is relieved.

A VALUABLE ASTRINGENT IN DIARRHŒA.

- ℞ Tinct. rhei..... 3 3
 Infus. crameriæ 5 8

Make a mixture and order one-sixth part to be taken every six or eight hours.

IN HÆMATURIA, PASSIVE INTESTINAL HEMORRHAGE, ETC., ETC.

- ℞ Ext. krameriæ.....gss. 20
 Aquæ..... 12

Make a draught. To be taken three times a day.

EFFICACIOUS IN CHECKING SIMPLE DIARRHŒA.

- ℞ Tinct. catechu..... 3 3—6
 Pulv. cretæ aromat.....gss. 90
 Olei menth. piperitæ.....min. 6
 Ext. opii liquid.....min. 30
 Mist. cretæad 5 8

M. Sig.—One sixth part after every relaxed motion. In some instances half an ounce of castor oil should be given four hours before commencing this mixture, or

- ℞ Tinct. catechu..... 1 1
 Acid. sulph. aromat.....min. 15
 Olei menth. piperitæ.....min. 1
 Infus. catechu..... 1 1

M. Sig.—To be taken 3 or 4 times a day.

CORRESPONDENCE.

NEW YORK, May 16, 1882.

Editor MEDICAL GAZETTE:

MY DEAR SIR:—In your report of my County Society paper on obliquity of the pelvis, in the April 15th issue of the GAZETTE, your reporter has erred in saying that I insist upon the necessity of recognizing this distortion as a primary condition and treating it as such. By reference to the paper itself,—it will be seen that I distinctly state the curvature to be *always* secondary—and that it can only be considered primary in the sense that clubfoot or lateral rotary curvature are sometimes considered primary—although they are really always secondary to muscular inefficiency or other changes.

The paper was written to draw the attention of the profession to means which might be adopted to relieve some of the cases of limping, notably that of sacro-lumbar curvature, which are so abundant and for whose improvement so little is attempted; to classify the various limps under their appropriate conditions, and to define the uses and abuses of the high soled shoe, which is so useful when rightly employed and so injurious when wrong. The points which were brought out in the discussion which followed were the least important contained in the paper and do not tend to place the paper in its proper relation to the profession.

Hoping that you will do me the favor to print this correction,

I am, Very truly yours,
 CHAS. F. STILLMAN, M.D.

MEDICAL NEWS AND NOTES.

Researches on Deaf-Mutism.—A discussion has lately taken place as to whether deaf-mutes taught to speak do so with the accent of their native district. M.

Hemet affirmed this in the French Academy, from personal observation, and noted the interesting nature of the fact (as he thinks it) of dialectal accent being hereditary. Mr. Axon has supported this view by other recorded cases, one being in an old number of the *Philosophical Transactions*—a congenital deaf-mute, who, when a young man, gradually acquired hearing and speech after a second attack of fever, and spoke with Highland accent; another, the case of pupils in deaf and dumb schools in Spain, observed by Ticknor to speak with distinct provincial accents; a third that of a deaf mute taught by Mr. Alley of Manchester, and found to speak with the Stafford dialect. On the other hand, M. Blanchard noted the harsh and disagreeable nature of deaf-mutes' speech, and thought their pronunciation had not the quality of accent. Professor Graham Bell says that in America this faulty utterance has been quite overcome; but, having examined the speech of at least 400 deaf-mutes, he has never remarked any such tendency as M. Hemet affirms. In a few cases dialectal pronunciations were heard, but it always turned out that such children could talk before they became deaf. Prof. Bell (in *Nature*, March 2) criticises the cases adduced. In that of the young Highlander there was probably imitation of heard speech. A large proportion of deaf-mutes, it is now known, have been able to hear in infancy, and many to speak, so it was an erroneous assumption of Ticknor that the pupils could never have heard a human sound. The youth taught by Mr. Alley became deaf at a very early age, but it is not said what age. M. Hemet's data are also pronounced defective. M. Hemet, further, has said he is unable to conceive how, in losing the use of speech, deaf-mutes should retain the unconscious memory of accent. Mr. F. I. Faraday (*Nature*) finds this conceivable as due to automatic activity of brain-tissue, and he cites a case in which a man, becoming deaf in one ear through typhoid fever, often seemed to hear with that ear entire sentences which had not been spoken. Turning from this, we note an interesting recent observation by Dr. Boucheron with regard to several cases of deaf-mutism in children, with accompanying giddiness, difficulty in walking, nervous cries, etc., which were treated successfully by a new method. Supposing that those troubles might be due to a compression of the acoustic nerve and the nerves of the semi-circular canals (which are known to be closely concerned with bodily equilibrium), such compression being the result of vacuum existing in the cavity of the tympanum, so that the tympanic membrane is pressed in on the bones of the ear, Dr. Boucheron sought to destroy this vacuum by passing air into the cavity through the Eustachian tube. The children rapidly improved, being soon able to walk normally, regaining by degrees both hearing and speech, and improving generally in health and disposition.

The Middlemore Prize in Ophthalmology.—

We are requested to remind intending competitors for this prize that all essays must be forwarded by the 31st May next, under cover, with a sealed envelope bearing the motto of the essay, and containing the name and address of the author, addressed to the General Secretary of the British Medical Association, 161A, Strand, London. The amount of the prize is £50; and the subject of the essay is "The Scientific and Practical Value of Improvements in Ophthalmological Medicine and Surgery made or published in the past three years."

THE MEDICAL GAZETTE.

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EDWARD J. BIRMINGHAM, A. M., M. D., EDITOR.

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EDITORIAL.

SANITARY CONDITION OF THE CITY OF MEMPHIS UNDER ITS NEW SYSTEM OF SEWERAGE.

The city of Memphis, Tenn., has for a long time enjoyed a not very enviable reputation in a sanitary point of view, and during the summers and falls of 1878 and 1879 this city suffered terribly from epidemics of yellow fever. Very properly the attention of the National Board of Health was drawn to the subject, and soon after the close of the epidemic in 1879, a sanitary survey of the city was made under the auspices of the National Board, by a commission composed of Drs. Billings, Mitchell and Folsom, Major Bengaurd, U. S. Engineers, and Col. George E. Waring. The system decided upon was that known as the "Waring System of Sewerage." The laying of pipe was commenced January 20, 1880, and the work was practically completed July 1, 1881. At that time 33 miles of sewer pipe had been laid, and 3,579 water closets had been connected with the sewer pipes. It is now known that the mortality of the city has increased since the construction of the sewers, and their connection by means of pipes with the dwellings.

Dr. R. B. Maury, a distinguished physician of Memphis, in a paper communicated to the *Medical News* of February 11, 1882, compares the mortality of 1880 and 1881, but makes very properly no allusion to 1878 and 1879, because, as he states, these were the years of the yellow fever epidemic.

"The total mortality for 1880 was 1,054 and for 1881 it was 1,276;" an actual increase of 222. This increase of mortality was distributed quite equally through the year, and among the white and colored population. The deaths from zymotic diseases were 274 for 1880 and 320 for 1881.

Speaking of special diseases, Dr. Maury says that the deaths from typhoid fever were 17 for each year; from dysentery, 45 in 1880, and 70 in 1881, this being nearly double the number of deaths from this cause in the preceding year. The number of deaths from diphtheria was 12 in 1880, and nearly four times as many, namely 43, in 1881. Acute diseases of the respiratory organs destroyed 102 in 1880 and 124 in 1881.

Dr. Maury proceeds to explain this apparent failure of a serious and somewhat expensive effort to render the city more healthy, and in doing so, first states: "There is no ground for the complaint of sewer gas in dwellings, and the pipes are believed to be comparatively free from it."

It seems proper to infer from this expression, "there is no ground for the complaint," that complaints of this sort have been made, but that Dr. Maury considers them without foundation.

"The only defect in the works yet discovered," says Dr. Maury, "has arisen from an error of calculation: It is that the two fifteen-inch mains, running parallel to the bayou, are too small to carry off readily the sewage from the laterals." The consequence of this error has been that side "overflows" or communications with the bayou had to be established at various points, thus rendering the water of the bayou more impure than it was before. It seems, also, that the subsoil drainage is insufficient; it lies too deep, under a clay soil, and the pipes are not sufficient in number; and, as a result, Dr. Maury does not think they exert any influence in the way of drying the surface.

Dr. Maury mentions two other sources of trouble, namely, the impurities in the water supply, and the fact that the drainage is into the Wolf river, and not into the Mississippi, as recommended by the commission. He does not see, however, "how the system of sewers can in any way be held responsible for the increased mortality of 1881," * * * "but it would seem that something else than sewers is necessary to make the health of the city what it should be; what this is, remains to be discovered." * * * "My belief is" * * * "that we may not reasonably look for much reduction in our death-rate until our drainage is radically improved." (The italics are Dr. Maury's).

In view of the statement made by Dr. Maury, and above quoted, that the cause of the increased mortality

"remains to be discovered," we submit whether the fact of the connection of the sewers with the apartments in the various houses may not be one cause of the increased mortality, and whether this question is not entitled to more consideration than Dr. Maury seems to have given to it. If a thorough examination of this point, and an examination entirely satisfactory to all parties concerned has been made, we are not informed of the fact. 3,579 water-closets and perhaps double this number of water basins have been connected with the sewers.

And what absolute assurance can be given that these connections are not to be included among the possible sources of the increased mortality? No doubt a partial explanation of the fact that the health of the city has not improved, as was expected and promised, is to be found in the failure on the part of the city to carry out all of the suggestions made by the commission; but soil pollution, from the privies and in many other ways has been stopped; and this has always been regarded as one of the chief sources of the unhealthfulness of Memphis; and a large amount of subsoil drainage has been established; yet the health of the city has not only not improved in the ratio of the "improvements," but it has actually become much worse.

LECTURES.

SUB-FIBROUS PLEURISY.

BY

WM. PEPPER, M. D.,

Prof. of Practice of Medicine in Medical Department of University of Pennsylvania.

The main thing to be accomplished in the treatment of this disease is to remove as rapidly as possible the fluid effusion which is distending the pleural cavity. It is important that while you are accomplishing this, you shall sustain by every possible means the vital powers of the patient. The means which have been proposed, and which are used largely for the removal of the fluid, are included under the head of hydragogue cathartics, diuretics, and diaphoretics. It has also been the custom to apply blisters to the surface of the chest. There are few at the present time who will resort to general or local blood-letting in the treatment of this form of pleurisy. The objections to general or local blood-letting are, that the patient is in a debilitated condition at the time of the occurrence of the pleurisy. It is, in the majority of instances, as I stated to you in connection with its etiology, a secondary affection, or it is especially likely to develop in those who have a tubercular or a phthisical diathesis. This class of individuals never bear depletion well, and it is for this reason that some years ago it occurred to me that hydragogue cathartics and diuretics were prejudicial rather than beneficial in this disease; that while they did not positively remove the fluid effusion rapidly, they did diminish the vital powers of the patient. That they rather prevented the absorption of the fluid than aided in its removal. The theory upon which the administration of hydragogue cathartics and diuretics in the treatment of this disease is based, is that they diminish the fluid constituents of the blood, and cause the absorbents to seize upon fluid existing abnormally in any portion of the body, whether it be in the pleural cavity, in the abdominal cavity, or in the cellular tissue. That the rapid

disappearance of fluid from cavities and the cellular tissue of the surface, in general dropsy, will follow the administration of diuretics and hydragogue cathartics, there can be no question, but you must remember that in such cases the effusions are not of an inflammatory origin; they are not the products of inflammation. They are simply the watery elements of the blood which have passed through the walls of the capillary vessels as a result of interference with the circulation. For instance, tie a string around your arm and compress the veins to a certain degree, so as to interfere with the return circulation, and you will have oedema. Now, in sero-fibrinous pleurisy, or in any form of pleurisy, such is not the cause of the effusion; the cause is an inflammation. Moreover, the effusion is not simple serum; it is sero-albuminous and sero-fibrinous. We have no evidence that the capillaries and the absorbents have the power to remove inflammatory products simply because the blood has been deprived of its fluid constituents by the action of hydragogue cathartics and diuretics. There is an entirely different condition in the two cases. Again, when describing the pathological condition of this form of pleurisy, I said that when the pleural cavity is distended with fluid, the capillary vessels on the surface of the lung, and in the pleural and sub-pleural tissue, are compressed and cannot absorb fluid. So long as they remain compressed, all depurative means—means which are employed for removing fluid from the system in dropsy—will have no effect. Another objection to the use of these means is, that there is a fibrinous deposit upon the surface of the pleura which interferes with absorption of the fluid by the absorbent and capillary vessels, and the thicker this deposit the more it interferes with absorption. Still another objection to the use of these depurative means is, that absorption of all inflammatory products goes on most rapidly when the vital powers are at the highest point. In a man debilitated and broken down the removal of inflammatory products takes place very slowly, if at all; it matters not what the inflammatory products may be; but when the nutritive powers are carried to the highest point, and the waste and repair of the system is rapid, absorption of inflammatory products will take place more rapidly. It was the custom, when I entered the profession, in the treatment of sub-acute pleurisy, to apply a blister on the front of the chest, and after three days to apply another in the axillary space, and after three days more another behind, and by that time the surface had nearly healed in front and the ground was gone over again. Now, gentlemen, you undertake to treat a young, delicate, sensitive female in that way, and you will find she will not bear it; she cannot bear it. I remember the first time I treated a case of sub-acute pleurisy without a blister. I did it because my patient would not be blistered, and I found that the fluid in her pleural cavity disappeared as rapidly, if not more rapidly than I was accustomed to see fluid effusions disappear. That led me to try its treatment without the blister, and I went on trying, and am trying it still; and I find that I get rid of the serous effusion just as rapidly as those who use the blisters. I do not say that there are not cases in which there is a low grade of inflammatory action, accompanied by a good deal of pain, where blisters may be of service. Under those circumstances they afford relief to the pain: but I do not believe that they remove or assist in removing the fluid effusion. Then, gentlemen, if a debilitated state stands in the way of absorption of the fluid effusion, why deplete your patient with hydragogue cathartics? But you say you do not deplete

him. I would like to know if depriving the blood of its fluid elements by way of the bowels is not as much depletion as to abstract blood from the arm. If you do not think it debilitates one to take a hydragogue cathartic, go home to-night and take a grain of elaterium and see if you come to lecture to-morrow. And yet you force these patients to take it, not only once, but twice; they have four or five watery discharges, and each time they grow paler and weaker. But you do more than that. No hydragogue cathartic can be introduced into the stomach without disturbing the digestion. I wish doctors would stop and think once in a while, when they are putting these awful doses into the stomach, what that stomach was made for, how it revolts at it, how the patient loses appetite, how his digestion is interfered with, and with it his nutrition. You are really doing harm, because you are interfering with the very processes by which you are to remove this inflammatory exudation. The same remarks apply, though in a less degree, to diuretics. They will deplete one, though not to the same extent, and they will interfere to some extent with the nutritive processes. If you take the acetate of potash, or the nitrate, which, perhaps, is the most vigorous, for forty-eight hours, so as to get its full effects as a diuretic, the flow of the urine will be increased abnormally, and the next day you will feel weak and debilitated. I do not call digitalis, strictly speaking, a diuretic. It increases the flow of urine, but it does so by regulating the circulation. You ask, how are we to remove this fluid from the pleural cavity, for it is all important that it be removed as soon as possible. Here arises the question of drawing off the fluid by mechanical means. In other words, shall you perform paracentesis thoracis in this form of pleurisy? You will find the profession divided in opinion with regard to its propriety. Some say there is danger of air entering the pleural cavity during the operation, and setting up in place of the sero-fibrinous inflammation, a sero-purulent one, and thus jeopardize the life of the patient. Others say that if you allow the fluid to remain in the pleural cavity, thickening of the pleura takes place by the process I have already described, and that there is danger of a different kind of inflammatory process being established. There can be no question but that if the fluid effusion remains too long in the pleural cavity it will cause by its very presence a change in the inflammatory process as certainly as the presence of air in the pleural cavity. You see, gentlemen, the argument theoretically is strong on both sides. If by aspirating you shall change a serous into a suppurative pleurisy, you certainly should not resort to it; and if by allowing the fluid to remain in the pleural cavity you shall have a sero-fibrinous pleurisy changed into suppurative pleurisy, it should be removed at all hazards. I would not take the extreme of either side. There is a middle ground upon which you may stand. If the pleural cavity is filled, or almost filled, with fluid, and shall continue so without diminishing, but rather increasing from day to day, compression of the lung having already taken place, do not hesitate to aspirate. It is impossible for air to enter the pleural cavity if you use an aspirator. If, when called to a patient, you find the chest distended with fluid, the heart and liver pushed out of position, great dyspnoea, the result of the fluid distention, then, you know the condition of the serous and subserous vessels is such that absorption of the fluid cannot take place, and without waiting you should aspirate. I will give you a few suggestions regarding the method of aspiration. Let the arm on the affected side be brought across the

chest so as to render the tissues over the affected side moderately tense. In the sixth intercostal space, at the junction of the axillary and infra-scapular regions, introduce the aspirating needle. Introduce it at least two inches, and allow the fluid to flow as long as the patient does not evince any uncomfortable sensation. As soon as he begins to feel a sense of constriction about the chest, stop. I care not whether you have drawn off four ounces or twenty, stop. Why? Because it shows that the lung is not expanded sufficiently to fill the space that has been occupied by the fluid. If the fluid has remained in the pleural cavity only a short time, the thickening of the pleura will be slight, and the lung will expand readily. If the pulmonary pleura be not much involved the lung will expand readily, and you may be able to draw off all the fluid at one time without any inconvenience to your patient. The chances for that patient's recovery are much better than those of one in whose pleural cavity the fluid has remained for a long time, and much thickening of the pleura has taken place, whose lung expands very slowly, so that only a small quantity of fluid can be withdrawn at a time. In this latter patient's case, when he begins to feel this sense of constriction on withdrawing fluid from his pleural cavity, and begins to catch his breath, wait a day or two, and then aspirate again. You will find that the next time you will be able to draw off a little more fluid than at the first operation. After another day or two repeat the operation, and so continue to do until all the fluid shall be removed from the pleural cavity. Now, gentlemen, I am convinced that by judicious management of the aspirator you will be able to save a large proportion of your cases from the dangers which surround them when fluid is allowed to remain in the pleural cavity a long time. Is there nothing else to be done? Yes, it is most important to increase the nutrition of the patient, so that after you have removed the fluid, changes shall take place in the plastic material which shall facilitate its absorption. Of all the drugs that have any power in this direction, I believe iron is the best, and of all the preparations of iron I think the syrup of the iodide of iron is the best. But do not give it in five or in ten drop doses. If you want any good effects from it, give it in large doses, at least a teaspoonful every four hours. Give nutrition in a concentrated form, keep the patient in an even temperature. The surface of the body must not be exposed to changes of temperature. This class of patients must not be exhausted by prolonged mental or physical labor, they must remain quiet, in rooms of an even temperature, in bed most of the time until the fluid shall have disappeared. When their strength will permit, they may ride out, well protected, in the fresh air. It is wonderful how the moderate use of stimulants helps this class of patients when they begin to recover. Their nutrition may often be increased very much by champagne with their meals. I never speak of this but I think of a reverend gentleman, about fifty years of age, who once came under my observation. He unfortunately attempted to carry on his work for a considerable time after his pleurisy had developed. Finally, the pleural cavity became filled with fluid, he suffered from shortness of breath, and was compelled to cease his work and call his physician. The physician had been brought up in the school of hydragogue cathartics, diuretics, and diaphoretics, and commenced on his already weak, feeble, anæmic patient by giving him elaterium in pretty full doses, purging him freely, and following that up with diuretics, and he would occasionally add to that a diaphoretic

hot-air bath. He thought, moreover, it was quite important to put his patient upon a low diet. The result was the reverend gentleman got into bed and was unable to get up. He began to have profuse perspirations. Under these circumstances he soon passed into a very critical condition. I saw him about this time, and proposed that he should stop hydragogue cathartics, diuretics, and diaphoretics and be put upon the plan of treatment which I have proposed to you, and as soon as his condition was slightly improved to aspirate his chest. It was not very many days before the patient was able to be out of bed. He began to assume a more cheerful aspect. He took stimulants very kindly, taking a quart of champagne each day; in fact, he was not restricted in its use. Within a week I aspirated him a second time and drew off about a quart of fluid. I aspirated him, I think, three times. From the first aspiration his improvement was rapid. He entirely recovered, and is doing useful work to-day. I simply mention this case to illustrate what a marked change for the better takes place in some of these patients under this plan of treatment, after the depurative plan has been thoroughly tested. Of course, rest from labor, a change of climate to one of an even temperature and high altitude is important during the period of convalescence. Remember, also, that after the fluid has disappeared, you have work to do still. The lung is bound down by the pleuritic thickenings and adhesions, and it is important that the patient shall be subjected to systematic gymnastic exercises, in order that the lung may be frequently inflated to its utmost limit.

CLINICAL COMMENTS ON PELVIC HÆMATOCELE—ADVANCED PHTHISIS COMPLICATED BY PREGNANCY—UTERINE FIBROMA.

BY

W. T. LUSK, M.D.,

Clinical Professor of Diseases of Women, Bellevue Hospital Medical College, Visiting Physician Bellevue and Maternity Hospital, Etc., Etc.

CASE I.—Pelvic Hæmatocele.—Female taken with cramps after drinking cold water. She changed her garments and took cold at menstrual period. She then had pain in the bowels. Whenever her bowels moved there was great soreness about the stomach and difficulty in passing water. If this story is strictly correct that she was perfectly well, took cold while menstruating and menstruation then became painful followed by difficulty in defecation and distress in passing water, we would assume that she was suffering from hæmatocele. Until I get evidence of this fact, however, I shall assume that she has some pelvic inflammation. She had fever and sweated a good deal. On admission temp. was 103° F. It has raised since she was here from 101° to $102\frac{1}{2}^{\circ}$ F.

Passing my finger above the anterior wall, I come in contact with the symphysis pubis and cervix. She has a small os as we expect to find in any woman who has not borne any children. Her abdomen is stiff and hard as a ball. I find the uterus a good deal enlarged and elevated above the symphysis. When I examined her I supposed at first I felt a large round tumor which I supposed to be the fundus uteri. I thought I had to deal with retroversion of the uterus. When I employ conjoined manipulation, one hand along the symphysis pubis and the other along the anterior wall of the vagina or in front of the uterus, I

find on the contrary that the uterus is sharply ante-flexed, perhaps a little more than ordinary dimensions. The fundus of the uterus is resting up above the symphysis so that the tumor that I feel behind the uterus is due to a deposit, and I can not say whether that deposit is due to a pelvic cellulitis or to a pelvic hæmatocele. When you see them at an early stage the differentiation is not difficult. When, however, the deposit behind the uterus has lasted three or four weeks, it becomes very red and assumes a rounded shape inside the peritoneal cavity, and the distinction between effusion of blood in the cul de sac of Douglas and cellular inflammation cannot be readily made out. If this patient was taken suddenly sick, her courses stopping, and if, during her courses, she was seized with sudden pain and tenderness across the abdomen, and the production of a tumor behind the uterus, it would appear that it was due to effusion of blood. A tumor due to pelvic inflammation comes slowly and increases gradually. When a bloody tumor is fresh we get fluctuation. Here the uterus is shoved forward to a considerable extent by a deposit behind the uterus. Effusion of blood in the cul de sac often causes little or no peritoneal inflammation and very little tenderness. In other cases it excites pelvic peritonitis so that there is produced as well a cellulitis. If this were hæmatocele, I should assume this was a case of this sort. She has fever and sweating, which go with pelvic peritonitis and pelvic cellulitis, and are rather uncommon in pure uncomplicated cases of pelvic hæmatocele. Some years ago it was proposed to hasten the recovery of these cases by thrusting the knife into the cul de sac of Douglas and allowing the blood to escape. The danger of this procedure is that you will lose a large number of cases. If you let it alone and simply keep the patients quiet in bed you will never lose any case. The blood will disappear in from 4 to 6 weeks. This condition does not run the chronic course of pelvic cellulitis or pelvic peritonitis.

CASE II.—Advanced Phthisis complicated by Pregnancy.—Female. Here, gentlemen, you have a case of a patient who has an abdominal enlargement. The enlargement seems to start from the median line. The presumption is that a tumor circumscribed in this way is in connection with the uterus. The tumor does not occupy the lateral region but only the median line. As I trace it down, I can follow this tumor down in the pelvic cavity. It is evidently connected with the pelvic cavity. It rises out of the pelvic cavity and occupies the median line. Hence it is connected with the uterus. I suspect pregnancy. The pigmentation along the linea alba is somewhat marked. There is none of that laceration of the cutis that we often find in pregnancy. White silvery lines are seen along the thighs. These white lines are now supposed to be obliterated lymphatics. These dilated vessels in the abdomen are not particularly characteristic of pregnancy. In ascites these veins are also somewhat prominent. In pregnancy they are rather rare. She has another condition which would account for the dilatation of the veins. The navel in pregnancy ought to project more than it does. On making bimanual palpation I can produce a movement inside the uterus when she relaxes her abdominal walls.

The patient is married seven years; has had one child. That is where the lines upon the hips came from. They are due to the very rapid development of adipose tissue during pregnancy. That same development may occur at the time of puberty. Her child is now $3\frac{1}{2}$ years old. Fever set in after

her confinement. As I pass my finger in front of the cervix against the abdominal walls, I get ballotment in a complete and satisfactory manner. I conclude therefore that she is pregnant and that the abdominal tumor is an enlargement of the uterus.

The patient has some pulmonary trouble and this condition of the veins I presume is due to an obstruction of circulation in the lungs. The fingers are somewhat enlarged at the extremity. She has abundance of râles on both sides and she has cavernous respiration on the right side. She has therefore advanced phthisis. It is always a question to know what to do in these instances. The presence of a fœtus tends to arrest the development of pulmonary trouble but causes a more rapid wasting of tissues. Patients are apt to run down quite rapidly. If this patient were kept under observation and were found to fail in strength it would be desirable to induce premature labor when the child has reached the viable period. This is partly in her interest and partly in the interest of the child. The mother can not be saved and we should do what we can to save the child's life, because with the advancing obstruction to the circulation there will be increase of CO₂ and the child will die with asphyxia.

CASE III.—*Fibroma of the Uterus*.—Female is very pallid. Is married and has one child æt. 10 months. She was unwell and had regular courses soon after the birth of her child. Sometimes menstruation has not the slightest effect upon the digestion of the child. In other cases colics come on. These cases of menstruation during the early part of lactation are rather uncommon. We would suspect in a case of this kind that there was something the matter with the uterine cavity. Her menstrual flow is of a bright red color. I have seen cases where the hemorrhages were due to displacements of the uterus. Sometimes they are due to an endometritis. Sometimes there are large sized polypi forming inside the uterine cavity. I find here a small fibroma in the anterior wall of the uterus. The probabilities are that this tumor has developed since the baby was born. Usually when a mass like this is embedded in the walls of the uterus if the patients become pregnant they abort. The uterus is quite tender. It is somewhat fixed, and you can feel this small rounded body in the anterior wall about the size of an English walnut. With this we generally have at the time of menstruation a great deal of bearing down and a sharp pain, due to swelling of these bodies as they are imbedded in the walls of the uterus.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, MAY 24th, 1882.

The President, Dr. E. C. Seguin, presided. The minutes of the previous meeting were read and approved. Dr. H. N. Heineman presented two specimens.

"THROMBOSIS OF UTERINE VEINS,"

and

"NECROSIS OF HEADS OF TWO RIBS WITH EMPYEMA."

In the latter case it was found on making the autopsy that an abscess had formed and ruptured in the right pleural cavity. The chest cavity contained pus and serum, and opposite the head of the fourth rib

there was an opening in the pleura communicating with an abscess in region of spinal cord. The heads of the fourth and fifth ribs were found to be involved in the inflammation; they showed lesions of arthritis and necrosis. The sixth dorsal vertebra was also necrosed.

Dr. Wyeth asked how long the abscess had existed before it was recognized and what was the character of the drainage employed. The case was interesting to him, since he now had a patient under his care with a similar history. In addition to the symptoms of abscess there were also the evidences of tuberculosis.

Dr. Nathan Bozeman presented two specimens of OVARIAN CYSTOMA,

which he had removed from a woman at 32, unmarried. She had presented for examination in February last with well marked evidences of ovarian tumor. She had been in good health up to four years before this time. When the tumor began to develop she applied for treatment to an eminent physician of this city who treated her for over a year for retroflexion, but finally abandoned the case. She was afterward examined at the Clinic for Diseases of Women at College of Physicians and correct diagnosis made. A fulness in the posterior cul de sac of Douglas's pouch which subsequently proved to be the right ovary, which was firmly impacted in this position. Before operating the patient remained under general treatment for two months. The tumor was found to have adhesions to anterior abdominal walls and to omentum. The specimen showed very well the commencing development of ovarian cysts. An interesting feature of the case was the fact that when first seen operation had been determined upon, but the patient could not take ether. On making the attempt to etherize her the face became suffused and the pulse stopped, so that operation had to be deferred. The urine had been examined and found to contain albumen. Her family physician was certain he had found granular casts, but three expert microscopists who examined it subsequently were unable to find any casts. At the time of operation she took the ether without difficulty.

Dr. Howe remarked that if granular casts had really been found in the urine, the patient would not have survived an operation of such magnitude. Dr. Wyeth said his own experience was not in harmony with that of Dr. Howe, since he had amputated the leg of a patient, whose urine contained casts, last summer, and she was alive to-day. Dr. Howe said that if Bright's disease run on to granular degeneration, he could not believe the patient could be operated upon with safety.

Dr. Lewis Sayre related a case he had met with in hospital practice, in which a patient was operated upon whose urine contained fatty casts; he survived the operation, but subsequently died of acute nephritis. Dr. Gibney also mentioned a case he re-called, in which a patient with casts in his urine had been operated upon and recovered.

Dr. Tauszky said it must be remembered that foreign matters in urine were often mistaken for casts; he saw such cases every day.

Dr. Gibney remembered a case taken to Bellevue Hospital with kidneys in such a bad state that operation was refused. Operation was, however, subsequently done, and the patient did perfectly well after it.

Dr. Kinnicut presented a specimen of

BRAIN SHOWING LESIONS OF DISSEMINATED SCLEROSIS.

The diagnosis had been made before death and confirmed at *post mortem*. The patient, a woman æt. 30, had been under observation at St. Luke's Hospital for three weeks. A connected history could not be obtained from her, but it was ascertained from a relative that she had been well up to about three years ago, when she began to suffer from epileptic attacks, muscular twitching, and was incapacitated for work. When she entered the Hospital there was very marked rhythmical tremor, which made any attempt at walking impossible, but was absent during rest. There were no perversions of sensation; the feces were passed involuntarily; there was retention of urine; the speech was syllabic or scanning; the intellect was impaired; there was paresis of the left upper and lower extremity, and some paralysis of the muscles of deglutition. She died from gradual failure of all the organs, there being no marked symptoms. Autopsy was made by Dr. Satterthwaite, who was to have been present, and presented the specimen. Examination of the brain confirmed the diagnosis of disseminated sclerosis; examination of the other organs was negative.

Dr. Birdsall inquired as to the condition of the reflexes. Dr. Kinnicut replied, that the tendon and skin reflexes were both present. Dr. Seguin asked if there was nystagmus or hallucinations. Dr. Kinnicut answered no. Dr. Seguin said this had been one of the few cases reported in which the diagnosis of disseminated sclerosis had been confirmed *post-mortem*; he had himself published one such case. It was difficult to make the diagnosis in cases in which the cerebral symptoms were not well marked. The condition of the reflexes was the guide to a differential diagnosis.

Dr. Birdsall presented the report of the committee on microscopy. A specimen of bony tumor presented by Dr. Neumann was found to contain true bone, which was the point of interest in regard to it. A second specimen of tumor of the breast was found to be a carcinomatous growth of scirrhus form. The report was accepted.

Dr. Sayre presented a specimen of GUN-SHOT WOUND OF THE ELBOW JOINT.

The patient received the injury last October; he was seen by Dr. Sayre for the first time three weeks ago. When the ulna and olecranon were exposed, there were three or four sinuses at the wrist joint, and superficial caries of the radius.

Dr. Sayre presented a second specimen of CICATRIX

removed from a patient who had been badly burned with phosphorus about three years ago. The wound was eighteen months in cicatrizing. It was thought useless to make any attempt at a plastic operation. The tissue over the abdomen and lower part of the thigh had undergone no contraction. The cicatrix was excised under Lister's precautions.

Dr. Tauszky presented the

LARYNX, TRACHEA AND LUNGS

of a child of two years of age, who had died from croup. Tracheotomy had been done, but the child died 24 hours after operation. The point of interest in the case was that the specimen demonstrated the difference between croupous and diphtheritic exudation *post-mortem*. This brought up the old question of the identity or dissimilarity of croupous and diphtheritic exudation, which was briefly discussed by Dr. J. C. Peters and others.

Dr. Wyeth presented a specimen of
ANEURISM OF THE ARCH OF THE AORTA
for which distal ligature had been done by him. It was one of three cases recorded in which the diagnosis had been made and this operation done. The patient lived a year after operation, when she succumbed to intercurrent disease. The ligatures used were $\frac{1}{8}$ of an inch in width by $\frac{1}{16}$ of an inch in thickness. *Post-mortem*: The sternum was found eroded, and the aneurismal walls so thinned as to have made it evident that the sac would have ruptured had the patient lived. Barwell had done this operation twice. It demonstrated the safety of ligature under these conditions. The pain in his case, which had been very severe, was relieved. It was difficult to imagine how the application of distal ligatures should be of any benefit, but they undoubtedly were.

Dr. Birdsall presented a specimen of

SARCOMA OF THE BRAIN,

which had been accompanied by the usual symptoms. Diagnosis had been made, *ante mortem*. On *post-mortem*, 24 hours after death, a soft fluctuating spot was found in right hemisphere of a reddish-brown color. Dr. Birdsall gave in detail the results of the autopsy and microscopical examination, which proved the tumor to be a round-celled sarcoma.

Dr. Seguin asked as to the existence of lesion of the optic nerve. Being told there was none, he remarked that this case was opposed to the general opinion, which held that lesion of the optic nerve was one of the most marked symptoms of tumors of the brain.

The Society then went into executive session.

SELECTIONS FROM JOURNALS.

THE EARLY DETECTION AND TREATMENT OF SPINAL CARIES. By EDMUND OWEN, F.R.C.S., Surgeon to St. Mary's Hospital; Senior Assistant to the Hospital for Sick Children, Great Ormond Street.

An affected spine too frequently receives no offer of therapeutic aid until its pathological bankruptcy is declared; whereas, judicious assistance, afforded at the proper time, might have spared a shameful collapse. In the early and comparatively obscure stage of spinal disease, the surgeon is too apt to assume a hopeful attitude, or to temporise; and then, later on, when a projecting spinous process appears, to say: "'Tis as I feared; there is disease of the spine." So angular curvature has come to express spinal disease; and spinal disease is expected to manifest itself by angular deformity. Such association of ideas is most unfortunate. Surely, the angular deformity is the one sign of spinal disease which our treatment itself should aim at precluding.

Let me give a parallel instance of a disease and diagnostic sign, with a similarly unhappy association. One's opinion is asked as regards the practicability of operative interference in mammary scirrhus, which has advanced so far that the mass adheres to the chest-walls, or the skin is bound down to the ribs. On suggesting that the case is past all surgery, one is told that the enlargement of the axillary glands—that confirmation of the diagnosis of malignant disease—has only recently taken place. Unfortunately, the attendant has waited for the lymphatic invasion before deciding on the malignant nature of the breast-tumor: just as

he might have waited for the angular curvature before diagnosing with certainty the spinal caries.

And I will now venture to institute another comparison—viz., between the spinal column and the knee-joint. In the latter cases, we have a short series of bony segments with intervening layers of cartilage; in the former, a long series. I will grant that the knee-joint is much more accessible, both for the purpose of examination and treatment, than are the spine-joints: for, in the lumbar and dorsal regions, the joint-segments lie well within the ventral and thoracic cavities, the better to support the superimposed weight; indeed, one can only just get at the tips of the spinous processes between the masses of the erector spinæ. Side by side let us trace through the various stages, from their very beginning, a case of knee-joint disease and one of spine-disease.

The two children, who are the subjects of them, may have been healthy; they may have been strumous; but, some months ago, one of them fell from a cart; that is the spine case. A few days ago, a boy was pushed down and hurt his knee. Let us watch this patient. He does not run about as he used to do, because his leg (not necessarily his knee) aches. He does not know exactly where the chief trouble is; children are not clever at locating pain; but, when he stands, he bears all his weight upon the other leg. The boy with the traumatic inflammation of the spine also complains of obscure aches and pains, which are very probably ascribed by his parents to "rheumatism," and perhaps even treated as such. It may be that the pains are referred to the chest, belly, or limbs, from irritation of the trunks of the nerves as they are passing out from the spinal cord. He does not care to run about, but complains of feeling tired, and lies near his mother, or on the hearth-rug. When he stands, he eases the inflamed joints by resting his arms over a chair, or anything else that may support him; and when he sits at meals, regardless of manners, he plants his elbows on the table, and supports his chin on his hands. If he be a little mite, he hooks his chin over the edge of the table. Very likely he cries when he is lifted off his chair or taken out of his bath. As he stands, he props himself up by grasping the thighs, just above the knees. But, as yet, there is no definite spinal projection.

Let us now return to the knee. Later on, its function becomes impaired. It refuses to work during progression, remaining always slightly bent, so as to save pain and jarring—and the patient limps along on the tips of his toes. Effusion has taken place, and the flexor muscles are assuming a condition of permanent contraction, partly because the flexed state of the joint minimises the intra-articular pressure, partly that there may be the least chance of a jarring together of the inflamed synovial or osseous surfaces.

So also with the spine, does flexion eventually come on: partly from muscular action, partly as the result of disintegration of the vertebral segments. But the definite angular deformity, as in the case of the diseased knee, is but a late sign of the occurrence of inflammatory changes. Now, what should we think of a student who was unable to diagnose knee-disease before the joint had permanently assumed the appearance of a fiddler's elbow?

If still we have not made up our mind as to the presence of the spine-disease, let us watch the little patient come down stairs, noticing how he eases himself down by the rails; let us see if he will jump from the bottom stair, or if he can touch his toes without bending his knees. Or, let us find out what has become of his hop, top, or marbles, according to the season of the

year; for children's out-door games succeed each other in regular chronological order. He has not lost his active appreciation of boyish delights, simply because he has "growing pains" or "rheumatism." Indeed, when he is eventually placed on his back in bed, he will have his whip or top put where he can watch it.

It may possibly be thought by some that much of this which I am now detailing is irrelevant to the subject of the early detection of spinal disease, or, at least, of so trivial a nature as to be unworthy of serious attention. I must, however, insist upon the urgent necessity of giving heed to these little matters. They are the straws which show the direction of the on-coming breeze; when the pathological storm is raging, almost any one can read the weather. To those who interest themselves in the ways of healthy as well as of sick children, these little matters are full of indications and suggestions. Unlike adults, children cannot often afford the surgeon much direct aid in making a diagnosis; but they are not, on the other hand, malingerers. The art of shamming illness does not usually manifest itself before they begin to experience the obstruction of the fifth proposition of the first Book of Euclid; or until, in some way, their little educational burden is becoming intolerable. Therefore we must never refuse to listen to, and search out the cause of their oft-repeated complaint: "Oh, mammy, my belly does ache!" or "My neck is so sore." Such phrases should rather make the mother, or at any rate the surgeon, apprehensive; and the child should be stripped stark naked and thoroughly examined, on several occasions if necessary; for, as Howard Marsh says, although angular curvature may not be detected in a suspected case, still it must not be concluded that the spine is sound.

On hearing that a child has slight and obscure pains, which we may attribute to the result of an injury to the spine, one must be particularly careful not to treat the case lightly. One is inclined to say to the mother: "I do not think it is serious." But, often, rest is as necessary as if one could see with the naked eye incipient osseous changes.

The earlier the treatment is begun, the better. Better even that two boys should be treated for spinal disease, where, after all, no disease existed, than that treatment should be delayed for a third boy, because the symptoms of the disease were not unequivocal.

And now a few words as regards treatment. In my opinion, the best method consists in placing the child at once on his back, on a firm flat horse-hair mattress, without a pillow. And there he must be kept, lying in absolute rest—by means of armlets, if necessary—for an indefinite time. If the disease be taken at the onset, that is, in the stage of inflammatory osteitis, a few weeks' rest may have the effect of causing the surgeon to wonder if his original and early opinion was, after all, correct. So much the better. But, if it be a matter of months, the small mattress may be carried out into the garden as a litter, or put upon an easy going wheel-chair. Later on, a plaster-of-Paris jacket should be carefully moulded over the trunk, from just above the great trochanters high up into the arm-pits; but no suspension need be used.

There is, in my opinion, no better splinting that that afforded by a Sayre's jacket, though that may be a matter for discussion. But I will insist on this: that, if a jacket be put on the child with early spinal disease, the patient must still be kept in bed, or else we are not obtaining for it that near approach to absolute rest of which we all talk so much. Little children do not fret, or become thin, because they are kept in bed;

they are, when well managed, as patient as those of maturer years. The head of the bed may be raised by blocks beneath the legs, so that the inmate may get a better view of what is going on around him.

The treatment of the later stage of spinal disease, I do not here discuss. Indeed, if the early stage receive its proper attention, its discussion will haply include also that of the later stage.

I may go as far, perhaps, as to deal with the disease when the little spinal boss is making its earliest appearance, but no further. Of a permanent angle produced by caries, I will say nothing. It is not found in the early stage. I have heard disciples of my friend, Professor Sayre, lay claim to an ability to straighten such an angle; but I could never admit that even the enthusiasm which they displayed in the question was sufficient palliation for their pretensions and misleading assertion. Hence, at the meeting of the International Medical Congress in London, it afforded me the sincerest satisfaction to hear Dr. Sayre deliberately refuse to entertain the notion, as it also did to hear him admit that suspension is not an essential part of his method.

For the future, let us all recognize this fact—when we are encasing the body of a child whose spine is inflamed or carious—that we are simply treating the diseased vertebrae as we should treat the tarsal or carpal segments when similarly affected, viz: by securing for them the nearest approach to that absolute physiological rest of which our Hilton was the High Priest. And let us stretch our hand across an Atlantic ocean, which, under the influence of science and scientific gatherings, is yearly becoming less worthy of the adjective "wide," to give fraternal greetings to Professor Sayre—a fellow workman, who has systematized and has brought to us a practical means of helping those countless children whom we had almost begun to regard as surgical outcasts.

THE TREATMENT OF LATERAL CURVATURE OF THE SPINE. By BERNARD ROTH, F. R. C. S., Eng.

A mother notices that a shoulder or a hip is beginning to grow out in a child, generally a girl at the onset of puberty. The family doctor is called in; the patient is stripped, and the trunk flexed. If there be no decided or marked irregularity in the bent spine, the parent is assured that the patient "will grow out of it"; and that nothing special need be done, except, perhaps, lying down daily for a short time. I have heard this story frequently when examining a case of incurable spinal curvature which had developed in the course, of one, two, or more years. It is, however, precisely at the time when there is no decided or marked osseous deformity, that complete cure is possible. Before pronounced osseous lateral curvature can occur, it must gradually pass through many intermediate stages from the time when the patient first began to assume a temporary vicious position of the trunk. The position of writing, as generally practised, is, more frequently than anything else, an initial cause of lateral and other curvatures not due to caries. The much larger proportion of girls than of boys affected, is due to the fact that girls do not enjoy, as a rule, one-fourth of the usual amount of physical exercise allowed to boys. Their muscles become weak; and, although they sit no worse than boys at their lessons, they have not sufficient strength to hold themselves erect, and to restore the balance of their curved backs out of school-hours.

After a careful examination, before the patient is allowed to dress, it is essential to ascertain to what extent the spine can be restored to its normal position, by a voluntary effort with the help of the surgeon. Although attention is first directed to the improvement of the lumbar curvature, any position that increases the upper lateral curve, if present, should be avoided. One arm directed and held upwards or outwards at a higher level than the other, is very frequently useful in helping to restore the symmetry of the trunk. Sometimes the best result is obtained by both arms being raised vertically by the side of the head, while avoiding undue elevation of the scapulae. This best position of the patient's trunk and arms for improving the spine, is the "key-note" of the exercises to be practised during treatment. It is extremely important to note whether any article of dress is too tight across the front of the chest, when the patient is holding himself in an improved position; the stoop of a scoliotic patient is often confirmed by closely fitting garments. This remark applies not only to the clothes worn by girls and women, but also to the shirt-collars, waistcoats, braces, buttoned coats, and overcoats of boys and men.

The treatment of lateral curvature should embrace the following points. *a.* The spinal muscles should be sufficiently strengthened, so that the patient can maintain an erect or improved position for an indefinite time, whenever required, without extra effort. *b.* The thorax should be developed by systematic breathing and methodical exercise acting directly on the ribs. *c.* All causes increasing or perpetuating the spinal curvature must be removed; that is, bad positions must be avoided, and good ones prescribed. *d.* The general health should be improved by attention to diet, by a daily morning bath, by tonics if necessary, and by as much open-air living as possible. The spinal muscles are strengthened by means of "medical gymnastics" (Swedish movements)—a scientific system of gymnastics based on anatomy and physiology. By them it is possible to bring any desired group of voluntary muscles of the trunk and limbs into regulated contraction, as slight or as severe as may be required. In many of these exercises, the position of the limb or of the trunk assures a sufficient amount of resistance to be overcome by the contracting muscle; while in others the resistance is given by the surgeon. The *erectores spinæ* muscles can be easily and thoroughly brought into action while the patient is either lying, sitting, or standing. Space does not permit me to describe more than two or three such exercises in detail. Let a patient lie prone, with the pelvis and legs supported, and the heels fixed on a padded table, while the head and trunk to the level of the iliac crests project beyond the edge of the table. The back-muscles must contract forcibly to enable a patient in this position to slowly raise his trunk into the same horizontal plane as his legs and pelvis, and to maintain that position for ten or twenty seconds, and then as slowly to allow his trunk to be flexed again by its own weight. The surgeon can easily increase the exertion, if required, by more or less pressure with one hand at the back of the patient's head or neck. During this exercise, which is repeated from four to eight times, the trunk and arms may be in any required posture. A less severe exercise for the *erectores spinæ* muscles is for the patient to lie prone on the floor or on a table, and, while the trunk is immovable, to describe slowly a circumduction, first of one hip and then of the other, while the knee is kept fully extended. The contraction of the *erectores spinæ* can be felt by placing the

finger on them; they are forced to contract to steady the pelvis. The amount of exertion can be increased by a pressure of the surgeon's hand on the heel. If the back-muscles be very weak, and the weight of the leg be too great, the surgeon can partially support the limb during the circumduction. A third exercise for the same muscles is for the patient to sit erect, astride a narrow table. The surgeon, with one hand against the back of the patient's head, gently presses him forwards, he having been previously requested to yield gradually in the lumbar vertebræ. As soon as the trunk is flexed at an angle of 50° or 60° , the patient stops, and then returns slowly to the previous erect posture; the surgeon in his turn gently resisting with the hand at the back of the patient's head.

The following is a prescription of exercises, which, with a few modifications according to circumstances, is used at the commencement of the treatment of all cases of spinal curvature not due to caries. It consists of twelve exercises, between each of which the patient has to rest for a minute or two on a couch with movable back. It has a wedge-shaped cushion, the lower end of which fits the hollow of the back.

"1. Lying on back, arms by the sides of the body, hands supinated; very slow deep inspiration by the nose; expiration by the mouth. (Repeated four times.)

"2. Similar exercise, with the arms extended upwards by the sides of the head.

"3. Same position as (1); head-rotation on axis to right and left alternately; also lateral flexion of head to right and left alternately. (Repeated four times.)

"4. Lying on back; simultaneous circumduction of both shoulder-joints from before backwards; elbows and wrists kept extended. (Repeated twelve times.)

"5. Lying on back; one hip-circumduction both ways; knees kept extended. (Repeated ten times.)

"6. Lying on back; simultaneous extension of arms upwards, outwards, and downwards, from a position of the elbows flexed and close to the trunk. (Repeated four times.)

"7. Lying prone; one hip circumduction both ways; knee kept extended. (Repeated ten times.)

"8. Sitting on couch, with back at an angle of 45° ; ankle-circumduction down, in, up, and out, while the toes are directed inwards the whole time. (Repeated thirty times.) (For flat-foot.)

"9. Lying on back, with arms extended upwards by the sides of the head; flexion of both arms (surgeon resisting), followed by extension (patient resisting). (Repeated six to eight times.) (The patient's knees, flexed over the end of the table, fix his trunk.)

"10. Patient astride a narrow table, with arms down and hands supinated; trunk-flexion at lumbar vertebræ (patient resisting), followed by trunk-extension (surgeon resisting). (Repeated six to eight times.) (Already described in detail.)

"11. Patient, with arms extended upwards, leans against a vertical post with pegs on each side; these he grasps. The surgeon gently pulls the patient's pelvis forwards by his hands on the sacrum (patient resisting); and then the patient returns the pelvis to the mast (surgeon resisting). Also pelvis-rotation on its axis to right and left alternately (surgeon resisting with his hands on each side of the pelvis). (Repeated six to eight times.)

"12. Lying on back, with head and neck projecting beyond the end of the table; the head is gently flexed by the surgeon's hand on the occiput (patient resisting), followed by head-extension (surgeon resisting). (Repeated eight times.)"

The last four exercises are personally carried out by the surgeon, while trained female assistants do the remaining eight under his supervision. Six to twelve firm longitudinal strokings, from above down, of the patient's back by the assistant's two palms generally remove any aching caused by the exercises. These strokings are also usefully employed at home to relieve backache. The prescription requires about an hour, after which the patient rests a few minutes before leaving. Several of the simpler exercises have to be practised at home for about fifteen minutes twice daily.

The removal of all causes perpetuating or aggravating the spinal curvature is most important. For reading and writing, a high-backed chair, with the back reaching to opposite the shoulder-blades and slightly moulded to the trunk, is required. The patient should sit with the sacrum as well as the scapulæ in contact with the back of the chair; the spine can thus be kept in an erect position with slight effort. The desk or table, sloping at an angle of 15° for writing and of 40° for reading, should be movable in a horizontal plane, so as to be brought over the patient's thighs. A Glendenning's adjustable modern School-desk, manufactured by a Darlington company, satisfies all the above requirements. In sitting, the thighs should be evenly placed on the seat of the chair, and never be crossed, as this throws the centre of gravity of the trunk to one side, and aggravates any curvature present. For severe cases of curvature, the couch with movable back already mentioned is to be preferred. Scoliotic patients should not stand more than is absolutely unavoidable, and then with the feet at least six or more inches apart. Walking, short of a fatigue which cannot be completely recovered from, after fifteen to thirty minutes' rest, is beneficial, as the back-muscles are being constantly brought into action while it lasts. If there be any relaxation or falling-in of the arch of the foot, anatomically shaped laced boots, with felt valgus pads, and with no heels, or only low broad ones, are necessary. Out of fifty consecutive cases of lateral curvature in private practice, I found that thirty-two had relaxed feet, some very severely.

More or less difficulty is experienced in convincing the patient that his habitually crooked position, with the head poking and on one side, and his trunk twisted and curved, is wrong, although natural and comfortable to him. It is still more difficult, and great perseverance is necessary, to convince him that the improved position which he is shown is really an improvement; because, if he trusts to his own sensation, he is at first under the impression that he is more crooked than before. In these cases, I find a looking-glass frequently of much service.

I have not said anything about mechanical treatment of lateral curvature, because no steel or plaster or poroplastic support should be prescribed, as long as there is any possibility of placing the patient in an improved position, and of his maintaining this by a voluntary muscular effort for even a few seconds. A spinal support must interfere with the natural expansion of the thorax in respiration, if efficient pressure is to be exerted in attempting to replace a spinal curvature. The following remarks, published in the *Transactions* of the late International Medical Congress (vol. iv, p. 171), express my views of Dr. Sayre's treatment "I cordially agree with everything that has been said in favor of Dr. Sayre's plaster jacket for the treatment of spinal caries.—With reference to lateral curvature of the spine,—it is very difficult, from what has been both written and spoken by Dr. Sayre, to understand to which stages of lateral curvature he refers. I constant-

ly examine cases of lateral curvature which, at the first glance, appear very badly deformed—yet—it was quite possible to restore the apparently deformed spine back into a perfectly normal shape, and for the patient to retain this position for a few seconds; the fact being there was no real osseous deformity, only a relaxed vicious position of the bones, ligaments, and muscles. I challenge Dr. Sayre or any of his disciples to exhibit, at a London medical society, a case of lateral curvature with osseous deformity of the vertebræ and ribs, even to a very moderate amount—but it must be there—and then to exhibit the case again within six or twelve months, as being cured by his treatment. Daily suspension by the head does not strengthen or exercise the muscles, as maintained by Dr. Sayre; it is against common sense. If you wish to strengthen a weak or flabby biceps muscle, surely you would not put the arm in a plaster bandage with the elbow fully extended, and then hang the patient repeatedly daily by the hand of the imprisoned limb. I have seen several patients with osseous lateral curvature who have been daily suspended by the head for months; and, if Dr. Sayre's theory were true, at all events the neck-muscles should have been strengthened, as they are most severely acted upon by the extension from the weight of the body; but nearly all poked their head as much as ever—Sayre's jacket is only of use in lateral curvature in cases of extreme osseous deformity, in supporting and giving relief to the patient, and in preventing the deformity becoming worse; also in cases of paralytic lateral curvature."

In the *Journal* of December 6th, 1879, is an article on "the Influence of Sayre's Treatment on the Spinal Muscles," in which I maintained that the muscles waste from want of exercise. Dr. Sayre soon after published a lecture criticising this opinion, and proposing a still worse modification of his treatment. After a patient with a lateral curvature had worn the plaster jacket for some weeks, till it became loose (in his opinion, because the spine was straighter; in my opinion, because the ribs were more compressed), he advised the jacket not to be removed, put a wedge-shaped piece to be cut out over the prominent ribs behind, and the two sides of the vacant space to be forced together by a fresh bandage tightly applied, and this process to be repeated two or three times at intervals. It seems strange how such a treatment could be advised, as it is only another form of tight lacing applied to a deformed trunk.

To return to the treatment I have recommended, and its results. More or less decided improvement is nearly always obtained within a month of daily treatment. Cases without osseous deformity are sometimes even quite restored in this time, but every care must be taken to avoid injurious positions, and prescribed exercises must be practised at home or some months afterwards, to prevent relapse. In cases with a moderate amount of osseous deformity, about three months' daily treatment will, on an average, give a satisfactory result, but complete cure here is not possible.

To sum up, the points I insist upon in this paper are these.

1.—A more careful description of the stage of lateral curvature is required, including the mention of any osseous deformity if present, and whether the patient can be at once restored to the normal position, or not, to what extent.

2.—If osseous deformity be present, even to a slight extent, complete cure is impossible.

3.—Many cases of apparently severe lateral curva-

ture have no osseous deformity, and can be at once restored temporarily to a normal position.

4. A patient with confirmed lateral curvature, with or without osseous deformity, is so habituated to the vicious position, that attempts on his part to improve the spine, except with the help of the surgeon's instructions, generally increase the deformity.

5. Exercises of the spinal muscles, with and without resistance, by the surgeon or an assistant, while the patient is in an improved position, are absolutely necessary to the rational treatment of spinal curvatures not due to caries.

6. Good position should be always assumed, not only at meals and at lessons, but whenever otherwise occupied. This is practicable in slight cases, even with ordinary backed chairs; in some cases, a couch, with horizontal seat and movable and moulded back, is necessary.

7. A moderate amount of walking, short of much fatigue, is beneficial.

8. Lying prone or supine does not tend to cure lateral curvature, as it does not strengthen the spinal muscles. Lying for a quarter or half an hour is useful when it rests the patient; but, if it be continued for several hours daily, only harm results from the physiological activity of the spinal muscles being prevented.

9. Sayre's plaster-jacket and other spinal instruments are injurious in all cases not due to caries, where the patient by an effort can maintain an improved position of the spine, even for a few seconds only. Sayre's jacket is only permissible when the sole object is to prevent further increase of extreme osseous deformity.

10. Swinging by the head does not strengthen the muscles, and dates back to the time of Dr. Glisson, more than two hundred years ago. In Germany, "Glisson's swing" has been known and used for many years (see *Journal*, July 26th, 1879).

11. By all vicious positions being avoided, good ones shown and maintained, and suitably prescribed exercises carefully carried out, better and quicker results are obtained in cases of lateral spinal curvature, than by any other treatment hitherto practised.—*Brit. Med. Jour.*

THE TREATMENT OF SPINAL CURVATURE BY MEANS OF THE CUIRASS. BY NICHOLAS GRATTAN, L. R. C. P. & S. Ed., Senior Surgeon to the County and City of Cork Hospital for Women and Children.

Four years have elapsed since Dr. Sayre's remarkable demonstration on the Treatment of Spinal Curvature by means of Suspension and the use of the Plaster-of-Paris bandage. As he has already written fully on the subject, it may seem presumptuous in me to make any further remarks. It is only, however, after the lapse of some time, that the true value of a remedy can be ascertained. When it is first discovered, those who have faith in it are apt to look on it as the remedy of the age, and to use it on every possible occasion, too often rashly and unwisely; whilst those who do not understand or appreciate it, and who have seen its bad results when it was injudiciously applied, are inclined to deny its value altogether.

Perhaps the man of genius who first discovers a really valuable remedy, and whose intuitive skill will save him from some of the blunders of his less gifted brethren, is not so capable of judging how far it is likely to be successful in general practice, or of seeing the dangers which may attend its indiscriminate use, as

the man of ordinary ability who has carefully studied his own and his fellow practitioner's failures and successes. Surgeons all over the world are now called on every day to decide whether they will or will not use Sayre's plaster-jacket, in case of spinal disease; both surgeons and patients have in many cases a strong prejudice against it.

Having employed this method of treatment both in hospital and private practice, since Dr. Sayre's visit to Cork in 1877, with considerable success, I venture to make the following remarks as the result of my experience on the subject. I believe the prejudice to which I alluded, is caused by the fact that at first too much was expected from the use of the jacket, by practitioners who had not carefully studied Dr. Sayre's book. Unhappy results have certainly attended its use. These results have followed too severe extension of the spine in cases of caries, especially where ankylosis had already commenced. Serious injury has also arisen in cases of lateral curvature, from a too long continued use of the jacket, which produced atrophy of the spinal muscles, and consequent weakness, owing to the want of proper exercise.

The general impression of all surgeons with whom I conversed on the subject (an impression which I shared for some time), was that Dr. Sayre directed that the patient should be suspended until only his toes touched the ground. Now he does say in page 17, "The patient is to be gradually drawn up until the feet swing just clear of the floor," but he proceeds to add most emphatically a little further on, "Do not attempt the impossible: do not try to straighten curved spines, the result of caries, that have become partially or completely consolidated; do not break them up; but simply extend the patient very slowly, until the patient says he feels comfortable; and never extend beyond this point." This caution, more than once repeated, cannot be neglected without the most disastrous results ensuing.

It is an easy matter, in the case of an adult, to extend "until the patient says that he feels comfortable;" but with a young and often frightened child, it is extremely difficult to find whether his comfort is increased or not, except in cases of advanced spinal disease. I would suggest to the surgeon to use his own judgment, while extending, to watch the patient carefully, and to extend *just to the degree which* (when the jacket is applied) *will relieve the spine of the burden it has to bear, and no more.* I believe, as this advice is carefully followed, so will the patient be relieved, without any danger of producing an aggravation of his spinal mischief.

A young delicate child may be often best extended by having his hands held up, so that his elbows are level with the top of his head. The assistant who holds him up can keep the spine steadily extended in this manner while the bandages are being applied, if his own hands be supported by passing them through the axillary supports of the extension apparatus.

The extension apparatus which I prefer, is that manufactured by Cocking. The neck appliance, being of soft felt, does not hurt, and the head and the axillary supports can be regulated with the greatest nicety and ease.

At the Children's Hospital, we occasionally extend the children over the backs of two chairs, a pillow being placed under the child's shoulders and hips; the chairs are slowly separated to the required extent, and the bandages are easily applied. Hammock-extension I have found satisfactory with children; I had, however, the misfortune to injure an adult by its use; while

in the hammock, he suffered so much pain from over-extension that he had to be at once lowered. I suspended him according to Sayre's method the following day, and applied a jacket. This gentleman is now quite well, having constantly worn a cuirass for eighteen months. With any weight such as that of an adult, there is a tendency in the hammock to sag in the centre; owing to this, I do not see how the danger of over-extension with this appliance can be avoided.

While prolonged rest to the spine, procured by the continued use of the plaster-jacket, is essential for the successful treatment of Pott's disease, I hold that the long-continued use of any jacket in cases of lateral curvature (where caries does not exist) is injurious. Very many of these cases are best treated by means of self-extension without the aid of any mechanical appliance; but when the curvature is severe, in order to enable the patient to exercise in the open air without pain, some external support must be worn during the day. In treating these cases, I have found Cocking's felt jacket, or the plaster-jacket with a lacing arrangement, of great service. It is necessary to impress on patients suffering from lateral curvature the importance of suspending themselves as frequently as possible, and never less than three times a day. Before retiring to rest, the jacket should be taken off, and reapplied each morning, while the patient is suspended. This treatment, with fresh air and attention to the health, has always proved beneficial. With regard to extension, I have found it nearly impossible, on account of the trouble and expense involved, to make many of my patients use a neck suspension-apparatus, as recommended by Dr. Sayre; they will not take the trouble. I am more successful when I desire them to procure a piece of round timber suspended from the ceiling by a rope, just like a trapeze, from which to swing by the hands several times a day; this I can get them to do. They enjoy the exercise; but nearly all, more especially children, object to use the neck piece. Nevertheless, where the curve is high up, I insist on the neck-piece being used, and self-suspension practised, strictly according to Dr. Sayre's directions. With regard to the jackets, I believe that Cocking's felt jacket, if worn at night, becomes soft.

The plaster-of-Paris jackets, whether used for caries of the spine, or for lateral curvature, I generally cut down and lace, according to the method described by me in the *Lancet* of November 20th, 1880; by so doing, I can more readily arrange the pads, or remove any portion I think likely to press upon projecting parts. Jackets laced in this manner will be found even stronger than before they were cut, and they can be removed at intervals for the purpose of cleaning the patient. I seldom use a dinner-pad, but make my patients have a good meal before operating, I believe the hips are best padded by sewing two or more layers of thick flannel outside the skin-fitting vest; but I find that the less I pad my patients, the better their jackets fit. I have had much loss of time and disappointment with my plaster bandages. Sometimes a jacket would harden properly; sometimes, when I was most anxious to have matters all right, I found them to fail. At first I ascribed it to the dampness of our climate affecting the plaster-of-Paris, but no amount of care, with regard to keeping the plaster dry, appeared to improve matters. A short time ago, I came to the conclusion that the cause of the trouble existed in the bandage muslin. I had the muslin boiled, washed, and dried before I cut it into strips, in order to remove the dressing; the plaster-of-Paris was then well rubbed into it. It became very hard when wet, and made an unusually excellent

jacket. I am happy to say I have had no disappointment since, with any of the bandages prepared in this manner.

I have been so often annoyed with jackets failing to harden properly, that I adopted the plan of making a miniature test-jacket before operating. This can be done by rolling ten or twelve layers of wet plaster bandage round a pint bottle; when it has set, it is cut down longitudinally. In half an hour it will have hardened, and it will be known if the other bandages similarly prepared will give satisfaction or not. It may be well for me to add that the plaster-of-Paris, which adheres so persistently to the hands and nails, can be easily removed by rubbing them with a little moist sugar.—*Brit. Med. Jour.*

CORRESPONDENCE.

CONSULTATIONS WITH HOMŒOPATHS.

EDITOR MEDICAL GAZETTE—DEAR SIR:—In all the discussions on the homœopathic question I have not seen stated in a succinct and definite manner what is the essential and only true reason that prevents the regular profession from consulting with homœopathic practitioners. The legal profession and the laity at large should understand that we treat disease with water, electricity, lobelia, and belladonna as willingly as with quinine, mercury and the other so-called allopathic remedies. In fact that we employ any means that experiment and the experience of ourselves or others prove to be useful in the combat with disease, and that we are willing to consult and accept as regular practitioners of medicine any one who does likewise. The homœopaths, however, by assuming that title, represents himself, either directly or indirectly, as practising an exclusive system which rejects everything that does not act on the principle of "like curing like." The hydropath assumes, or pretends to assume, that water is the cure-all; the electropath that electricity is the panacea for all ills. As soon as these classes of practitioners drop the exclusive system of treating disease, and the title which leads people to *believe* that they practice an exclusive system, they become acceptable as regular physicians, are eligible to membership in our societies and can properly be met in consultation.

A civil engineer would certainly decline to recognize as a scientific confrere one who called himself a "gravity engineer," and would not, or cause people to believe he would not, employ any force except gravitation in building bridges, viaducts and railroads. The engineer or architect who used steam, horse-power, gunpowder and electricity, in addition to gravitation, according to his judgment would not be willing to have a "gravity engineer" associated with him, in the construction of an important public work.

This is exactly the attitude of the regular profession towards homœopathic, hydropathic and electropathic physicians, and the public should be shown that our position is not one of antagonism. READER.

FORMULARY AND POINTS IN PRACTICE.

FOR A CHILD ABOUT TWO YEARS OLD SUFFERING FROM CROUP. ALSO IN CASES OF INFANTILE PNEUMONIA.

R Potass. iodidi.....grs. 15
Tinct. assafœtidæ.....min. 90
Tinct. senegæ.....3 3.
Syrupi mori.....ad. 3 3.

M Sig. One teaspoonful, every two, three or four hours.

VERY VALUABLE IN STRUMOUS ENLARGEMENT OF THE ABSORBENT GLANDS.

R Ammonii iodidi.....grs. 3-15
Infus. cinch. flavæ.....3 1-2

Make a draught. To be taken twice or thrice daily before food. The dose is to be graduated according to the patient's age. At the same time an ointment of the iodide of ammonium grs. 60 to lard 3 1 should be rubbed into the swellings night and morning.

IN SYPHILITIC SKIN DISEASE, IN NODES AND FOLLICULAR INFLAMMATION OF THE PHARYNGO-LARYNGEAL MUCOUS MEMBRANE.

R Pot. iodidi.....grs. 60
Tinct. rhei.....3 1.
Ext. sarsæ liq.....3 2.

M Sig. A small teaspoonful in a wineglassful of water three times a day.

IN SEVERE GONORRHOEAL RHEUMATISM, TERTIARY SYPHILIS, SECONDARY SPREADING SYPHILITIC ULCERS, FROM THROAT, AND S. BOBULOUS SORES.

R Pot. iodidi.....grs. 30-120
Glycerini.....3 1.
Tinct. aconiti.....min. 20
Vini ipecacuanhæ.....3 2.
Succi taraxaci.....3 6.
Decoct. sarsæ. co.....ad. 3 8.

M Sig. One sixth part three times a day.

IN DISEASES OF THE STOMACH ACCOMPANIED BY THE FORMATION OF THE SARCINÆ VENTRICULI.

R Sodæ sulphitis.....grs. 30-60
Infus. quassie.....3 1½

Mix and make a draught to be taken three times a day. The patient should eat unfermented bread while taking this medicine.

IN IRITIS WHERE THE USE OF MERCURY IS CONTRA-INDICATED.

R Olei terebinthinæ.....3 1.
Vitelli unius ovi.....
Beat together and add gradually.....
Misturæ amygdalæ.....3 4.
Syrupi aurantii.....3 2.
Tinct. lavand. co.....3 4.
Olei cinnamoni.....gtts. 4.

Mix. Sig. Two tablespoonfuls three times a day.

IN DIARRHOEA DUE TO ACIDITY OF THE PRIME VIE.

R Tinct. lupuli.....3 6.
Tinct. card. co.....3 4.
Vini ipecac.....3 2.
Ext. opii liq.....min. 25
Misturæ cretæ.....ad. 3 6.

M.—Sig. One tablespoonful every two or three hours.

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EDITORIAL.

ANOTHER DROP IN THE BUCKET.

COLLEGE OF PHYSICIANS AND SURGEONS,
JOPLIN, MO., 5, 28, 1882.

GENTS.—Please send price list of *Doctors*, and *Druggist*. Names, by states as I want to mail several thousand Annual *Catalogues* to the *Profession*, all over the U. S. A. and Canada. I am starting an embryotic Pioneer—Medical College and I must, of necessity, nois it around to the world to make it pay me. An early reply will greatly oblige your Respectfully, &c.

J. C. PETIT, M.D., Dean.

The above monument of epistolary art, and record of the aspiring plans of a would-be medical teacher was recently received by the Publishers of the GAZETTE.

Its unique orthography, displaying as it does, the untutored mind of the author, untrammelled by the shackles of education, is a silent rebuke to the indifference of a public and profession which permits men of this stamp to usurp the functions of teachers, and teachers, of all arts, all sciences the most exacting, medicine.

It is refreshing to see the simplicity with which this would-be Dean unconsciously defines the purpose of his "embryotic pioneer Medical College," namely, "to make

it pay me." At what expense to good medical instruction, to the interests of his profession, or of humanity, his purpose will be accomplished probably has not occurred to him. But why rail at an individual instance of an evil that is above all else the stumbling block to good medical instruction, namely, the necessity which makes financial success the condition of existence for our medical colleges. As long as this is so shall not our most conscientious teachers be obliged to cater to the tastes of their patrons, the students, both in regard to the character and duration of the instruction. What stronger argument for endowed institutions and their independent instruction can be furnished than this alarming growth of so-called colleges, which are most often, as in this case, business enterprises, money making schemes, engineered by some ambitious but illiterate and unscrupulous person. Granted, you will say, that these colleges are doing untold harm. What are you going to do about it? What can be done to abolish them? Our answer is (and we believe it is the only solution to this question of "how to improve the quality and diminish the quantity of the annual production of Doctors"), found endowed institutions. We are aware that this way out of the difficulty is not a new one, that it has been over and over again suggested by the medical press and those who have given this question careful study. We are conscious that the objection made is the impracticability of securing endowed institutions. But why is this impracticable? Is it not because our medical teachers are not yet willing as a body to sacrifice the furtherance of their petty personal ambitions and unstable emoluments for the sake of uniting their talent and monetary influence and prestige, to combine the many small colleges into a few universities in which shall be gathered the best teachers in the land, and to which the student will go when the paramount advantages of such institutions are made apparent to him.

However, it is not our purpose to enter into a discussion of this much discussed question, but rather to publish to the profession this new venture in medical teaching while yet in an embryotic stage that it may never get beyond that stage; and to emphasize the necessity of early legislative action to put a stop to this new birth of colleges begotten by such uncultured adventurers, and nursed by public and professional apathy.

LECTURES.

PROLAPSE OF THE UTERUS.

BY

WILLIAM GOODELL, M. D.

Prof. of Gynæcology in the Med. Dept. of the Univ. of Pa.

I wish to begin the lecture with a few words on the subject of abdominal braces. Some years ago it was

considered the worst kind of quackery to use these appliances in one's practice. But of late the profession has undergone a change of opinion upon this subject, and there are but few physicians too fastidious to employ them when they can be used to advantage. I think that they do a great deal of good under certain circumstances. For instance, in the case of a woman with a bad anteversion or anteflexion, which it is impossible to treat with a pessary, a great deal of good may be accomplished by the use of an abdominal brace. There are three varieties of braces which are not patented, and these are, therefore, the ones which I would recommend. They are (1) the "London" brace, (2) "Fitch's" brace, and (3) what I think, if I remember aright, is called the "American" brace. They are all constructed upon the same principle. Other braces, again, are furnished, with a zinc plate in front and a copper plate behind, and so keep up a sort of constant electric current. I have used some of these with most decided benefit. In fact, whenever a patient tells me that she feels as if she needed some sort of abdominal support, a brace does good and should be advised. In some cases of retroversion and retroflexion a brace does great good. It does not remedy the malposition of the womb in the least, but it relieves the womb of the weight of the superincumbent viscera by narrowing the aperture of the pelvis, and in so preventing the viscera from resting upon the womb. Again, if a woman has lost the sigmoid curve in her spine, and so no longer preserves the obliquity of the pelvis—the axis of the trunk of her body being nearly brought into a position of coincidence with the axis of the superior strait—an abdominal brace will often act like a charm. In the normal pelvis the axis of the superior strait forms an almost oblique angle with the spine. When this angle has been lost, from excessive hard work or any other cause, the weight of the viscera, instead of falling upon the pubes, falls directly upon the womb. In such an instance the abdominal brace does good, (1) by restoring to some extent the obliquity of the pelvis, and (2) by affording an artificial support for the intestines. In some cases of anteversion I put in a Hodge or Smith pessary, and so succeed in raising the fundus of the womb above the pubic bone, and, when once raised to this position, what better method of keeping it off the bladder than by the application of an abdominal brace? This brings us to a consideration of prolapse of the womb. In prolapse, the womb is lower down than it should be in the pelvic cavity. Prolapses are usually divided into two classes, (1) procidentia, and (2) prolapse proper. By the first term we understand a complete falling down of the womb, and by the second merely a sinking down of the organ. Some authorities just reverse the meaning of these terms. However that may be, I do not regard these terms as sufficiently accurate, nor do I altogether fancy the division which some have adopted of complete and incomplete prolapses. I am in the habit of dividing prolapses into three varieties: (1) *Simple*, where the womb sinks down below its proper level, but is not enlarged, and, if we may use the expression, comes down of its own fault. (2) *Prolapse from elongation of the infra-vaginal portion of the womb*,—that portion which we can feel by inserting the fingers into the vagina. In this variety of prolapse, which is, in reality, no prolapse at all, the os externum is close to the perineum, or protrudes from the vulva; the cervix is enlarged, but the womb is of natural size. These cases are rare, but we see them every now and then. The third variety is, *the prolapse from elongation of the supra-vagina portion of the womb*. In this variety the os externum projects

from two to four inches from the vulva, and bears a strong resemblance to the pelvis of a horse. The first variety, then, is the simple descent of the womb, together with its furniture of ovaries and ligaments. In this descent the womb is usually within the vagina, but we sometimes find it outside. Let us take, for example, an old lady who has grown thin and lost her padding of fat, which is about the womb and that helps to keep up the vagina, which, unsupported, becomes lax and flaccid. This old lady is seized with a bad cough, or stoops down to lift up a heavy scuttle full of coal, her diaphragm is forced down, and the first thing she knows, out pops her womb; or it may have fallen down as a result of the excessive vomiting produced by seasickness, or may have been the result of some injury received by the woman, who, perchance, has been knocked down or trodden upon by a drunken husband. We generally find this variety of prolapse occurring in old as distinguished from young women. Simple prolapse is very easy of diagnosis. You will find, upon examination, a pear-shaped small tumor projecting from the woman's person—not much larger than the normal womb—which can with the fingers be entirely circumscribed. Then, too, the vagina will be found to have disappeared, and you can take your sound and pass it up into the womb. I do not think it is possible to make a mistake in such an instance. These cases are troublesome by reason of the flaccidity of the vagina and vulva. The vulva has, perchance, been torn by numerous labors and the perineum weakened by the same cause. The cases are hard to cure by the use of instruments. We cannot often derive much benefit from the use of the Smith pessary in these cases: it is so likely to be forced out. There is no means of keeping it up above the pubes. The Hodge pessary is much better, that is, if you are careful to insert it with its big curve below, and, in this way, to get it behind the pubic bone. A woman suffering from this condition of affairs must not lift heavy weights, and must hold her clothes up by means of shoulder straps. If the Hodge pessary, put in wrong end foremost, does not answer the purpose, you had better use Goddard's pessary with cup and bowl. Spooner's modification—a sort of hybrid pessary—will keep the womb up, if it is tied in position, but it has its disadvantage. It is but too liable to give rise to ulcerations in the posterior wall of the vagina. In such cases I prefer to remedy the difficulty by making a good, new, thick perineum. Simple prolapse is only met with in young women, when the womb is enlarged or the cervix lacerated. The treatment consists in making applications to the womb to lessen the endometritis and metritis and in putting the patient to bed if she is a young woman. Old women you cannot cure by the bed treatment. A good local application is the tincture of iodine, or the use of vaginal suppositories containing gr. v. of tannin. Occasionally, in these patients, the vagina and womb will be found to be very sensitive. In this case you will be obliged to pack the vagina behind and before the cervix with oakum. This brings us to a consideration of the question of *hypertrophic elongation of the infra-vaginal cervix*. I have brought several cases of this nature before you, but they are very rare. A conical cervix gives rise to sterility and dysmenorrhœa. These are symptoms often met with. This elongation of the cervix may be either an acquired or a congenital affection. The diagnosis is made by passing the finger up the vagina, and sweeping it round to see if the womb is inverted. This error may be most conclusively eliminated by passing the sound. A hypertrophic cervix so projects into the vagina, that you might

suppose it, at first blush, to be a polypus, but a polypus has no cervical canal. Cases of elongated infra-vaginal cervix projecting from the vulva are rare. I have seen only *seven* thus far. The cases in which the cervix is an inch or more long are, however, common. There are two ways of treating conical cervix, (1) by forced dilatation under ether, or (2) by bilateral incision. This latter operation is performed by putting the scissors inside the os and cutting each side of it up to the junction of the cervix with the vagina. Some do this with the hysterotome, but as one blade of this instrument is likely to be sharper than the other, it will cut too much on one side. The great objection to this operation by bilateral incision is that we may have all the advantages consequent upon a laceration of the cervix and that we may be obliged to sew the incision up again. The womb, is however never enlarged as a result of this operation, as is the case in lacerated cervix. I usually treat hypertrophically elongated or conical cervix, by dilatation. I have in several instances, performed lateral incision, but I have fortunately never been obliged to subsequently sew up the incisions. I suppose my immunity has been due (1) to the fact that I very rarely incise, and (2) that I have never had the misfortune to have my cases become pregnant just after the operation. But I suppose that the cervix is so enormously hypertrophied as to fill up the whole vagina and seriously interfere with coition. In such a case the operation necessary is amputation with the scissors; or, if you are afraid of excessive hemorrhage, you may cut the end of the cervix off with a hot wire. I do not think that there is much danger of hemorrhage in these cases. I prefer the scissors, and I may cut it directly off with them, or I may slit it up in each side, and cut off each lip separately. I usually cut it off, or them off, about three quarters of an inch from the vaginal junction. If you allow this wound to heal of its own accord, the resulting cicatrix is very likely to give rise to dysmenorrhœa and endometritis. This tendency I remedy in this way. After amputating the elongated portion of the cervix, I pass my needle in at the edge of the cervical canal and carry it through to the vaginal surface of the stump, and so proceed radiating my stitches like the spokes of a wheel. Then, after putting in these stitches all the way round, I tie the ends of the wire together. Calling the vaginal mucous membrane of the cervix, the *vagina mucosa*, and the cervical mucous membrane, *cervical mucosa* you understand me as saying that I unite the *vaginal mucosa* and the *cervical mucosa* by means of radiating stitches. I unite these loose ends of wire either by twisting them or clamping them with shot. When we meet with elongated infra-vaginal cervix in virgins, or in sterile women, it is usually either a congenital condition or the result of some congenital condition. The most confusing and perplexing variety of prolapse is the (3) *hypertrophic elongation of the supra-vaginal portion of the cervix*. No two gynæcologists exist who think alike on this subject. My own idea is that supra-vaginal elongation occurs generally in women who have had children, and very rarely in virgins. We find a tumor projecting from the woman's person and resembling the penis of a horse. The pendent mass is much larger than the male organ. This condition ought never to be mistaken for anything else. You should set out by trying to find the vagina which is, in reality, inverted—there is, in other words, no vagina. Then pass your sound up, and just here I may tell you that very often, when you have passed your sound up, three inches or so, in these cases it will stop, and you will have to coax it and bend it for some time until it

will not go any further. I give you this warning that you may not think you have touched bottom, when the sound shows only three inches. I have had measurements of seven inches. The bladder is almost always prolapsed in these cases and may come all the way down to the os externum. Beside the bladder there are two other important organs in the tumor. Douglas' pouch is closely attached to the womb, and often falls to the level of the os externum. So, too, with regard to the anterior pouch of the peritoneum, *i. e.*, both the utero-vesical and utero-rectal pouches are dragged down. Here is the position of the posterior pouch in this painting. For, see, it has fallen away down. The anterior pouch is not usually as low down as the bladder. In a recent case in which I performed amputation, I entered the anterior pouch and not the bladder. In that instance there must have been some malposition of the parts. Let me recapitulate the diagnostic guides in these cases: the cervical canal is greatly lengthened, there is no vagina, and the bladder is very much prolapsed, as you may determine by passing the sound into it at right angles with the axis of the body. Why do I speak of elongation of the supra-vaginal portion of the cervix? The vaginal cervix is enlarged literally, but not elongated. That part which is elongated is the portion of the womb or cervix lying above the vagina. The womb, as you all no doubt know, is divided into three portions—the corpus or body, the neck, and the isthmus (between the corpus and the neck). The isthmus is only about one-third or one-half of an inch in length, and is not united to the bladder or surrounded by the vagina. Two-thirds of the cervix are covered by the fibres of the vagina. If you suppose a constant state of traction you will have elongation as a result of the dynamical force below, in the shape of an elongated cervix pulling down, and the static force above, or broad ligament. I give you a very fair illustration of what takes place when I speak of candy-pulling, in which you know it is not the ends but the intermediate portion that is spun out. What is it which pulls out this intermediate portion? Some say, hypertrophy; if by hypertrophy alone, why is it no larger than my index finger? It looks to me very much as if it were a result of traction. I think that the majority of gynæcologists hold to the traction theory. This is the way in which I explain the process: a woman suffers from laceration of the cervix in labor; involution is arrested; the womb becomes flaccid and ductible; the vagina, which has been hypertrophied, ought to take on involution, but the same causes do not affect it which affect the womb; the perineum is, perchance, functionally weak; the vagina pulls down the neck of the womb and bladder. The moment the little pouch of bladder comes down, every effort at micturition or straining pulls the bladder further down, hence a constant state of traction upon the cervix, which causes congestion, and consequently superabundant nutrition, or hypertrophy of the parts, rendering them still more plastic and ductible. This is what will take place if the broad ligament holds fast. In cases of ovarian tumor, however, I have seen exactly the reverse occur. There the vagina was the static force, and the tumor, pulling up, the organic force—the vagina taking on precisely the same state of hypertrophic elongation. There ought to be no blunder made about diagnosis here. In most cases the fundus is nearly in its normal position. Once in a while there will be complete prolapse; the broad ligament gets tired out and gives away, and then the cervix looks more like the snout of a pig than any thing else. The

womb is turned over, and the cervix projects like a snout. In these cases, too, you can circumscribe the whole tumor between four fingers and the sound. These cases are rare. Having diagnosed the condition, what is the rational treatment? Evidently something which will give rise to the involution of both vagina and womb. How is this to be accomplished? By producing a raw surface which shall take on retrogressive nutrition. If you cut off the end of the cervix in these cases, the vagina behaves exactly like an overstretched rubber band—*i. e.*, it springs back. After you have amputated, Spooner's and Goddard's pessaries will keep the womb up, but they give rise to so much pain that the woman goes about the street wearing a simple T bandage. There is no support which can compare with this. You will rarely succeed in curing these cases. They are not often met with among the higher walks of life, but among cooks or washerwomen who stand on their feet a great part of the time and lift heavy weights. Being prevalent among the poorer classes, you cannot put them to bed, for if you could put them to bed and operate on the cervix, and use pessaries of tannin and opium, and intra-uterine injections of hot water, you might cure them, but this is not possible. I have often operated and failed. My most successful cases have been those in which I have brought on marked retrogressive metamorphosis, by amputating a considerable portion of the elongated cervix. I always insert my little finger into the bladder in these cases, so as to avoid cutting into it. With Douglas' pouch you have to take your chances. You will invariably cut into it at some time or other during your life. Only last year I cut into Douglas' pouch, but fortunately the woman recovered. I cannot but think that a great many fatal cases have occurred which have not been reported. Still, on the other hand, I think that the peritoneum has been overrated, and that we are much more afraid of injuring it than we need be.

ORIGINAL ARTICLES.

INFLAMMATION OF THE TYMPANIC CAVITY, OR EARACHE.

BY

OREN D. POMEROY, M. D.,

Surgeon to the Manhattan Eye and Ear Hospital, New York.

The expression earache conveys the most striking idea of the prominent characteristics of this disease. It is extremely painful. The patient is attacked with considerable suddenness, although if the source of the trouble is the throat, there may be pain in that part preceding the pain in the ear, which rapidly passes up the Eustachian tube to the middle ear. The character of the pain is that of a feeling of fullness in the ear; this is further aggravated by the heart's impulses, which give a *throbbing* character to it. This may continue for from one to several hours, when rupture of the membrane and discharge of pus, mucus, serum, or blood, or all combined, give tolerably complete relief to the patient. If no treatment is employed, the pain may recur every day, or more likely at night, for several days or even weeks, as has been observed. This pain is aggravated by a horizontal position of the body, and the patient suffers less sitting upright. The whole side of the head may be painful, and the region about the auricle quite tender. There may or may not be constitutional systemic disturbance. In severe cases

there will be fever, elevation of the temperature, sometimes delirium, and in cases of children, convulsions; the symptoms somewhat resembling brain disease. The discharge varies in quantity and quality, with the severity of the attack. If it is mostly purulent and excessive in quantity, the name *purulent otitis* is given to the disease; if pronouncedly mucous, it partakes more of the nature of *catarrhal otitis*; if blood is the principal characteristic of the discharge, then it may be called *hemorrhagic otitis*. In much milder cases, with less pain and discharge, and the latter principally composed of serum, then it may be called *serous otitis media*. This discharge usually continues until the membrane is healed, which may be from three to four days to as many weeks, provided the disease becomes cured during the acute stage. If not, then it goes on as a chronic otitis. *Tinnitus aurium* is always present. The voice of the patient is heard with unpleasant distinctness in his own ears (autophony), and has a very unpleasant hollow sound, the patient having a bewildered stuffy sensation in his head. Previous to the relief of the pain the patient may have prolonged crackling, snapping or hissing sounds, which dart with sharp pains through his ears, but which diminish the throbbing pain at each exhibition, until relief is soon experienced. The hearing at the outset may be preternaturally acute, and loud noises may even be painful. Subsequently it may be so reduced as not to be able to detect the loudest conversation. The tuning-fork may be heard best in the worst ear, unless the tympanum is filled with inflammatory products, or so hyperæmic as to interfere with vibrations, when it is likely to be heard best in the best ear. On inspection, the membrane may not be visible on account of swelling of the canal, which often obliterates it. When plainly visible, before the discharge, it will be partially or wholly reddened. In the latter instance it may look like raw beef; in the former, the injection may be along the malleus handle, including the region of the short process, or the periphery may also be injected. If the tympanum is full of fluid and bulging, it will appear so; both sides of the malleus handle may be pushed out, leaving a heavier depression at the malleus handle, but the more usual site of the protrusion will be in the superior part of the membrane, and will give it the appearance of merging into the wall of the meatus. After the discharge, the membrane will look dull, whitish and sodden, from the maceration of its dermoid (outer) layer. If this is wiped off with cotton-wool—for it is often half detached—the membrane will be seen to be somewhat red. Perforations in recent cases may frequently be seen, but as they are often but a fissure in the membrane, and even if there were loss of tissue, the swelling of the membrane would be likely to close them. If the tympanum is inflated, air may be blown through the aperture (perforation whistle), or fluid, which completes the diagnosis. If there is pulsation of the membrane, probably there is perforation. If after cleaning the ear with absorbent cotton, it soon grows moist, probably there is perforation; or if after cleaning the ear, a light reflex is seen, there is almost certain to be a perforation. In general terms, when the patient has had severe pain, followed by a profuse discharge, there has been a perforation. The diagnosis is not difficult. Severe throbbing pain in the ear, with lowering of the hearing, tinnitus aurium, autophony and swelling of the meatus, are diagnostic; but all these symptoms may not be present in a given case. A pain in the ear from carious teeth, may simulate otitis; but absence of redness of the membrane, hearing good, and no other ear symptoms, will exclude ear trouble.

In children there will be difficulty; brain symptoms will simulate ear trouble, and inspection of the membrane will be required to make the differentiation. When the discharge makes its appearance, then doubt is usually set at rest. It may be well to apply the test of *smell*. If there has been even the smallest amount of discharge, it may be detected by the odor.

The prognosis is usually favorable; the principal trouble is, it may involve the brain and destroy life, or cause a mastoid trouble of an obstinate nature, or go on to the stage of chronic suppuration with production of polypi, carious bone, cerebral abscess, &c. The cases dependent on scarlet fever are more likely to make a bad recovery. The causes are, taking cold, with sore throat, and the passage of the inflammation up the Eustachian tube to the middle ear, or exposure of the ear directly to cold is sufficient. All of the exanthemata are liable to give rise to ear trouble and whatever causes an inflammation of the naso-pharynx may excite an ear trouble. All forms of violence inflicted on the drum membrane or cavity may excite this disease. Concussions from explosions, when the air suddenly strikes the ear, may give rise to the trouble. This naturally includes cannon firing, etc. A box on the ear may do it by suddenly compressing the air in the meatus, sea bathing, from cold water applied to the ear, and even getting it into the tympanum, from taking the water into the mouth when it passes up the Eustachian tube. The nasal douche used unskillfully, and we fear too often when used with precaution, may give rise to this affection. *Treatment*.—

The pain is the first point to be considered in treatment. One to three leeches applied to the part, face of the tragus, is the best plan to begin with. If the leech takes hold of any point about the orifice of the meatus it will do, but in the rather firm cartilage of the concha inflammation may result from the leech bite; occasionally the leech will aggravate the pain, when a hypodermic injection of morphine may be administered, which acts as a true anti-phlogistic, as well as an anodyne. Leeches may be repeated if necessary every day or two as long as the pain or feeling of fullness continues, but do not depress the patient by too much abstraction of blood. Milder measures of relief are dry hot applications; as a rubber bag or glass bottle of hot water, the temperature being adjusted to the comfort of the patient. Water too hot or too cool will aggravate the pain. Common salt heated and placed in a bag gives relief. Moist applications relieve the pain, but if continued too long will macerate the parts, predisposing to otorrhœa and otherwise doing harm. A roasted onion applied to the ear often acts well. The patient had better sit up rather than to lie down, as the throbbing is not so severe. In children, a little paregoric on cotton is serviceable, or even Majendie's sol. of morphine may be cautiously used. A bit of cotton with black pepper wrapped inside of it will warm up the parts and relieve pain. Let it be tried on an adult first so as to prevent excessive burning. Atropine gr. iv. to the ounce of water may be dropped into the ear very cautiously. If there are any signs of poisoning, the pupil will dilate soon enough to give warning. This is also good in adults. Steam blown into the canal will relieve, so will vapor of chloroform.

If on inspection the membrane is convex or from any other signs there appears to be a collection in the tympanum, paracentesis will be more appropriate to the relief of pain than leeches, besides being in a general way more rational treatment. For this purpose a broad needle from an ophthalmic surgeon's case, will be the best instrument, If the shank is extra long it will be

all the better. Poise the instrument over the most protruding portion of the membrane, and approach very near to it, for the ext. canal may be pricked instead of the membrane, and by a gentle thrust push the instrument forward until it touches the bony wall of the tympanum. If the instrument is held closely in the fingers it will be less likely to make a violent thrust. If no discharge follows the puncture, then inflate. By inclining the head to the same side as the affected ear, all the discharge may be blown out. This operation may be repeated every day or two until there is no longer any collection. If after a puncture there is a relief to the ear symptoms and the old symptoms recur after a few hours or days, another collection may be suspected.

After the pain is subdued, keep cotton wool in the ear, and remove it as often as it becomes moistened. After two or three days, the drum cavity should be inflated and if the discharge does not show signs of lessening in from four to six days—in the meantime the ear being kept clear by injection and syringing with warm salt and water (3 i to the Oj) and carefully wiped out and dried once or twice daily,—we may begin astringents. Plumb. acet. gr. ij. t. v. to the ounce of water, poured into the ear twice daily, after syringing. (Syringe very gently so as not to cause a return of the throbbing pain). Arg. nit. of the same strength used in the same manner may be recommended. Acid carb. 3 i to Oj. of water may be used in the same manner; the latter is disinfectant. A great variety of astringents may be used, but none should cause excessive pain or make the ear throb afterwards. If the discharge does not disappear after this treatment, fill the canal with finely powdered boracic acid, let it be well packed in by means of the cotton, on a holder, and allow it to remain until the discharge moistens it, when it may be syringed out and renewed. Stronger solutions of arg. nit. may also be used, running up to 80 or 100 grs. to the ounce, provided the ear has shown a toleration for such applications.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, JUNE 1st, 1882.

The President, Dr. Fordyce Barker, presided. The minutes of the preceding meeting were read and approved. Dr. Barker stated that through an error of the chair a paper read one year ago was announced to be read this evening. Dr. Lente, who was to have read a paper, was prevented from doing so at the last moment by the non arrival of his manuscript. The chair further stated that he was happy to announce that Dr. A. B. Judson would fill the evening by reading his paper entitled

"SOME PRACTICAL INFERENCES FROM THE PATHOLOGY OF HIP DISEASES."

The following is a brief resumé of Dr. Judson's paper: The beneficial effects of the application of traction to a joint in the stage of acute inflammation were first alluded to and typical cases narrated, showing how the most acute pain was often instantaneously relieved by traction. As a matter of fact, most cases of acute inflammation of the joint, were, at least in this city, treated by traction. The rationale of such treatment being usually accounted for by the theory that traction

counteracted the effects of pressure on the diseased articular surfaces, pressure induced by the contraction of the muscles.

It was just this point he proposed to discuss, namely, whether the action of the muscles were a pathological element in the production and maintenance of hip-joint disease. Is muscular action a menace to the tissues in hip disease?

Dr. Judson mentioned many authorities who had discussed this question; among them John Hunter, Marshall Hall, Maisonneuve, L. A. Sayre, Henry Davies etc. Drs. Sayre and Davies were perhaps the most extreme advocates of the view that muscular action was the great element in hip disease.

When it was said that muscular action provokes disease of the articular surfaces, it might be said that it was arguing in a circle to say that diseased articular surfaces provoked abnormal muscular action. Barwell in alluding to this point said "it is a circle but nature's own not mine."

C. Fayette Taylor, C. F. Stillman and others had in their published writings admitted the existence of this vicious circle.

On the other hand the tangible facts of morbid anatomy, and the tables of exsection of the joint for hip disease, showed that in far the larger proportion of cases the acetabulum was healthy. As this portion of the articular surface could not escape the diseased action, if this were brought about by muscular contraction, its freedom from implication throws a dubious shadow on the theory of the prevailing importance of muscular action in hip disease.

Dr. Judson here quoted at length from Sir Benjamin Brodie, V. P. Gibney, Symes, Bryant, Cootes, Newton M. Shaffer, Barwell and others in proof of the statement that there was no evidence that hip-joint disease began by an injury to the joint, but that on the contrary the weight of authority and the results of *post-mortem* examination supported the view that it began in disease of the bone itself; not in the soft parts. Illustrations of joints from plates by Volkmann, Barwell, Holmes, Sayre, Stillman and others were shown to the Academy in support of this view.

The next stage of hip-joint disease, that of ulceration, was next discussed by Dr. Judson. He inquired if there were any proofs in this stage of the importance of muscular action as a factor in the production of hip disease, and concluded from an analysis of this stage that there were none.

The articular surfaces instead of being the first seat of ulceration were the last. The bearing of this fact on the argument was evident. When the articular surfaces are found involved it is apparently secondary to disease of the internal parts and much less in extent than the internal parts. Dr. Poore, Dr. Gibney and others had reported cases in harmony with this view.

He would conclude, therefore, that lesions of the articular surfaces were less important than those of the underlying tissue, that the morbid action proceeds from within outwards, from the centre toward the periphery, and is not therefore dependent on muscular pressure. It is true the effects of pressure were seen in the alteration in the shape of the extremity of the femur, but this change in shape was at the expense of the cancellated, not the articular tissue.

In the third stage all the surfaces are thoroughly diseased. If the action of the muscles is provocative of disease in this stage we would expect the tissues to give way under it. If the femur were propelled by a force equal to that of the many pounds employed to

counteract the supposed force of the muscles we would expect in the third stage to have the diseased tissues give way.

In conclusion Dr. Judson said: "We have thus, and all too hastily, reviewed the pathology of hip disease. We fail to find any evidence of the importance of muscular action as a factor in inducing this disease, and therefore discredit it. As regards traction, the rationale for its use is sufficiently clear without seeking to account for its results by the theory of muscular action. It is this:—traction causes fixation and it is from fixation that we obtain the good results that follow the application of traction."

Dr. V. P. Gibney in discussing the paper said: "The paper just read is full of instruction to me and must be so to every member of the profession. The author has presented a most important question in a most thorough and interesting way. Not only has he gone fully into the literature of the subject, and given us theory, but he has also presented the pathological facts. The deductions drawn are most important. There are various kinds of hip disease and the tendency of specialists is to classify them. By hip disease I mean epiphysitis or a bone disease from the beginning. We have such affections as peri-arthritis and neuroses of the hip, mistaken for hip disease. The value of immobilization in the treatment of hip disease can not be over-estimated. The author's views of the rationale for traction are also mine."

Dr. T. E. Satterthwaite said there was a single point in the etiology of the disease he would call attention to. Some time ago when Dr. Gibney and he were studying caries of the ankle-joint they were impressed with the fact that the disease originated in the interior of the bone. It would occur in a number of joints at the same time. The constitutional origin of the disease was brought out very emphatically. In all probability further *post-mortem* examination of joints will demonstrate that the disease originated in the interior. Dr. Judson closed the discussion.

Drs. T. F. Healey, R. C. Brandeis, J. B. White and A. E. McDonald were elected Resident Fellows of the Academy, and Alfred Baring Garrod, M.D., F.R.C.P., F.R.S., London, and J. Crichton Browne, M.D., London, were elected Corresponding Fellows. The Academy then adjourned.

HOSPITAL RECORDS.

NEW YORK HOSPITAL—NEW YORK.

SARCOMA OF FOOT—AMPUTATION

SERVICE OF

GEORGE A. PETERS, M. D.

Patient D. D. Native of U. S., æt 25, single, seamstress. Admitted to the Hospital Sept. 18th.

Patient was treated for sarcoma of the foot in this hospital during the past winter, the tumor having been removed Jan. 21st, 1880. She had the trouble two years ago and thinks it was caused by wearing a stiff slipper which she says bruised her heel. The tumor returned after operation and is now about its original size. One ulcer remained unhealed near the ankle where the drainage tube emerged. She was discharged May 6th, 1880, but returns to-day for further treatment, complaining of much pain and inability to use her foot.

Admission.—General condition good. No cancer-

ous cachexia. No enlarged glands. All organs of body, on examination, found healthy. The right foot is the seat of an abnormal growth. The pain, which is severe and persistent, has never extended beyond the ankle joint. Deformity and swelling slight.

Sept. 19th.—Ordered leeches around the ulcer and blister on heel.

Sept. 22nd.—Pain still severe; ordered ung. stramonium to foot.

Oct. 9th.—*Operation.*—Ether, dorsal decubitus, parts shaved, washed in carbolic solution 1-20. Leg amputated in middle one-third, lateral flaps made; flaps coaptated with carbolized silk sutures. Fenestrated drainage tube. Lister dressing applied and patient sent to ward.

Oct. 11th.—Dressings changed.

Oct. 19th.—Dressings, drainage tube and sutures removed. Highest temperature to date 100.2°. Primary union. Lister dressing re-applied.

Oct. 30th.—Dressed small superficial ulcer which is all that remains of wound.

Nov. 2nd.—Patient sitting up. Ulcer completely healed.

Dec. 13th.—Discharged cured.

Pathologist's Report.—Beneath the cicatrix and extending thence backward and forwards over a space irregularly circular with a diameter of $\frac{1}{2}$ inch is a new growth. It is very soft and friable, of a reddish gray color and contains numerous small spots of hemorrhage. It lies beneath the skin and spreads thence deeply downwards, involving the sheath of the tendons. On the outer side of the foot, just below the malleolus, is another mass of similar material about as large as the end of one's thumb which bears the same relation to the superficial and deep tissues as does the growth on opposite side of foot. Underneath the os calcis is a mass of the same tissue three or four times the size of that last described. It invades the tissues of the bone at one point to the depth of $\frac{1}{4}$ inch. These masses of new growth are discrete, being separated by an area of tissue to all appearances healthy. The tissue of the new growth, examined microscopically, is found to be very rich in spindle cells and in small oval cells.

CONCUSSION OF SPINE.

SERVICE OF

ROBERT F. WEIR, M. D.

W. C. æt. 28: Truckman; admitted to the hospital Feb. 9th, 1881. Patient fell from his truck this evening, striking on the back of his neck and shoulder. Brought from house of relief at 9 P. M.

Admission.—Conscious; moves all extremities, but complains of numbness and formication in both upper and lower extremities. Had marked loss of power in legs directly after injury, but now has nearly regained normal power. Pain over middle dorsal and cervical vertebræ, also pain on moving the head. Pressure over the first dorsal vertebræ develops pain in the hand; no loss of power, pupils normal.

Feb. 11th.—Slightly delirious to day, slight tremor of muscles and restlessness. Less backache and less rigidity of head. T. 99.2.

Feb. 12th.—Suffering from delirium tremens.

Feb. 13th.—So noisy and restless, had to be removed to cell. P 140, T. 101°. Ordered tr. digitalis, gtts. x every two hours, and spts. vini rect. $\frac{3}{4}$ i. every two hours. Chloral in 20 grs. doses and hyoscyamine grn. 1-20, hypodermically given, without effect. Tre-

mor very marked. Tongue coated. Complaints of insomnia.

Feb. 15th.—Condition to-day much better. Less delirium, pulse stronger and less rapid. Rational almost all the time. Ordered to be taken to ward and to take liq. ferri dialysat. $\frac{3}{4}$ ss. once a day and tonic Hamil. $\frac{3}{4}$ j. twice a day.

Feb. 25th.—Except some weakness and pain over dorsal vertebræ, patient is doing well. Allowed up.

Feb. 26th.—Cautery applied over whole length of spine.

Feb. 28th.—Discharged cured.

SELECTIONS FROM JOURNALS.

A CASE OF ABLATION OF THE FUNDUS OF THE UTERUS, BY THE ABDOMINAL SECTION, BEING A MODIFICATION OF PORRO'S OPERATION.* By LOMBE ATTHILL, M. D., Master of the Rotunda Hospital, Dublin.

The operation for the removal of the entire uterus, when the seat of malignant disease, introduced by Freund, has been successfully performed on several occasions. Still, however, so far as can be judged from the imperfect records we possess (for I believe several unsuccessful cases have not been made public), the results have not been encouraging; nor can this be a matter of surprise when we remember that this operation, which involves the removal of an organ situated deep in the cavity of the pelvis has to be performed on a patient the subject of cancer, and consequently in a condition most unfavorable for undergoing it, without taking into consideration the risk of wounding important organs during its performance. Thus, in addition to the evident danger of wounding the bladder or intestines, it appears, according to a statement made in the *British Medical Journal*, that in two cases recently operated on by experienced London surgeons "One or both ureters were cut or tied" during the operation. Still, as a painful death awaits the subject of this terrible disease, not a few will be found ready to run the risk of a speedy death, on the chance of a favorable result occurring. Therefore, I believe, the operation will continue to be performed, and accordingly I hold it to be the obvious duty of every surgeon to give a full and true account of such cases as come under his care, no matter whether the results be favorable or the reverse.

Acting on this principle I shall lay before the Society the details of a case in which I recently removed the greater portion of a cancerous uterus by an operation, which, though being in point of fact, a modification of Porro's, bears directly on the question of the propriety of removing the entire uterus when the seat of cancer. The case is specially interesting as being an example of epithelioma attacking the inner surface of the uterus, the cervix being healthy, a matter of rare occurrence. It is, moreover, the first occasion in which the operation has been performed in Ireland.

In the first place, it is right to point out that Porro's and Freund's operations were suggested with totally different objects. Porro advocated his as a substitute for the Cæsarean section on deformed women, or on women in whom some obstruction existed, which rendered the birth of a living child impossible, the uterus however, being healthy; Freund, on the other hand, had in view the removal of a cancerous uterus. His

*Read before the Surgical Society of Ireland.

operation has been performed in two ways, viz., 1. By the abdominal section; and 2, *per vaginam*, the attachment of the bladder and vagina to the uterus being carefully separated from below, the uterus then being drawn down to the broad ligament, ligatured and severed—these steps, of course, being reversed when the abdominal section is preferred.

E. C., a married woman, æt. 58, the mother of one child, now 24 years old, was admitted into the Rotunda Auxiliary Hospital, on the 3d of October, 1881. She stated that she was a member of a healthy family, that she had emigrated to America when a young woman, had married while there, and returned to Ireland twenty years ago; while resident in America she had suffered from fever and ague, but not severely.

For many years menstruation had been irregular and scanty, but never painful, and it finally ceased to appear when she was 50, that is eight years ago, subsequently she continued to enjoy her ordinary health till September, 1880, during which month she observed one day some drops of blood on her linen, on the next day a gush of blood came from the vagina, and from that time she had never been free from a sanguineous discharge. This, usually scanty, occasionally became very profuse. At first she did not suffer pain, but felt very weak, and noticed that she was unable to retain her water for any length of time; if she attempted to do so it trickled away. She continued to work, however, till July last, she then began to suffer from severe pain, of a darting, or lancinating character. This seemed to originate in the left ovarian region, to extend downwards along the course of the Fallopian tube to the groins and down the inside of the thigh, as well as to the uterus. She described the pain as coming on in paroxysms, at somewhat regular intervals, commencing at about 2 p. m. each day, and passing off towards the evening. These paroxysms were generally accompanied by the expulsion of some clots, and were relieved by the occurrence of the sanguineous discharge. These attacks gradually increased in intensity and duration; so that prior to the operation they came on before noon, and lasted till late at night, unless cut short by the hypodermic injection of morphia, a grain of which drug was then required to deaden the pain. No higher elevation of temperature or frequency of pulse preceded or accompanied these paroxysms, and no drug, except morphia, administered hypodermically, had any effect in retarding the advent, or lessening the intensity, of these attacks.

When examined on admission, the os uteri and cervix were found to be perfectly healthy, the fundus could be easily felt through the abdominal walls, the patient being much emaciated, and a bi-manual examination showed that it was much enlarged and inclined forward; the sound however passed only to the depth of two and a half inches, its introduction caused much pain, but pressure on the cervix or on the fundus did not do so.

I felt considerable difficulty at arriving at a correct diagnosis in this case. The occurrence of a constant hæmorrhagic discharge in a woman of nearly sixty, and the great pain and emaciation which accompanied it, made me suspect the existence of malignant disease, but on the other hand that any form of cancer could have existed for more than a year and a half without its having implicated the cervix or extended to the adjacent parts was doubtful. Then the paroxysmal nature of the pain, and the relief experienced on the expulsion of clots, seemed to indicate that there was something in the uterus which that organ was endeavoring to expel. I, therefore, thought it probable that

there might be some extra-uterine growth which was the cause of her sufferings, and which it might be possible to remove. Acting on this view I dilated the cervix uteri, this process caused her a good deal of pain, but on passing my finger into the uterus I was disappointed to find that nothing like a tumor existed, the inner surface of the uterus felt rougher than usual, and the walls were thicker, but this was all; I accordingly contented myself with brushing over the whole interior of the uterus with fuming nitric acid. For a few days after this she seemed better, but soon relapsed into her former unsatisfactory condition.

I now became convinced that the patient was the subject of malignant disease of the fundus of the uterus which would terminate fatally, and accordingly told her that nothing more could be done unless she submitted to excision of the womb, by an operation which was of the most hazardous nature, and the success of which was very doubtful. She at once replied that she wished the operation performed, for that death was preferable to the life of pain she led. I further told her that the risk must be explained to her husband and his consent obtained. I mention this to show that the patient and her family were fully alive to the danger she would run, for, with respect to this operation, the result of which is so very doubtful, I hold that the surgeon should merely give his opinion, and leave it to the patient and her friends to decide whether it will be acted on or not.

The patient being most urgent that the operation should be performed, I lost no time in making the necessary arrangements, and having again made a most careful examination, I decided to remove the fundus of the uterus just above the insertion of the vagina, in preference to removing the entire organ, because I believed that the disease was confined to the fundus, and that the cervix being healthy the chance of the patient recovering would be increased by leaving it. The result, however, proved that in this I was mistaken.

The operation was performed on Monday, 16th January. I was assisted by Professor Bennett, Dr. Kidd, and Dr. Franks. Chloroform was the anæsthetic employed, administered as is usual in this hospital by means of Junker's inhaler. I have used chloroform administered in this manner in all my operations for the last six years, and found it to be so invariably satisfactory, that I have discontinued altogether the use of ether. Chloroform thus administered has always, in my operations been very well to me, and I now never have the distressing vomiting which formerly gave me so much trouble.

The patient was greatly emaciated, and the abdominal wall very tense and depressed; this condition added much to the difficulty of the operation. The incision extended from an inch above the umbilicus to close to the pubes. A small opening would not have allowed room for the necessary manipulation. No blood was lost during this part of the operation.

On the abdomen being opened I passed my left hand down into the pelvis and grasped the enlarged fundus of the uterus, and after some little trouble succeeded in seizing it with a strong vulsellum, the great difficulty in doing so being to avoid wounding the intestines, for they slipped in between my fingers and under the claws of the instrument, but the fundus having been raised upwards by means of the sound introduced into its cavity from the vagina, I at last succeeded in my object.

Having seized the fundus and drawn it well up, I proceeded to separate it from its pelvic attachment. For this purpose I first passed an aneurismal needle, armed with a strong hemp ligature, through the

broad ligament, as low down as possible, and tied it. I then grasped the ligament to the inside of the ligature with a pair of Spencer Wells' strong curved pressure forceps, and divided it. The same steps were taken in dividing the right broad ligament. The ovaries which were much atrophied were not removed. The fundus was now with ease raised up on to the pelvis, and I transfixed it on a level with the os internum with a strong needle armed with a hemp ligature. The ligature, which was double, was then divided, and each half tied separately. The uterus was then cut through a little at the ligature. A small artery in the stump bled freely and had to be ligatured, otherwise there was no hemorrhage. The divided surface of the cervix was then seared with the actual cautery and allowed to fall back into the pelvis, which was then carefully cleaned and the incision closed. The operation lasted an hour and a half—there was no vomiting during or after it.

On recovering from the effects of the chloroform she complained of severe pain in the left inguinal region. This was relieved by the hypodermic injection of morphia, which had to be repeated every six hours. At 7 p. m. the temperature was 99° , pulse 108, towards night it rose to 140° , and the temperature to 102° , she had a constant desire to micturate, but on passing the catheter very small quantities of urine were drawn off. She passed a quiet night, dozing constantly; the pulse, however, continued to be very rapid, and the temperature to rise, and she died rather suddenly at 11 o'clock on the 17th, just twenty-four hours after the operation.

On laying open the uterus after the operation, its walls were found to be of unusual thickness, and the whole of its inner surface to be covered with a gray pulaceous mass, which emitted a most fetid smell. The disease proved to be epithelioma which had attacked the mucous membrane lining the uterine cavity.

The autopsy revealed the fact that a small portion of the malignant growth was left in the stump of the cervix. There was also evidence of a low form of septic peritonitis, which, in the reduced state in which the patient was, was probably the cause of death.

The consideration of this case raises several important questions. Of these the most obvious are, 1st, Was the operation justifiable? and 2nd, Was the one performed the best under all the existing circumstances.

The first involves the question of diagnosis. In this case, until the operation was completed, I was not absolutely certain that the patient was the subject of malignant disease. Epithelioma rarely attacks the fundus of the uterus as a primary disease. As a rule it commences in the cervix and extends inwards, and the case just recorded was the first of the kind I had met with in my own practice. For a considerable time I suspected that the patient was suffering from malignant disease of the fundus, but the extreme rarity of the instances in which this occurs, the cervix being healthy, the peculiar intermittent character of the pain, and the length of time which had elapsed since the first symptoms manifested themselves, made me hesitate for a long time to recommend an operation of such magnitude as the removal of the whole or part of the uterus, but being at length convinced that my opinion was correct, and that the neighboring structures were not implicated, I believed it to be my duty to suggest an operation, which, though involving great risk, offered the sole chance of saving life, while its failure could at most shorten by a brief space a miserable existence. I think it will be admitted that in this case the operation was justifiable.

The second question is of even greater practical importance. Freund's operation was originally practised in cases of cancer of the uterus, in which, though the cervix was implicated, the disease had not extended to the adjacent structures, and I am not aware of any recorded case in which the operation was performed when the cervix was healthy. Porro's, on the other hand, was brought forward as an alternative for the Cæsarean section, and I do not think it has been performed in cases of cancer attacking the fundus of the uterus. I had, therefore, no previous experience to guide me, but after much consideration I decided on removing the fundus, only, as being the least hazardous proceeding; for we know that in cases of uterine fibroids, in which the body of the uterus has been removed, the cervix being left, the results have been of late very good, while comparatively few have recovered after the whole organ has been extirpated, but I now believe that my decision was not a wise one, because a post-mortem showed that a portion, doubtless a very small one, of the cancerous growth was left behind in the stump of the cervix. Therefore, had the patient survived the operation, the disease would have recurred; therefore, in a similar case, I should advise the performance of Freund's operation in preference to the one I performed.

As to the operation itself, it was carried out satisfactorily in all its details. It should be borne in mind, however, that it is an infinitely more difficult one than ovariectomy.—*Med. Press.*

CASE OF EXTRA-UTERINE GESTATION: HÆMORRHAGE: DEATH.

The following case will, doubtless, be interesting to obstetric readers. On the evening of June 8th, last year, I was summoned to see a young married lady, who had been taken suddenly ill in the afternoon with severe abdominal pain and faintness. Dr. Wylie, who resided in the immediate neighborhood, had been sent for at the time. On my arrival, at seven o'clock, we had the opportunity of seeing the patient together. The history of the case was as follows: The lady had been married about a year; she had enjoyed good health, although the menstrual periods had always been somewhat irregular. Five weeks had elapsed since the last period; but as this had occurred on other occasions, the suspicion of pregnancy was not strongly aroused, especially as there was a total absence of any other sign indicative of this condition. The sudden pain in the lower part of the abdomen occurred whilst the patient was standing upon a step-ladder, hanging up a curtain in her drawing-room; she became very faint almost immediately, and was assisted to bed by her servant. The condition, when we saw her, was one of extreme pallor and faintness, with a very feeble pulse, indicating, apparently, some severe internal hemorrhage. Her intellect was clear, she being able to reply to every question; but on the slightest attempt to raise the head, she became almost unconscious. There was not much pain on pressing the abdomen, but some dulness in the hypogastric and iliac regions, and a sense of fluctuation. Vaginal examination revealed the uterus abnormally low, with an oedematous os; no tumor could be felt in Douglas's pouch. A catheter was passed, but only a few drops of urine were removed. Taking all the circumstances into consideration, we concluded there was some grave internal hemorrhage going on, possibly arising from the rupture of an extra-uterine gestation, and ordered opiates and the frequent administration

of small quantities of nourishment and stimulants. We saw her again at midnight, and her condition was much the same; she had taken nourishment freely, and had not vomited. Early next morning we met again, but she had grown rapidly worse just before our arrival, and was moribund when we saw her, dying shortly afterwards, twenty hours from the first symptoms. The following day we made a *post-mortem* examination, with the full consent of the friends. Upon opening the abdomen, we found three or four quarts of fluid blood and coagula in the cavity; on further exploration, and removal of the uterus and appendages, we discovered a ruptured cyst about the middle of the left Fallopian tube, on its anterior aspect, about an inch in length, on its walls being the remnants of some torn vessels. The embryo we were fortunate enough to discover subsequently; it had been baled out along with the liquid blood into a bucket, and escaped observation at the time, but was afterwards found floating on the surface, apparently about five or six weeks old. The corpus luteum was found in the left ovary, and the uterus somewhat enlarged, the sound passing over three inches. A case of this kind shows what a fatal state of things may be in existence without the least symptom of uneasiness, and how slight a cause, as in the present instance, may produce rupture at an early period of development, and how extensive may be the hemorrhage from a comparatively insignificant origin, causing death in a very short period.—WILLIAM S. PAGET, M.D., in *Brit. Med. Jour.*

ATTACHMENT OF SCROTUM AND PENIS.

As cases like the present are very seldom met with, I consider it worthy of publication, especially with regard to treatment.

On August 13th, 1881, Mrs. A. gave birth to a fine large healthy male child. The following day I was sent for rather hurriedly, and was told that "something was wrong with the child's privates." On examination I found the lower part of the penis, in its whole length, intimately attached to the exterior raphe of the scrotum, with an anterior convexity. On looking up Erichsen's *Science and Art of Surgery* (1872, vol. ii, p. 753, I found he had only met with one case of the kind in his necessarily large experience*. The malformation in itself is very simple, resembling that of tongue-tie or webbed fingers or toes. The remedy is to cut through the frænum; but this may be somewhat troublesome, depending on the loose nature of the parts. I operated as follows: I passed a No. 3 gum elastic catheter along the urethra to ascertain if the canal were perfectly straight. I then got an assistant to hold *in situ* the scrotum, and the catheter in the urethra. I proceeded to cut through the attachment with a strong pair of scissors. This I failed to do completely, on account of the toughness of the skin. Finally, I thrust a bistoury through about one inch backwards, and cut forward parallel with the catheter. Five months afterwards, I was compelled to circumcise, as the very small opening in the prepuce contracted to a mere pinhole. The mucous membrane was adherent throughout to the glans penis, and required dissecting off before stitching back. The child is now completely well.—RICHARD McDougall, M.B., in *Brit. Med. Jour.*

* Somewhat similar case, where the penis and testes were enclosed in one common sac of integument, is recorded in the *British Medical Journal* of March 18th, 1882, p. 398.

NEGRETTO ON THE RADICAL CURE OF VARICOCELE BY INTRAVENOUS INJECTIONS OF CHLORAL-HYDRATE.

Dr. Angelo Negretto records (*Gaz. Med. Ital. Prov. Venet.*, January 14), two cases of varicocele, in which he succeeded in obtaining a speedy and permanent cure by intravenous injections of chloral-hydrate. In the first case, the patient was aged 28; the varicocele was situated on the left side, turgid, and painful. Dr. Negretto injected, with a Pravaz's syringe, in four different places, a solution of chloral-hydrate, of 7 grains to the ounce. At once, a small hard knot could be felt in the lumen of the vein. Within a few hours, a mild attack of orchitis supervened, which yielded readily to ordinary remedies. The injection was repeated in one or two other spots, with the same result of again inducing orchitis, which, however, was of the mildest possible type. Six days later, all visible traces, both of the operation and the varicocele, had disappeared. Along the course of the spermatic vein a few hard small and indolent nuclei could be felt, which corresponded to the seats of puncture. The author remarks that in this case the obliteration of a few branches of the spermatic vein had evidently been sufficient to effect a cure. The second case occurred in an individual aged 23, in whom varicocele had existed six years. In its leading features it resembled the preceding. Five injections were used, with the result of producing a clot in the vein, followed by slight orchitis, with severe pains radiating from the spermatic cord over the pelvis generally. A week after the last operation the cure was complete; and, as the patient never returned, the author believes it was permanent.—*Lond. Med. Rec.*

SCHIEDEL, KUSTER, AND MUNDY ON POISONING BY IODOFORM.

In response to Professor König's appeal to his colleagues, that they should publish the results of their experience with iodoform, Schiede of Hamburg, in the *Central. für Chir.*, Nov. 3, 1882, relates some of the ill effects he has observed following the use of iodoform in the Hamburg Hospital, and also points out some contra-indications to its external application (*Deutsche Med. Zeit.*, Feb. 2, 1882). He gives, however, no exact account of the quantity used in dressing large and small wounds, so that his results do not in any way contradict those of many conscientious observers who have not seen these bad effects following cautious administration. He says that there are persons who possess a peculiar idiosyncrasy towards iodoform, which is not to be found out until, without any warning, it suddenly appears in the most severe symptoms of poisoning, and may lead to the rapid death of the patient, even though the administration be immediately suspended. These symptoms he divides into six groups. 1. There may be elevation of temperature to 104 Fahr., and more, without phenomena (so-called 'aseptic fever.' 2. In addition to fever, there may be depression of spirits, headache, loss of appetite, taste of iodoform in the mouth, the pulse being often very rapid, while at the same time it is small and compressible. On stopping the drug, these symptoms at once disappear. 3. The pulse-rate may be increased to 150 or 180, and more. In spite of rapid cardiac action and small pulse, with anxiety, etc., amelioration may take place in this condition on stopping the drug; but there is, nevertheless, great danger. This condition may arise after the first application of an iodoform dressing, or it may only set

in after toleration has been established for weeks. 4. The alarming rapidity of the pulse is accompanied by high fever, yet the sensibility is not diminished, and no symptoms of septicæmia arise, but the suspension of administration is not followed by reaction, and death follows. 5. After severe operations, although the pulse is very good, rapid collapse sets in, ending in death. It is, however, a question whether this is solely due to the iodoform. 6. The most alarming and, by the relative frequency of their occurrence, as well as suddenness, most dangerous forms of poisoning, are the disturbances of the cerebral functions, which either take the form of acute meningitis, or of a psychological disease (melancholia, etc.), and lead to a fatal termination, even though no elevation of temperature of a particular kind take place, and the application of the drug has been immediately suspended. Schede says that large fresh wounds should not be filled with iodoform, as it becomes impacted in the open tissue-spaces, so that it can only be removed with the spontaneous separation of the scab. Even smaller wounds do not offer security against absorption, although there is less danger in granulating surfaces. Dressing with the iodoform gauze, as well as the use of the gelatine points, in ulcine diseases, he declares to be more safe; but there is no protection against erysipelas in iodoform.

Kuster, in a recent paper (*Berl. Klin. Woch.*, No. 14, 1882), lauds the application of iodoform in powder to open wounds, but relates several cases of fatal intoxication, in which the symptoms were much the same as those described by Schede, viz., 1. disturbances of the digestive tract; 2. fever; 3. a peculiar influence on the central nervous system, characterized by depression, melancholia, dilatation of the pupils, apathy, uncleanness (involuntary motions and urination), hallucinations, etc.; 4. rapid collapse and death. He also comes to the conclusion that it offers no protection against erysipelas; and he has found it to act as a foreign body, and to produce a peculiar phlegmon, in spite of which the wound preserves its thoroughly aseptic character. Independently of these drawbacks, he has, however, obtained astonishing successes with iodoform in checking decomposition, and in the treatment of tubercular diseases, against which carbolic acid was powerless; and he is of the decided opinion that resections are now much more successful in his clinic than formerly. Under these circumstances, great caution is necessary, however, and an indiscriminate use of this antiseptic is to be strenuously deprecated.

In the same number of the *Berl. Klin. Woch.*, Dr. J. H. Mundy, of Vienna, most energetically advocates the use of iodoform as a first dressing on the battlefield, it being, in his opinion, the safest and most reliable, as the application of Listerian dressing is impossible, and he has not seen it successful in his extended experience in military surgery. It requires no water to make solutions, nor clean vessels, and, if supplied to surgeons and assistants in suitable cases for carrying about the person, can be immediately applied in the first and second lines, where vessels and water are scarce, and there is no time for circumstantial dressing. He believes that the fatal cases were the result of putting too much iodoform into the wound (80 to 300 grammes at once!), and points out that many of the patients who died were anæmic, either very young or very old, subjects of old-standing supuration, etc., and that on minutely examining the cases of Mikulicz, Schede, König, Hoeftmann, and Czerny, it is found that many of the patients suffered from organic disturbances, only revealed *post-mortem*,

and which may have been the cause of death just as much as the iodoform. In others, the account of the *post-mortem* examination is either not given, or only so vaguely as to leave it impossible to draw any conclusion therefrom. In applying the dressing, Mundy recommends that only a small quantity of the powder be dusted into the wound, that it be only removed when absolutely necessary, and that tight sutures and bandages be not applied, as it is by these and by the constant removal of the dressing to uselessly wash and re-apply iodoform that its rapid absorption is promoted. He believes that in iodoform we have now obtained the only possible antiseptic dressing for the first lines, hitherto out of the question. That it is necessary to exercise great caution in using a drug containing 96 per cent. of nascent iodine is, in his opinion, a matter of course; but do not carbolic acid and salicylic acid—in fact, nearly every antiseptic or drug—induce evil effects when recklessly applied or administered? Lastly, he advises that every military surgeon should be supplied with a belt and leather box, in which to carry a supply of iodoform in perforated tins, so that an immediate and handy means of applying antiseptic dressing could be in his power, wherever situated.—*Lond. Med. Rec.*

FORMULARY AND POINTS IN PRACTICE.

The following hints regarding the administration of cod-liver oil to children are from the fourth edition of Ellis on Diseases of Children:

Ol. morrhue is a sheet anchor of medicine in scrofula, tuberculosis, glandular enlargements, rickets, and debility of all sorts.

The secret of giving cod-liver oil successfully is *not to give too much, and to give it at the right time*. Small quantities are best to begin with, a few drops for a very young child, 3ss. to 3j. for older ones, in orange wine, or a little weak nitro-muriatic acid in water, well sweetened. It should be given so as not to clash with meals or soon after a meal; if before, it spoils the appetite. When it causes sickness, bed-time is a good time to give it; the child lying down immediately afterwards, it is usually well retained. When it causes diarrhoea, and often in rickets, I give it with equal parts of lime water. A little iodide or phosphate of iron may be dissolved in it, or a little phosphorus, when the administration of that drug is desirable. As an external application to many obstinate forms of eczema capitis and other cutaneous diseases, I have found it extremely valuable. If necessary it may be made into an ointment as—

R. Ol. morrhue..... 3ss.
Liq. potassæ..... 3ss.
Adipis, q. s.....
Ft. ung.....

—Dr. Neligan.

When cod-liver oil cannot be tolerated, glycerine and cocoanut oil are the substitutes. They should be given in doses of ʒi. to 3ii. two or three times a day. I have tried the Dugong oil, but do not think it possesses any special merit, nor yet the cod-liver oil emulsions, jellies, etc. I much prefer the plain oil. Some bear the light brown kinds well, others prefer the pale. Burgundy or claret make good vehicles for cod-liver oil, or may be given sandwich fashion in a little brandy and water. Ice in the oil also renders it nearly tasteless. If the oil be thick from cold weather it should

be warmed and made clear before administration. As a rule, children get to like it without artificial means of any kind. I am therefore only supplying hints for possible difficulties.

MEDICAL NOTES AND NEWS.

Thought-Reading.—A meeting, at which Dr. Crichton Browne presided, and which was attended by a number of scientific and literary men, was held at the Marlborough Rooms on the evening of Saturday last, the 6th instant, to witness an exhibition of the phenomena of "thought-reading" by Mr. Stuart Cumberland. That gentleman, with great promptitude and precision, went through the usual performance of finding articles that had been hidden during his absence from the room, of spelling out words thought of by the subjects of his experiments, and of disclosing the date of birth of several members of his audience. At the close of his demonstrations, Monsignor Capel, Professor Ray Lankester, Dr. Hack Tuke, Dr. Simpson, and others, complimented him on the success which had attended them, and expressed their conviction that his power in "thought-reading" was superior to that of any professor of the art who had as yet appeared in London. Professor Croom Robertson said that, having been a member of a small committee which investigated the pretensions of Mr. Bishop as a thought-reader about twelve months ago, he could testify confidently that Mr. Stuart Cumberland was correct in his interpretations or readings in a larger proportion of instances than Mr. Bishop; and that there was this great difference between Mr. Bishop and Mr. Cumberland, that, while the former always left it to be understood that he was aided in his experiments by an occult force or mysterious influence which he could not himself comprehend, the latter acknowledged that he was aided in all his revelations simply by naturally quick and highly trained perceptive faculties, and that he was guided entirely in his explorations and discoveries by movements in the hands which he held or pressed to his forehead. Monsignor Capel said that "thought-reading" or "willing" is practised in hundreds of drawing-rooms in London; and the chairman expressed his belief that Mr. Cumberland is engaged in a salutary work in exposing the impositions of charlatans, and the superstitions of weak-minded enthusiasts. Some spiritualists who were present did not seem inclined to accept Mr. Cumberland's account of his own extraordinary powers, but were evidently disposed to regard him as a clairvoyant, in spite of his disclaimers, and of his plain-spoken denunciations of spiritualism in all its manifestations.—*Brit. Med. Jour.*

An inquest has been held at Preston, England, on the body of a boy, aged ten. It was stated that the deceased was brought to the house of a dentist of Preston, to have some teeth extracted. Seven teeth were taken out, the lad being placed under the influence of nitrous oxide gas. While unconscious he changed color, put his hand to his throat, and died. It was afterwards found that one of the teeth had fallen into the windpipe and choked him. A verdict of "accidental death" was returned.—*Bost. Med. Jour.*

Sewer Gas.—Three More Victims.—We learn from the *Buffalo Express* of June 1st that Edmund P. Fish, a prominent citizen of Buffalo, took possession of a house about the first of May last. The family consisted of Mr. Fish, his wife and four children, all in perfect health. May 26th one of the children, a daughter, æt. 9, was attacked with diphtheria and died on the 28th. On the 29th a son, one year old, died; and May 31st a daughter, aged seven years, died; the death in each case having been caused by diphtheria.

"The plumbing was examined by an expert and pronounced *perfect* before they moved in. On Tuesday, however, another examination was made by a different plumber, and the pipes were found *very defective*, giving out the deadly gas in several places."

The editor, after making the above announcement, adds: "Deeply as we feel for the stricken parents, the best use to which *The Express* can turn this dire adversity is to advise all householders to look carefully to their water-pipes. If any strange smell is constantly observed in the house, no matter how slight, do not be satisfied with any plumber's certificate until the source of the odor is discovered and the leak stopped. Meantime, until that is done perfectly, be liberal in the use of some good disinfectant, and leave as many windows open all the time as you safely can."

So far as advice is given it is good; but it will be seen that the advice implies that the nose can distinguish always between the odor of sewer gas and a dead rat, or any other offensive odor, which may not be so dangerous to life as to demand such a radical and expensive exploration of the plumbing. The writer forgets, also, that enough sewer gas, with its accompanying germs, may be admitted, to cause fatal infection, without any perceptible odor—and indeed, it is not stated in this case that any odor had been noticed by the family. It happened in this case, as has happened often before, that an examination by an "expert," after the fatal result had been experienced, was more successful than an examination by "experts" before.

Is it not well to consider again the question: Can plumbing be made perfectly safe?

Opiates and Peristalsis.—Prof. Nothnagel of Vienna, recently communicated to a German society the results of experiments on the action of opium and morphia on the intestine. The constipating power of these drugs appears due to their being irritants of the splanchnic, the inhibitory nerve of the intestine. That nerve is specifically influenced by morphia, just as the vagus, the inhibitory nerve of the heart, is acted upon by digitalis; in fact, in both cases, small doses excite, large doses paralyze. It was observed in a discussion on this question, that the peristaltic action of the intestines is not necessarily the same in man as in animals. Antiperistalsis does not appear to occur in the latter; in our species it is known to exist; though, when obstruction exists, peristalsis in the ordinary direction is quite sufficient to account for fecal vomiting. Dr. Rosenstein, however, had seen chronic fecal vomiting in a patient of his where no mechanical obstruction could be found. Professor Preyer stated that he had seen antiperistaltic movements of the small intestine in animals, and pointed out that the filling and emptying of the cæcum, especially of the very long cæcum of some animals, could only be effected by alternate peristalsis and anti-peristalsis.—*Brit. Med. Jour.*

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THE CODE OF ETHICS AS VIEWED BY THE LEADING MEN IN THE PROFESSION.

In order to ascertain the views of the leading men in the profession in regard to the code recently adopted by the State Medical Society, we addressed a note to about a dozen of the most prominent men in this city, asking them to give expression to their opinions. The following replies we have received to the time of going to press, and they silence the extravagant assertions of the *Medical Record*, which claims that in supporting the new code, it reflects the opinions of the best men in the profession.

DEAR SIR.—In reply to your note of the 31st ultimo, I have to say that I am for retaining, substantially, the code of ethics adopted by the American Medical Association in 1847. I think, however, that the article relating to consultations should be modified as follows:—Instead of saying that "no one can be considered as a regular practitioner or a fit associate in consultation whose practice is based on an exclusive dogma," I would say, in substance, no one who adopts a sectarian name or belongs to an organization in antagonism to the medical profession. I would not interfere with entire freedom of opinion, but so long as Homœopathists, Eclectics, *et id genus omne*, retain these designations and remain in an attitude of hostility to legitimate medicine, I cannot see how members of the regular profession can, with propriety or self respect, affiliate with them.

Yours truly, A. FLINT.

MY DEAR DOCTOR: In my opinion, the action of the State Medical Society was unwise in every point of view. I do not think it is calculated to promote the interests, either of the Science of Medicine or of the people, whom we serve; and I sincerely hope that the action will be rescinded at the earliest opportunity.

Yours truly, FRANK H. HAMILTON.

MY DEAR DOCTOR: My opinion of the new code can be expressed in few words.

I think it illogical, absurd, sophistical, unsound, unwarranted, untenable, inconclusive, fallacious, specious, evasive, irrelevant, heretical, unreasonable, unscientific, narrow-minded, visionary and futile.

But then I think the old code was worse and that no code could be any better.

Yours sincerely, WILLIAM A. HAMMOND.

DEAR DOCTOR:—In answer to your request for the expression of my opinion of the new code adopted by the New York Medical Society, I beg to state that I was the seconder and earnest advocate of Dr. Roosa's substitute for the report embodying this code. The substitute aimed to institute, instead of any written code, discipline for all conduct unbecoming a physician and gentleman, and would, if adopted, have enabled the society to condemn members for acts contrary to the spirit, if not the letter, of the code of the American Medical Association, which are now practiced without redress. This substitute received a majority, though not a two-thirds majority, vote of all the members and delegates present by "ayes and nays,"—a vote which should, according to parliamentary rule, have made the passage or even the further consideration of the "New Code" impossible. The president of the society, however, decided differently, and, the society sustaining his decision, the new code was adopted by a two-thirds vote (52 to 18, I believe). The old code, *i.e.*, the code of the American Medical Association, framed at a time when the relations of regularly educated medical practitioners to each other were in many important respects different from what they are now, is open in my opinion to many objections. I opposed the new code because it does not do away with the objections to the old. As experience has proved, since its adoption, it has also placed the profession in a false position in the eyes of irregular practitioners and many lay people in a manner unexpected and not intended by many, if not most or all, of those who voted for it. I firmly believe that the latter are as sincere in upholding professional honor and dignity, and as far from desiring to make any concessions to Homœopathy, Hydropathy, or any other "pathy" or "ism," as those who voted against it, and as any member of the American Medical Association. While I agree with your late editorial that the National Association, with its present regulations, can not admit the New York State delegates as such, I trust that these

regulations will be changed and the Association's Code, *as now printed*, be either abolished or so modified as to be consonant with present requirements and professional conditions.

Respectfully Yours, LOUIS ELSBERG.

MY DEAR SIR:—Your note is before me. As regards the New Code, it is a great mistake. If we have any rules, they should be *positive* and not "may be." As to "emergency," no ethical point can be made on that. *Sympathy* demands action then.

Yours truly, WILLARD PARKER.

DEAR DOCTOR:—In reply to your note I express the following opinions.—The first mistake of the profession was shutting the homœopathists out from their communion, when the new doctrine first appeared in this country. This made them a separate, and, they say, a persecuted class, and enlisted sympathy for them. By this separation they were greatly strengthened, while, if intercourse had not been interrupted, their new views would have had their day and then disappeared.

But taking the matter as it now presents itself, they are a separate class; but the doctrines of their founder have no advocates among them now, or if any, very few. In their mode of practice there is no real reason why the regular profession might not meet them in consultation. But then comes the question,—Are they not deceiving their patients, and making profit out of the deception? They would doubtless answer that they still hold the doctrine of *specifics*, and still believe in the "*similia similibus curantur*," though they can no longer credit the *testings* and *proofs* of their founder and his early disciples, or rely on *infinitesimals*; that they prefer the testings and proofs of the past century, and have found it safest to administer medicines as the regular profession do, substantially. If this is so, do they make their patients understand it? If not, are they not sailing under false colors? Can honest men have professional intercourse with them? In view of their mode of practice to-day, this last question is the only one that presents itself to my mind when I am asked to consult with one of their number.

You inquire particularly regarding my opinion of the action of the State Medical Society in adopting "the new code." I think it premature and unwise. Whatever may be the merits of the question, the adoption of a new code, that in one important particular was in direct opposition to the code of the American Medical Association, was an act of rebellion. It seems to me that the State Medical Society, if it wanted a change, should have applied to the National Society, giving reasons for such change and waiting for its action. As it is, in the matter of consultations, New York has seceded from all the other States, and claims to do as it pleases, whatever others may think of its action.

A. CLARK.

LECTURES.

CHRONIC BRIGHT'S DISEASE.

A CLINICAL LECTURE

BY

AUSTIN FLINT, M. D.,

Professor Practice of Medicine, Bellevue Hospital, Medical College.

To-day, gentlemen, I wish to call your attention to the subject of chronic Bright's Disease. We may enter these different forms of Bright's disease are often

upon this subject from two different standpoints. We may take the anatomical standpoint, and consider the different forms of kidney disease embraced under the name of chronic Bright's disease. Thus we have the large white kidney, fibroid or contracted kidney, and waxy kidney. We can consider these three different lesions as giving rise each to symptoms or different modifications of symptoms.

combined so that we have in a considerable proportion of cases the symptomatic phenomena which belong to them severally united together.

In the second place we may take the clinical standpoint and consider the symptoms which are present in the different cases, which, in the first place, denote disease of the kidney, and, in the next place, those modifications of symptoms which point to one of the different forms of chronic Bright's disease anatomically.

I shall introduce a patient who will present in his symptoms an inference, to be deduced therefrom, of different varieties of chronic Bright's disease.

CASE I.—*History*.—William J., æt. 35; occupation, stone-cutter. Has been in hospital since January 27. Last July legs, feet and scrotum became swollen, and often in the morning he noticed that his face was puffy. Had headache and spots before the eyes. Last November his abdomen became quite large and he stopped work; he passed large quantities of urine; before admission he was troubled with dyspnoea, connected at times with effusion into the pleural cavity.

On admission he presented a pale and cachectic appearance; œdematous all over the body; there was a thrill in the left chest; cardiac dullness increased; urine sp. gr. 1.014, albumen 40 per cent.; contains hyaline, granular and fatty casts.

January 28.—Seventy ounces of clear serum were taken from the left side of the chest by aspiration.

February 7.—240 oz. serum removed.

February 21.—Abdomen tapped; 215 oz. serum removed.

February 23.—Complains of poor sight; urine normal; constipated.

March 31.—Uvula was so œdematous that it was cut off.

April 8.—Abdomen was tapped again; 295 oz. removed.

April 10.—Both eyes show with the ophthalmoscope white and hemorrhagic spots on the fundus; disk of left eye slightly choked; sight is growing worse.

April 26.—Abdomen tapped; 384 oz. removed.

May 26.—Seems brighter and anasarca is less.

You observe here, gentlemen, in the first place, that the abdomen is enlarged, and by making percussion I get impulse, which is the diagnostic sign of the presence of liquid. This is diminished, however, to such an extent that we shall forego the operation of paracentesis, which a few days ago we thought of performing before you. We pass down to the lower limbs, and here we get the evidence of œdema, though much less than it was a week ago. As I make pressure I produce an indentation, which is a physical criterion of œdema. I also produce distinct indentation at the sternum. This is important in the way of diagnosis. For this patient has now really no distinct evidence of dropsy in his face. With a local dropsy we may get dropsy of the lower limbs. The question arises at once, is this a case of anasarca, or is it a case of local dropsy, accompanied with œdema of the limbs. The fact that I get up a distinct indentation over the sternum is evidence that there is a general dropsy. This man had very marked dropsy of the face and lower limbs a week ago. When a patient has a purely general dropsy, car-

diac or renal, and nothing else, the amount of liquid in the abdominal cavity corresponds to that which exists elsewhere; as, for instance, in the pleural cavity. Therefore, if we find a dropsy of the peritoneum existing in a marked degree, while the serum diffused everywhere else is small, we have to infer that there is something here besides the general dropsy. There is a cause which gives rise to the general dropsy, and there is a cause which gives rise to this local dropsy in addition to that which creates the general dropsy. There is a cause which makes the abdominal dropsy out of proportion to the general dropsy. In such a case we are pretty safe in inferring that we have cirrhosis of the liver.

There are two causes of general dropsy, one or both existing in a very large proportion of cases, viz.: disease of the heart, and renal disease. Is this a case of cardiac or renal dropsy? We may form an opinion and attach considerable faith to it by the mere aspect of the patient. Here is a patient with a pallid countenance; no cyanotic appearance of the face. His respiration is carried on comfortably. If there were disease of the heart we would have a dusky hue, if not distinct cyanosis, with embarrassment of respiration. We examine the heart physically and find no evidence of disease there. Then we reach the kidneys pretty strongly by exclusion. We examine the urine, and we find albumen, in greater or less quantity, together with the other elements of kidney disease.

Now, the question arises as to the variety of kidney diseases present in this case. Is it waxy kidney? We do not find in the history of this case that any of those causes are present which give rise to waxy degeneration of the different viscera. It does not appear that this patient has had syphilis or disease of the bones, giving rise to suppuration. The diagnosis lies then between the contracted and the large white kidney. We have here symptoms which point to both. In the first place the amount of dropsy which this patient has had; and the amount of albumen which he has had in the urine would point to the large white kidney. In that variety of kidney we have dropsy an early and prominent symptom, and a large amount of albumen in the urine. On the other hand we find some symptoms here which point to uræmia. There is disturbance of vision, and the appearance alluded to observed by the ophthalmoscope. Uræmia occurs especially in the contracted or fibroid kidney. Besides, this patient has had headache and other signs of uræmia.

Here, then, gentlemen, you observe the symptoms of two forms of kidney disease intermingled. Not unfrequently in practice the patient gives all the evidence of the contracted or fibroid kidney, and from time to time he has superadded to this the tubular or acute diffuse nephritis. It is not improbable that there may have been added in this case an acute diffuse nephritis to a chronic fibroid degeneration. So far as the dropsy is concerned, when abundant, especially when occurring rather early, and when the albumen in the urine is abundant, it is diagnostic of the large white kidney. So far as the phenomena of uræmia are concerned, these point rather to the fibroid or contracted kidney. This makes a convenient practical division of the symptomatic phenomena. A patient may have a large white kidney, suffer from dropsy and general prostration without any of the phenomena of uræmia. On the contrary we find patients not unfrequently with the contracted kidney, who give us no dropsy and present the only symptomatic evidence of disease of the kidney in the phenomena which pertain to uræmia. We have a train of symptoms which are connected with the ex-

cretion of albumen in the urine. This stands in a special causative relation to the dropsy. We may have little or no albumen in the urine, as well as little or no dropsy. We also have a train of symptoms which depend upon the insufficient excretion of urea by the kidney. The accumulation of urea in the blood gives rise to a series of symptomatic phenomena. Those present here are disturbance of vision, headache, etc. Other symptoms relate to the digestive organs, nausea, vomiting, and especially in the morning when the stomach is empty. Sometimes there is looseness of the bowels. These are what are conveniently termed the minor manifestations of uræmia. Then we have the graver manifestations, coma and convulsions standing first, inflammation of serous membranes, œdema of the lungs, œdema of glottis; these and a half dozen others not dependent upon œdema of the lungs or any appreciable condition of the lungs which relate, as we may infer, to the nervous center presiding over respiration.

DYSMENORRHEA—URETHRAL CARUNCLE AND CYSTITIS.

A LECTURE DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

BY

PAUL F. MUNDE, M.D.

CASE I.—Patient, æt. 22, single. First menstruated at 14. Since then has always been irregular, being unwell every two weeks. Has poor appetite and is constipated.

It is very common for young women to have dysmenorrhea, and there is generally a cause which we may find out by examination. If there is no displacement of the uterus the dysmenorrhea may depend upon ovarian congestion. It may be congestive dysmenorrhea or depend upon the monthly or inter-monthly congestion of pelvic organs generally. It may be also a so-called neuralgic dysmenorrhea. Generally, however, there is a distortion of the uterus that is flexion or anteversion. If there is retroversion the dysmenorrhea will be due to congestion. Here we have a condition which is very frequent in young girls, namely: retroversion together with anteversion. I believe the dysmenorrhea here depends chiefly upon the flexion upward of cervix and body. In my opinion, this peculiar position of the uterus has existed for many years. She has never been exposed to any of the conditions which are apt to produce displacements in the married woman. She has never borne a child; has never had an enlarged heavy uterus with relaxed uterine supports, conditions which would produce displacement. Her uterus always was in that position more or less. If this patient were married her condition would be worse. Repeated coition would simply double the uterus up more than it is now. Besides there would be a splendid opportunity afforded for a false vaginal route, according to Paget, the penis during coition making a passage for itself on one side or the other of the displaced cervix, sterility would be the result. This condition being congenital, it is difficult to do anything for it. The patient has very short anterior and posterior vaginal pouches. The only thing to do would be to insert a stem pessary to strengthen the uterus. Stem pessaries are very good instruments "to watch." The dangers of stem pessaries are the irritation produced on the uterus by the constant presence of a foreign body. There is the danger of endometritis and metritis. There is more danger of peritonitis

or cellulitis. I should think it a good plan to dilate the uterus first by introducing a laminaria tent and then to give the stem a trial.

CASE II.—Patient, æt. 44. Married 29 years. Has eight children, two miscarriages. Difficult micturition; considerable discharge from the vagina. When she passes water a lump protrudes from the vulva as large as an egg. I expected to find a cystocele, that is, a prolapse of the anterior wall of the vagina and posterior wall of the bladder. I found, however, projecting from the posterior wall of the urethra a conglomerate growth of the size of a small strawberry, which went up into the urethra and by its growth caused the posterior wall of the urethra along with the anterior wall of vagina to protrude. This growth bled freely on touching it with the sound or finger, and discharged a sanious fluid.

This patient then has a urethral caruncle. It consists of hyperplastic papillæ of mucous membrane lining the urethra. We may have a large number of these papillæ enlarged. These growths occur more frequently in stout women. Want of cleanliness, vaginal leucorrhœa, or urethritis may cause this condition. The treatment consists in removing the growth. Put the patient under ether, separate the labia, take either an ordinary dressing forceps or one of the various forms of urethral specula and expose the growth. Then take a double tenaculum and hook in the growth, lift it up so as get at the base and apply a small looped wire. By twisting this tightly the growth may be removed, or it may be burned off by the Pacquelin cautery at a dull heat. I usually snip off the growth with scissors and cauterize the base with Pacquelin or fuming nitric acid to prevent hemorrhage and its recurrence. The after treatment consists simply in moderate irrigation. If there is much pain apply ice-water compresses over the vulva. It is well to perform dilatation of the urethra before cauterizing, as vesical tenesmus is liable to ensue. Be careful however not to overdilate the female urethra. The little finger is always sufficient, and permanent incontinence will not then follow this moderate distention.

This patient is also troubled with chronic cystitis. The condition is very disagreeable to treat and very difficult to cure. It may come from a cystocele, retention of urine, from exposure to cold or as the result of the parturient act from pressure, and from anterior displacement of the uterus on the bladder. The symptoms of cystitis in the female are frequent desire to pass water, scalding in act of micturition and sediment in the urine, which is generally turbid and ropy.

The most marked symptom is the frequent desire to pass water and the scalding. Patients have told me that they will get up twenty times in the night and pass only a few drops at each time. These patients soon become anæmic. The frequent micturition is relieved by moderately dilating the urethra as already prescribed. You can cure the cystitis by internal remedies such as balsam of copaiba, fluid extract or infusion of pareira brava, uva ursi, and by one of the best triticum repens, with benzoate of soda. Such cases are always tedious in proportion to the length of time the disease has existed.

Dr. Hermann Knapp has been appointed to the Chair of Ophthalmology, and Dr. Newton M. Shaffer to that of Orthopedic Surgery, in the University, Medical Department. Dr. Stephen Smith becomes Professor of Clinical Surgery.

ORIGINAL ARTICLES.

CHRONIC PURULENT INFLAMMATION OF THE TYMPANUM.

BY

OREN D. POMEROY, M. D.

Surgeon to the Manhattan Eye and Ear Hospital.

The acute form of otitis media purulenta usually shows a tendency to self-limitation, or, if properly treated, makes a good recovery, with the exception of a few cases, where the constitution may be at fault. Illustrations of this may be seen in tuberculous or strumous subjects, in the syphilitic or in chronic Bright's disease, in the severer forms of exanthematous otitis, or that dependent on other fevers, or even a state of general depression of the vital energy. In these instances the disease passes on to a condition in which there is little resemblance to its former state. Instead of active hyperæmia, there is passive; the parts are rather pale than intensely red as in the acute disease. There is absence of pain usually, and the discharge is somewhat more scanty; the aperture in the membrane may grow larger rather than smaller, or remain stationary; the constitution suffers from the prolonged disease and we have an altogether different kind of an affection to deal with. *The discharge being an important symptom, the disease has from time immemorial been called otorrhœa.* It is one of the gravest affections of the ear and results in more mischief than any other ear affection except, possibly, one or two. *The quality of the discharge must needs be largely purulent as in the acute form, with the exceptions it may frequently contain mucus, or serum, and when granulation tissue or a polypus exists there is likely to be blood.* It is from this disease that cerebral abscesses frequently result, with or without thromboses, and perhaps obliteration of the sinuses in the vicinity of the ear. Pyæmia and septicæmia, with possibly metastatic abscesses, are sometimes formed. Labyrinth disease occasionally results from extension of carious processes to the petrous portion of the temporal bone. The whole of the bony surroundings of the organ of hearing may also be removed by these processes. Paralysis are frequent, more especially that of the facialis, as its canal, the fallopian, passes along the inner wall of the tympanum, and occasionally is only protected from the cavity by a membrane instead of its thin, normal bony covering. The ossiculæ may fall out of the ear as a result of the chronic suppurative process, either in a state of necrosis or otherwise; their ligaments having been destroyed by ulceration. The stapes, however, usually remains fixed in its oval window, although it may be removed entire. All forms of chronic mastoid affections are likely to have this disease for an exciting cause. Aural polypi are mostly the result of this disease. Many forms of diffuse inflammation of the meatus are caused by otorrhœa, the discharge often being very ichorous in character, and irritates the canal into inflammation, and occasionally deep grooves may be furrowed in the canal. Chondritis and perichondritis of the cartilage of the meatus and auricle sometimes result from extension of the middle ear disease to these parts. So grave is this malady that for many years life insurance companies have refused to take a risk on a patient who has for some time had a discharge from the ear. *The discharge is more profuse in cases of children than adults as a rule, and may be accounted for on the theory of the greater vascular activity of the parts in the former. Sometimes it nearly disappears*

without treatment, and the patient will exclaim that he is convalescent, but on careful inspection the remains of the membrane will be smeared over with a whitish or yellowish material, possibly resembling the membrane itself, and it may have a light reflex upon it. Some very ridiculous mistakes have been made by beginners in inspection of these parts, and it may be laid down as a good rule that if there is any suspicion of a discharge, pass in the cotton on the holder and gently wipe the parts. The patient may occasionally have a relapse of pain, and the discharge will suddenly increase in quantity, become sometimes purulent, but more frequently ropy mucus will be observed. The bad smell of the discharge is due to: 1st—uncleanliness; the secretion is allowed to remain and undergo decomposition; 2d—some varieties of polypi produce an unpleasant odor in the discharge; 3d—carious bone. The latter gives a very dreadful odor to the discharge, not, however, as offensive as that from ozæna with carious bone. If there are any malignant polypi or growths the smell from the discharge may be very offensive indeed. There is a form of discharge called "cheesey," which may be composed in part, possibly, of tuberculous matter, and which, according to Dr. Buck in his book on Diagnosis and Treatment of Diseases of the Ear, may be absorbed into the system and produce general tuberculosis. This material, according to Dr. Wilde, has "a peculiar, heavy, sickening smell;" whether this depends on decomposition is not exactly known; I am inclined however to believe that it does. Another interesting fact about the discharge is, that the patient often hears better while the ear is running; when it stops he is perceptibly deafer. Various explanations have been given for this phenomenon which are not satisfactory on the whole. It is possible that in a temporary arrest of the discharge the parts may be somewhat more hyperæmic than before, and this would account for the diminished hearing. When the discharge has ceased permanently from real arrest of the inflammatory process, however, we cannot conclude that there is then increased hyperæmia.

Appearances on inspection.—Before looking carefully at the ear it must be *cleaned*. Do it in the following manner: First syringe with quite warm water, pointing the beak of the syringe successively towards every part of the canal and membrane. The auricle may be grasped and pulled backward, upward and outward, so as to straighten the canal. *Syringe very gently*. Previous to syringing, inflate the ear by Politzer's or Valsalva's method, so as to blow secretion from the Eustachian tube and tympanum. After syringing, epidermic scales and sticky secretions may still remain; this may be wiped away by means of brushes made of absorbent cotton wound on a cotton holder. A really good cotton holder may be extemporized from a common hair pin, straightened out; the ends may be roughened with a file or by rubbing them against any gritty substance to remove the paint, when, by dipping them into water, they will catch the cotton sufficiently well; nay, these are better than the ordinary cotton holder, for the latter has a heavy handle which dulls the tactile sensibility. Moreover, the hair pin may be obtained of any size desired, even to an instrument of very delicate proportions. The cotton holder should be used with great delicacy, as much harm may result from harsh manipulations within the meatus or tympanum. The forehead mirror should be used to illuminate the parts, so that every step may be carefully taken. The canal and membrane are likely to have a macerated appearance, and if the epidermis is intact

it will be of a greyish-white color and somewhat wrinkled. When the latter is removed, as it may be naturally or by the wiping of the cotton, the parts may look red, or of a pale salmon color, or even whitish. The canal may be so swollen, especially in children, as to be closed; it may also show the deep grooves before described, and which may bleed easily; its entire wall may be uniformly of a dull grey color, from the maceration, or be faintly reddened. Granulation tissue and polypi may be seen springing from the canal, wherever there is an ulceration. In children also, in very old cases, the canal may, after a while, become much too wide from atrophy of its subcutaneous connective tissue, including its fat element. The drum membrane must needs be *perforated* or have been at some previous time, and evidence of repair may be observed. Its color will be red or reddish when the epidermis is removed, or greyish if it be intact, unless it be not much moistened by the discharge, when it will be quite like the pearly grey color of the normal membrane, but always opaque, although it *generally* is more or less reddened. The *perforation* in the membrane may leave only a greyish rim of drum membrane, having the shape of a sickle, and even in some cases no vestige of this may be visible, but usually a considerable portion of the membrane is left. The perforation is very frequently in the lower part of the membrane. The malleus handle and short process seem to prevent the membrane in its vicinity from being destroyed, so that the perforation will resemble in shape a kidney with its hilus presenting at the end of the malleus handle; perforations may occur in front of the malleus handle, and behind, in the same membrane. Perhaps the most frequent site of the perforation is behind the malleus handle near its extremity. The membrane, above the short process is frequently perforated which is an unfavorable location for healing. The *site of the perforation* may be only a dark looking spot or point if it be small and the tympanum insufficiently illuminated (*i.e.* by the small aperture), but if it be of considerable size then the red color of the inner wall of the tympanum will conspicuously show, especially if it be somewhat swollen or granular. The remains of the membrane are often sunken, so as to be, at the perforation edge, quite in contact with the promontory. Naturally in this position the malleus handle will be much retracted and foreshortened, and the short process will appear quite prominent from the turning outward of the opposite end of a lever represented by the end of the malleus handle being drawn so far inward. The perforation whistle may be elicited, but if the edges of the perforation are adherent to the promontory, then air may not even enter the posterior part of tympanum but may enter the part next the Eustachian tube (ant. part), but cannot escape through the meatus. Whenever there is a rupture of the membrane with ulcerated edges at the border, or the lining of the tympanum has assumed a condition called granulation tissue, we are likely to have polypi. There is microscopically little difference between granulation tissues in the tympanum and true aural polypi. Below is given the examination of a large sized polypus from the tympanum of a patient who has had several removed previous to this one. There is however no suspicion of malignancy, as the appended examination indicates. It is done by Dr. T. Mitchell Prudden, Pathologist to the Manhattan Eye and Ear Hospital. It is as follows:

"There is abundant gelatinoid, scantily fibrillated basement substance, in which are embedded numerous

larger and smaller spheroidal, fusiform and branched cells; many of the cells are crowded with pigment. Small and thin walled blood vessels are abundant, especially near the surface of the tumor. The whole tumor is covered with lamellated columnar epithelium, which is in part ciliated. Anatomical diagnosis: myxoma polypoidea." Where the polypus springs from parts covered by skin, the covering of the polyp is likely to resemble integument rather than mucous membrane, otherwise they are quite identical with the polypus of a mucous membrane. Polypi of the ear have been divided into many varieties. Wilde has made a very beautiful and somewhat fanciful division, but which seems to the writer based on differences which have no bearing on the indications for treatment subsequently required. Some are harder and more fibrous than others; some are extremely soft and jelly like. The *shape* depends mostly on mechanical causes, while in the canal they must needs be narrow, but if the growth extends beyond the meatus it widens out. Some are more highly vascular than others and bleed more easily. When the growth extends so as to come in contact with the outer air, it then has a paler color, or even may approach that of the skin, and the covering will be nearly as thick as that of the neighboring integument. Many *malignant tumors* of the tympanum and meatus simulate polypi, and, in the end, the only means of diagnosis is the microscope. If, however, the tumor grows with any great rapidity, after removal, bleeds more than usual, has a more offensive smell, and is possibly painful, and there is paralysis of parts in the neighborhood, we may *suspect* a malignant growth.

Treatment.—With a view to assist the discharge, it has been, for a long time, a question whether it is safe to arrest somewhat suddenly a chronic discharge from the ear. I remember a little patient some years since with this disease, whom I treated until the discharge ceased and the membrane had healed. Polypi had previously been removed. Within a month or two the child had a relapse of ear trouble with brain symptoms, and the little patient died. The family felt sure that the treatment was the cause of the catastrophe, and I, myself, have always felt sure that *possibly* if the patient had been let alone that death might not have resulted. In a general way, one would *suppose* that in a case with profuse discharge, great relaxation of tissue, and almost an entire absence of hyperæmia, that any sudden arrest of the discharge would almost call for some compensating drain on the system, elsewhere, to prevent dangerous local hyperæmia. A firmly seated prejudice *generally*, has *some* excuse for it. On the whole I am in favor of arresting the discharge from an ear as soon as possible. The first important step is to *cleanse the ear*. This has already been dwelt upon. Some form of astringent or stimulant is indicated. Arg. nit. in strengths varying from two grs. to the ounce to a *saturated solution* (not far from 500 grs. to the ounce), may be used. It should never cause excessive or long-continued pain, and the discharge should usually grow thinner and diminish in quantity, and it should not make the ear tender or feel "sore." Before knowing of Schwentzer's nitrate of silver treatment, I had used saturated solutions of it in otorrhœa. Sometimes arg. nit. aggravates the symptoms; then discontinue. The weak solution may be used two or three times a day; the strong, once in one, two or three days. Do not repeat the application as long as the good effect of the first continues. I am in the habit of dropping a little into the ear with a medicine dropper, the head being turned to one side. Allow it to remain a minute or two, then syringe out with

water. Other astringents proper to be used are plumb. acet. 2 to 10 grs. to the ounce of water or sulph. zinc (of the same strength) may be poured into the ear after cleaning *thoroughly* once or twice a day. *Do not do too much syringing*. Chloride of zinc resembles the arg. nit. in its properties, but it is sometimes painful; may be used as directed for the last. Acid tannici 3 i. glycerine 3 i m. may be dropped into the ear once daily and allowed to remain in until the next cleansing. To correct the bad odor it is often sufficient to keep the ear clean, but if the discharge is excessive it may be necessary to use carbolic acid 3 i. to Oj. of water freely poured in and allowed to remain; repeat several times daily. The liq. sod. chlo., one or two drachms to the ounce of water, may be used in the same manner. If the membrane is pretty well swept away, and the parts are much relaxed, it may be well to pack the tympanum with absorbent cotton, either with or without an astringent or disinfectant. It should, however, be removed if it causes any pain, tinnitus or dizziness, or if it seems to prevent the discharge from making its exit from the ear. If the source of the otorrhœa seems to be the Eustachian tube, then the astringent may be *forced gently*, by applying the nozzle of a syringe into the meatus, which must fit it air tight. A piece of rubber tubing stretched upon a good sized tip of a syringe will fulfill this indication. The remedy may easily be driven into the throat through the Eustachian tube. In children this is especially easy of accomplishment. The late Mr. Hinton, of London, devised this method. Be careful and not apply too much force or cause any unpleasant symptoms to the patient by this mode of procedure. If a given application does not act satisfactorily, *change* to another, as it is not *possible* to always determine the exact indications for the selection of any one remedy. In many instances the treatment is *overdone*, and by interrupting it sometimes for a few days, the patient will be found to instantly improve. Latterly *boracic acid* has answered very well indeed, in arresting the discharge, whether the tympanum were granular or not. It is also good in the subsiding stage of acute cases. The meatus should be *packed full* of the *finely powdered* acid. Let it remain until the discharge has moistened its way through the mass, then remove it by syringing and reapply. In some cases the surgeon will be surprised to find that his running ear has suddenly dried up, and it may so remain for some days, in consequence of a single application, although this is not the rule. The only way to properly reduce the boracic acid to a sufficiently fine powder is to have it done at the wholesale druggists, by appropriate machinery. The admixture of inert substances with it to facilitate the reduction to a powder, diminishes the effectiveness of the remedy, and should be avoided. The mode of procedure in case of *granulation* or *polypi* is as follows: remove the polyp or granulation and cauterize its base, so as to complete the removal, and diminish its chance of return, or remove the polypus by cauterization or by the shrinking process of stimulant astringent applications. To dispose of a polypus by an astringent or stimulant, the nitrate of silver may be used, although Schwentzer has laid it down as a principle, that this is one of the conditions not indicating the use of this remedy. I have seen a polypus of two lines in diameter dispersed by four or five applications of a 40 gr. sol. of the argent. dropped into the ear and allowed to thoroughly reach all parts of the polypus. A saturated solution of alum will sometimes remove a small sized polyp by a few applications. This and the arg. may be used every one, two or three days. The

objection to the alum is that it sometimes produces *alum curds*, which act as foreign bodies, irritate the tympanum, and are often difficult of removal. If the polyp is punctured with a hypodermic syringe and any strong astringent injected into the substance of the growth, it acts quite effectively in removing the neoplasm. The liq. ferri sesquichloride is a useful remedy for this purpose, or the liq. ferri prosulph. After one of these injections it will be well to wait a few days to see if any considerable reaction results. As has before been stated the boracic acid in powder will sometimes disperse a polyp of small size. *Cauterization alone* is only adapted to the cure of minute polyps or granulations. For this purpose the saturated solution of the arg. nit. is valuable and safe, as it does not destroy tissues adjacent to the polyp. Nitric acid is more effective but not as safe, it is in danger of destroying more tissue than is desired. The acid nitrate of mercury is very effective indeed, but there is danger of considerable reaction from its use and the amount of tissue destroyed cannot always be limited. Iodoform blown into the ear has some power in destroying polyps, but it has a very unpleasant odor. If the polyp is of considerable size it must be removed bodily or recourse must be had to the galvano-caustic. *Wilde's snare* has for many years been a popular method for their removal. Where the polypus has a peduncle and is of considerable size, this method is a very brilliant one and is deservedly popular. Blake, of Boston, has devised a snare, somewhat more delicate and artistic in structure than the Wilde, and is a very beautiful instrument indeed. The principal difficulty in snaring out a polypus is that the wire is not sufficiently pushed into the ear so as to effectually catch the whole of the tumor. By means of the forehead mirror and a probe, the wire may be carefully pushed to the bottom of the polyp and securely caught upon it. It is well to draw gradually at first until sure that the wire has sufficiently engaged the polyp, then draw firmly so as to nearly cut it off, then by a sudden but not violent jerk, extract the tumor. Naturally, care must be taken not to engage any of the ossicula in the wire loop. The principal objection to the snare is, it does not remove all of the tumor, is painful, it not being possible to work the instrument without some little violence; moreover only a certain number of polyps or granulations may be caught by the snare. The writer's usual mode of procedure is to use some form of *forceps*. The small sized straight fenestrated forceps used in nasal polypi, having a fixation catch to keep them closed, is an admirable instrument. The same with the handle bent at a right angle enables the surgeon to see better. If the fenestration is very large so as to leave a cutting ring at the bite of the forceps, it will catch most admirably. If the arms of the forceps cross each other so as to make a reverse opening, it will do better in a speculum. Gruber's forceps and Hinton's simpler form, are of this construction. The writer has a mouse toothed forceps, made on this principle by Tieman & Co., of New York, which are admirable for catching very simple polyps. It is better to extract without the speculum, when possible: when not, use the Gruber speculum or any convenient variety of bivalve speculum, taking advantage in the introduction of the forceps, of the fact, that there is a fissure in the speculum. The forceps require to catch the polyp very securely or nothing will be accomplished. In the soft, slippery, gelatinous polyp, the bite of the instrument may not catch more than if a jelly fish were in its grasp. In this dilemma, drop in a 40 gr. sol. of arg. nit. and coagulate

the polyp, when it becomes much easier to get hold of and is removed without difficulty. The bleeding will often much embarrass the operation, then pour in more arg. nit or some ferruginous styptic, and when it is arrested, make another effort at extraction. The writer, however, in order to save time when the site of the tumor is exactly known, goes in again and again, with the forceps, even when the canal is filled with blood, and nothing is visible. It would be injudicious, however, to recommend an inexperienced person to do this. The object of the fixation to the forceps is, that after the polyp is fairly caught in the bite of the instrument, this is maintained by the catch, and the operator is free to treat the polyp as strongly or gently as he likes; his sense of touch not being impaired in the effort to hold on to the polyp. Torsion is the best method of removing polyp by this method. If the instrument has an uncertain hold on the tumor, by twisting it may then secure such an attachment to the neoplasm as to extract the whole of it at once. Dr. Buck, of New York, has an instrument for scraping out polyp and granulations. The writer has little experience with it, but has heard it very favorably spoken of. After the removal of the polyp by any of the best methods, there usually will be a little remaining. This may be destroyed by cauterization. Saturated arg. nit., nitric acid or the acid nitrate of mercury, are the best agents for accomplishing this purpose. Boracic acid will sometimes accomplish this end. If a minute point of dead bone is seen it will be well to use one of Dr. Buck's larger rigid scrapers for its removal. Gruber has an instrument in his tenotomy case which would accomplish this.

It may not be necessary to mention that the pressure of dead bone will often cause a polyp to be reproduced, perhaps as long as it is present. There seems to be no special rule as to how often a polyp may return or whether it returns at all or not except this matter of dead bone. I have removed a polyp in a given case some dozen times, and at last have the membrane heal completely, with no further trouble with the growths. The galvano-cautery is an admirable method of removing polyp, but it is on the whole more expensive and troublesome than an ordinary case warrants.

A few cases of suppurative otitis refuse to take an reparative action; the relaxed condition continues, there is no tendency even to the formation of polyps or granulations, and absolutely no tendency to repair. Sometimes this is explained on the theory of tuberculosis or struma.

Bright's disease or diabetes will often interfere with repair; sometimes it is simply unaccountable. In a large number of cases, however, the tendency to repair is decided, the whole of the membrana has been restored with most of its normal characteristics present; but the new formation is more likely to be of the nature of cicatricial tissue, and considerably thinner than the normal.

Frequently the edges of the perforation are sunken so as to be in apposition with the promontory. In this position they may become adherent thereto, and close the drum cavity. The latter may then be a circular cavity, or if the membrane has been mostly swept away in one meridian, the tympanum may be divided into two unequal halves, so that the part next the entrance of the Eustachian tube at the anterior portion of the tympanum alone will become inflated with air on Politzerism. Inasmuch as the contact of air with the tympanum excites undue secretion and the closing of a perforation being indicated to resist this tendency, the artificial drum membrane may be used for this pur-

pose. The one known as Toynbee's is in common use. It consists of a plate of India rubber as thin as paper and attached to a wire a little longer than the depth of the meatus. The rubber membrane may be trimmed off with scissors so as to be easily pushed down upon the remains of the old membrane. In addition to the closing of the cavity of the tympanum it also presses the ossicula firmly together if they have been separated by relaxation or ulceration of their ligaments, thus restoring vibratory continuity between the membrana and oval window. These are the principal reasons for using the artificial membrane. It is not as popular as formerly, and has somewhat fallen into disuse, as it frequently re-excites the discharge, causes pain, tinnitus, and dizziness. In a certain percentage of cases, it improves the hearing while worn, provided it is placed upon exactly the right spot; this is determined by experimentation. The patient himself may apply the drum membrane more successfully often than even the surgeon, and, indeed, he needs to be taught how to do it, for the membrane should only be worn for a few hours at a time during the day, and never in the night, as at best it is an irritating foreign body. Within two or three years the Yeanley cotton pellet has become much more popular than formerly as a substitute for the Toynbee drum. Quite a small bit of cotton wool is rolled into a rounded mass, and by the aid of a pair of forceps or a probe it is pushed into position.

If there is a small perforation, it is better to press the cotton directly upon it, although here, as in the case of the other membrane, experiment needs to determine exactly where it must touch to produce a maximal improvement to the hearing. This may be often worn most of the time; it aids the membrane in healing, and may by its presence cause the absorption of some small polyps. The same precaution in applying it where there is considerable discharge must be observed in this instance as in that of Toynbee's. After the patient has recovered from the disease, the greatest precaution needs to be taken to prevent a relapse. If a slight cold is taken, the patient may again have a running at the ear with or without pain; and the membrane which previously had healed, may again rupture, requiring weeks or months of time to repair it.

A greater danger than this, however, is the tendency of the disease to involve the brain and destroy life.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK COUNTY MEDICAL SOCIETY, MAY 22d, 1882.

The President, Dr. F. R. Sturgis, presided. After the transaction of routine business, Dr. Wm. C. Jarvis was introduced and read a paper entitled

"THE SURGICAL TREATMENT OF CHRONIC NASAL CATARRH."

The following is an abstract of Dr. Jarvis' paper:

The treatment of few diseases has been less satisfactory than that of nasal catarrh. This is largely due to the fact that the necessary examination is not made thorough enough. Not enough importance is given to a proper differentiation of the different conditions of this affection.

He regarded the removal of the hypertrophied tissue of chronic nasal catarrh as a great advance over old methods. The tissues principally involved in the inflammatory changes were those over the turbinated bones. When it was doubtful whether the tumefaction is due simply to congestion or to actual hyper-

trophy, it was better to defer operation until the diagnosis was made clear.

Dr. Jarvis thought the hypertrophy occurring in this region to be due not so much to pathological change, but rather to the loss of contractile power of the tissues. The tissues over the lower portion of the turbinated bones is most liable to hypertrophy. The two chief divisions he would make were anterior and posterior hypertrophy. He alluded next to thickening of the tissues over the septum and to osseous and cartilaginous deviation of the septum.

It was advisable to remove the cause of a disease in order to effect a cure, and this was possible in chronic nasal catarrh. A plate was exhibited illustrating the appearance of hypertrophied turbinated tissue. The instruments required to do the operation were described. They consisted of the ecraseur, the mirror and tongue depressor, tape holders, septum scissors, etc. The amount of hemorrhage was inconsiderable providing slow traction was made. Nasal hypertrophies of every variety could be permanently removed by this method. Nasal polypi, although apparently insignificant, may by irritation maintain a chronic catarrh, and therefore they should be destroyed.

Dr. Jarvis described his method of operating, which consisted of reflecting in a mirror the localized and general thickenings over the septum, ensnaring them with the ecraseur and excising them. This operation he looked upon as far preferable to that so much in use, namely, punching holes through the septum.

In conclusion he urged the adoption of the methods described on account of their manifold advantages over others. They were at the same time less difficult, less painful and more beneficial in result.

The paper was discussed by Drs. Elsberg, Goodwillie, Bosworth, Brandeis, A. H. Smith, Beverly Robinson, and others.

Dr. Goodwillie thought the wire snare a good means for removing polypoid growths, but in slight hypertrophy he was in favor of using the galvano-cautery.

Dr. L. Elsberg said that the statement that European laryngologists used the rhinoscope so infrequently should not go unchallenged. He knew of none who did not use it. The surgical treatment of nasal catarrh doubtless originated in this country. He had tried the different methods for removing hypertrophied tissue in the nose, scarification, the application of strong acids, the mechanical removal by blunt scissors, cutting forces and as far back as a dozen years ago had employed a wire snare loaned to him by Sir Wm. Wilde. He preferred, however, evulsion to all other methods and when properly done this was not so terrible an operation as pictured.

Dr. Bosworth looked upon Jarvis' snare as the best instrument in use for the removal of nasal hypertrophy. He could not agree with Dr. Goodwillie in regard to the frequency of bony deposit in this region; he had met with only 2 such cases in 10,000 of nasal catarrh.

Dr. Brandeis was in favor of using the method described by Dr. Jarvis. He had obtained good results from its adoption.

Dr. A. H. Smith said he considered the use of rigid piano wire necessary to success in the use of the snare.

In anterior hypertrophy he was accustomed to use chloro-acetic acid and found it accomplished all that was desired.

Dr. Robinson thought that the liability to hemorrhage after the use of the snare was not sufficiently emphasized. He thought the galvano-cautery superior to the use of the snare.

Dr. Jarvis closed the discussion.

Dr. L. L. Seaman exhibited a

NEW APPARATUS FOR TREATING FRACTURE OF THE PATELLA.

It secured perfect apposition of the fragments, permitted of dressing the wound without disturbing the fragments, and allowed the patient to go about without danger while the apparatus was applied.

The apparatus consisted of a splint made from strips of raw hide and steel bars and adhesive plaster and could be adjusted by means of a key.

The Society then adjourned.

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK.

BURNS OF MOUTH AND THROAT FROM SWALLOWING SULPHURIC ACID.

SERVICE OF

GEO. A. PETERS, M. D.

Patient J. K. German; æt. 44; single; laborer; was admitted Sept. 30th, 1880. He had swallowed a small amount of sulphuric acid with suicidal intent.

Admission.—Has great pain in attempting to swallow; some dyspnœa; continuous efforts at vomiting; no blood in vomited matter; pharynx very red; slough on tongue, and lips crusted. Temperature normal.

Treatment.—Albumen and milk ordered. Difficulty in deglutition and inability to retain food, pain over gastric region remained the most prominent symptoms.

Oct. 22nd.—Is able to swallow fluid food only. Stricture of the œsophagus suspected. On examination œsophageal bougies were arrested, but on account of the nervous and excitable condition of the patient the suspected stricture could not be located.

Oct. 24th.—Still suffers from difficult deglutition. Pain in right side of chest. Vomited matter contains blood supposed, however, to come from the gums.

Oct. 30th.—No improvement in general condition, is being nourished by enemata of beef juice.

Nov. 2nd.—Retains nourishment well to-day for the first time; vomiting much less frequent and violent.

Nov. 11th.—Still fed entirely by enemata. Attempt made to pass flexible bougie into œsophagus but without success.

Nov. 17th.—Patient growing very weak and mental condition impaired. Very melancholy; can retain very little beef juice.

Nov. 18th.—Patient ætherized. No. 24 F. urethral bougie passed into stomach. On withdrawal it was slightly tinged with blood. No larger instrument could be passed.

Nov. 23rd.—Improving. No. 26 F. passed through stricture without ether, begins to retain fluid food.

Nov. 29th.—Very much emaciated. This A. M., is weak and discouraged. Extremities cyanotic, pulse very feeble. Vomited during the night. Ordered spts. amm. aromat. gtt. xx every hour for three hours. In the evening is feeling much more comfortable.

Jan. 9th.—Is slowly improving, is able to eat raw beef and fluid food and is gaining flesh.

Jan. 26th.—Gradual improvement to this date when patient making no further complaint was discharged cured.

SELECTIONS FROM JOURNALS.

THE AMERICAN MEDICAL ASSOCIATION.

Thirty-third Annual Meeting, held at St. Paul, June 6, 7, 8, and 9, 1882.

Vice-President, P. O. Hooper, of Arkansas, in the chair. The proceedings were opened by prayer by the Right Reverend John Ireland.

General Lucius F. Hubbard, Governor of Minnesota, in an address of welcome, tendered to the delegates the hospitalities of the State, and invited their attention to the special attractions and advantages of its soil and climate. He said, "there is a characteristic of our country of peculiar interest to, and invites the investigation of, gentlemen of your profession. I refer to the exhilarating and vitalizing influence of our climate, which has made Minnesota the Mecca for health-searchers in years past, and as a direct result of your visit at this time, we shall expect to greatly widen and strengthen our reputation in that regard. With assurances of health that do not disappoint, and opportunities for the acquisition of wealth that can but satisfy, we invite the brain and muscle of the world to a home in our midst." General Hubbard concluded with a few words expressing the interest and sympathy of the people in the deliberations of the convention.

Dr. A. J. Stone, of St. Paul, chairman of the Committee of Arrangements, extended an invitation to the ex-Presidents and Vice-Presidents to occupy seats on the platform. The invitation was accepted by Drs. L. A. Sayre, of New York; N. S. Davis, of Chicago; J. M. Toner, of Washington; and Beverly Cole, of San Francisco.

Dr. Stone also announced a programme of railroad excursions, receptions and entertainments by private citizens, and a grand banquet by the profession and citizens this evening at the Metropolitan Hotel.

Protests from the Philadelphia County, the St. Louis, the District of Columbia, the Æsculapean, the Wabash Valley, the Grant County (Indiana) Societies, and the State Societies of Georgia, Pennsylvania, Arkansas, Kentucky, Tennessee, Missouri, and others; in fact, from the whole Union, he said, were announced by the Secretary, as having been received against the admission of delegates from the New York State Medical Society, and condemning its course in reference to the Code of Ethics. These protests were referred to the Judicial Council.

The Secretary also read the following letters:

NEW YORK, May 27, 1882.

To WM. MANLIUS SMITH, M. D., Secretary of the Medical Society of the State of New York. DEAR SIR: I have just received a certificate of my appointment as delegate from the Medical Society of the State of New York, to the American Medical Association, which is to meet at St. Paul on the 6th or June next. As the State Society has passed a resolution ignoring the Code of Ethics which bound them as members of the American Medical Association, I cannot see how they can expect their delegates to be received into an Association whose laws they are not willing to obey, and which must necessarily, therefore, refuse them admittance. I must therefore respectfully decline to act as delegate, and therefore return my certificate.

Respectfully,

LEWIS A. SAYRE.

PHILADELPHIA, May 30, 1882.

To THE ACTING PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION. DEAR SIR: I deeply regret

that engagements from which it is impossible to extricate myself, will deprive me of the pleasure of attending the meeting of the Association at St. Paul, and of participating in its deliberations, which promise to be of more than ordinary interest on account of the extraordinary proceedings of the New York State Medical Society. I regard these proceedings as an outrage which every member of the profession should consider as a deep personal insult, and which the Association should rebuke in most stern and uncompromising manner.

Hoping that the approaching meeting will be a success, and that its deliberations will be conducted with that wisdom and calm judgment which have heretofore characterized them, I am, dear sir,

Very truly and respectfully,

Your friend and obedient servant,

S. D. GROSS.

In the absence of J. J. Woodward, M. D., the President of the Association, who was obliged to go abroad on account of his health, Dr. P. O. HOOPER, of Arkansas, the first Vice-President, delivered the Annual Address.

He regretted that the illness of Dr. Woodward prevented his presiding at this meeting, and he accepted with diffidence the Presidential duties which thereby devolved upon him. He expressed the thanks of the Association to the citizens of St. Paul, for the cordial reception which they had extended. He sketched the history of the Association, its aims, and the success it had attained, and claimed that it had greatly aided the cause of reform in medical education. He thought that the influence of the Association would be further increased by substituting a weekly journal for the annual volume of transactions. To the Association belongs the honor of insisting upon the importance of health laws. As a result, State Boards of Health have been established, and recently the National Board of Health. He sketched the progress which had been made within the last year in all branches of science, and particularly in medical science. He dwelt upon the importance of preventing the introduction into communities of contagious diseases, and claimed that smallpox can be stamped out by efficient vaccination and revaccination, and he urged that vaccination be made compulsory in all the States of the Union. He recommended to the Association the propriety of organizing a relief society for the benefit of the families of physicians left in destitute circumstances. He directed attention to the position taken by the New York State Medical Society, which endangered the very foundation of the Code of Medical Ethics, and stated that, as the matter was referred to the Judicial Council, whose decision would be final, he would refrain from further comment. In concluding, he paid a glowing tribute to the President of last year, Dr. J. T. Hogden, whose recent death at St. Louis is so deeply deplored, and to Dr. J. J. Woodward, who is now in Europe to recuperate his health.

On motion, the thanks of the Association were tendered the President for the address and a copy was requested for publication.

The Secretary read a letter from Dr. J. J. Woodward, dated Washington, January 31st, 1882, expressing his deep regret at his inability to be present at the meeting of the Association.

On motion of Dr. J. Solis Cohen, of Philadelphia, a cablegram was ordered to be sent to Dr. Woodward, regretting his absence and expressing the earnest hopes of the Association for his speedy recovery.

Dr. N. S. Davis, of Chicago, presented the following

resolutions from the Women's National Christian Temperance Union:

Whereas, We approve teaching the children and youth in the schools and educational institutions in this country, as facts of hygiene, the physiological dangers and evils resulting from the use of alcoholic beverages; and

Whereas, It is the acknowledged duty of the State to provide for such education of the people as is essential to good citizenship;

Resolved, That we recommend the State Legislature to enact laws requiring the physiological dangers and evils resulting from the use of alcoholic beverages to be taught in schools supported by public money or under State control.

Referred to the Section on State Medicine.

The Register of Members was read by the Secretary, and 883 delegates were shown to be present, constituting the largest meeting ever held, with the exception of the meeting in New York in 1880.

On motion, the members of the Minnesota State Medical Society, now in session at St. Paul, were made members by invitation.

INVITATION TO ATLANTIC CITY, N. J.—A communication was presented, inviting the Association to hold its next Annual Meeting at Atlantic City, N. J., in June, 1883, and offering free hotel accommodation to the members. Referred to the Committee on Nominations.

SECOND DAY—JUNE 7TH.

INVITATIONS.—Dr. A. J. STONE, Chairman of the Committee of Arrangements, presented a communication from the Mayor and Council of Fargo, Dakota Territory, inviting the Association to visit Fargo as the guests of the citizens, and offering free transportation.

Excursions were announced for Thursday, to Stillwater and White Bear lakes.

The Committee on Nominations was announced as follows: Arkansas, J. A. Dibrell, Jr.; California, H. S. Orme; Colorado, J. Hawes; Connecticut, Bronson; Dakota, S. B. McGrumpy; District of Columbia, W. V. Marmion; Georgia, Wm. F. Holt; Illinois, T. F. Worrell; Indiana, Jones; Iowa, T. J. Caldwell; Kansas, J. Bell; Kentucky, L. S. McMurtry; Louisiana, Drysree; Maine, Foster; Maryland, Wm. Lee; Michigan, Foster Pratt; Massachusetts, M. G. Parker; Minnesota, W. W. Mayo; Missouri, A. J. Steele; Mississippi, Harris A. Gant; Nebraska, Abbot; North Carolina, Eugene Grissom; New Hampshire, Davis; New York, N. C. Husted; New Jersey, S. S. Clark; Ohio, Scott; Pennsylvania, A. Fricke; Rhode Island, A. Ballou; Tennessee, Lindsley; Texas, W. H. Hart; Virginia, F. D. Cunningham; Vermont, Thayer; Wisconsin, N. Senn; U. S. Army, Glover Perrin; U. S. Navy, John M. Brown; U. S. Marine Hospital Service, Miller.

NEXT PLACE OF MEETING.

The President announced the reception of invitations to the Association to meet at Cleveland, Detroit and other places. Referred to the Committee on Nominations.

On motion of Dr. J. E. Reeves, the necessary traveling expenses of the Treasurer were ordered to be paid.

DECLARATION OF PRINCIPLES.

Dr. Chas. Dennison, of Colorado, offered the following: "In order to correct a misconception which largely exists in the public mind, and to some extent prevails among members of the medical profession, as to the liberty of action authorized by this Association in the treatment of disease, we deem it proper to make a declaration of principles broadly applicable to the healing art, as sanctioned and practiced under our

Code, to wit: Rational medicine, being based on experience and pathological research, demands absolute freedom in the selection and method of administration of materia medica, and there is nothing in the Code of Ethics of the American Medical Association prohibiting the use by its members of any known and honorable means of combating disease. Furthermore, as contributing to the alleviation of human suffering, we hail with pleasure and gratitude every discovery in etiological and therapeutical science by whomsoever made. We, therefore, reject as untrue and obnoxious the term 'allopathist' as applied to members of this Association, by dogmatists and extremists without its fold: First, because it tends to convey the erroneous impression that we are restricted in the choice of remedies and the method of using them by other than the limits of rational science. Second, because for any association of men claiming to practice the profession of medicine, to adopt a name based upon limited and conjectural theories of therapeutics for the purpose of designating a particular school of medicine, we have always and still regard as unscientific in principle and dangerous in practice."

Referred to the Judicial Council.

Dr. J. H. Packard, of Philadelphia, read the REPORT OF THE COMMITTEE ON JOURNALIZING THE TRANSACTIONS.

He recommended the establishment of a weekly medical journal under the control of nine trustees, three to be elected each year and to serve for three years. The editor's salary to be \$6,000 per annum, he to pay the salary of the assistants. The Journal to be entitled, "*The Journal of the American Medical Association*." The subscription price to non-members of the Association to be six dollars per year. The committee propose that the board of trustees should send out circulars to every regular physician whose address could be obtained, and if within three months the answers should be sufficiently encouraging—say 2,000 subscribers pledged, the Board should then elect an editor and complete the arrangements for early publication.

The report was accepted, and made the special order of business for Thursday morning.

An amendment to by-laws allowing permanent members to vote was laid upon the table.

The address in medicine was read by Dr. J. A. Ochterlony, of Louisville

REPORT FROM THE JUDICIAL COUNCIL.

In reference to the *Nebraska State Medical Society*, the Judicial Council reported that careful examination of the documents and matters involved in the protest of certain members of the Nebraska State Medical Society against the admission of said Society to representation in the American Medical Association shows no proper cause for such protest at the present time, and consequently the Society is entitled to its full representation by delegates in this Association.

In regard to the resolution concerning the use of remedies controlled by a patent, copyright or trade-mark, etc., which was reported from the Section on Practical Medicine and Materia Medica, and by the Association referred to the Judicial Council last year, the Council has decided, after careful examination, that, inasmuch as said resolution includes matters not referred to in the Code of Ethics, and said Code contains all that is necessary for the proper guidance of members of the medical profession, therefore the resolution should not be adopted by the Association.

Third, in regard to the protests against the action and reception of the delegates from the *New York*

State Medical Society, which was referred to them, the Judicial Council reports as follows: Having carefully examined the Code of Ethics adopted by the New York State Medical Society, at its annual meeting in February, 1882, as furnished by the Secretary of the said Society, the Judicial Council find in said revised Code provisions essentially different from and in conflict with the Code of Ethics of this Association, and, therefore, in accordance with the provision of the ninth by-law of this Association, decide *unanimously* that the said New York State Medical Society is not entitled to representation by delegates in the American Medical Association.

The conclusion of the report was received with prolonged and enthusiastic applause.

Dr. H. O. Marcy, of Boston, delivered the address in obstetrics.

The subject was uterine fibroids, and the lecture was illustrated by microscopic preparations thrown on the screen by the solar microscope.

Adjourned.

THIRD DAY—JUNE 8TH.

THE CODE OF ETHICS.

The Secretary announced the receipt of a communication from the Committee on Ethics of the State Medical Society of Colorado, to the effect that it will report at its next session in favor of maintaining the provisions in relation to consultations of the time-honored Code of the American Medical Association; also the resolutions of the Medical Association of Georgia, at its recent annual session. These communications were received with applause.

CHANGE OF TITLE OF SECTION VII.

Dr. D. H. Goodwillie, of New York, moved that the name of Section VII. be changed from that of "Section on Dentistry," to "Section on Dental and Oral Surgery." Adopted.

The Committee on Nominations presented the following report.

The next place of meeting, Cleveland, Ohio.

For President, John L. Atlee, M.D., of Lancaster, Penn. Vice-Presidents, Drs. Eugene Grissom, of North Carolina; A. J. Stone, of St. Paul, Minn.; J. A. Ochterlony, of Louisville, Ky.; and H. S. Orme, of California. Treasurer, R. J. Dunglison, M.D., of Philadelphia. Librarian, Wm. Lee, M.D., of District of Columbia. Judicial Council, N. S. Davis, of Illinois; J. M. Brown, U. S. N.; X. C. Scott, of Ohio; M. Sexton, of Indiana; N. C. Husted, of New York; Wm. Lee, of District of Columbia; and J. E. Reeves, of West Virginia.

The report was referred back to the Committee, as it contained nominations which were rendered ineligible by absence of the nominees.

The journalizing of the transactions was the next special order of business. In the absence of Dr. Packard, Dr. N. S. Davis, of Illinois, introduced the discussion. He said he did not sympathize with the unjust criticisms which had been urged against the annual volume of transactions. He offered the following resolutions:

Resolved, That the interests of the Association would be promoted by the publication of its transactions in a weekly journal, under its own control, instead of in an annual volume as heretofore, provided that it could be done without involving pecuniary embarrassment, or so far encroaching its funds as to prevent the annual encouragement of original investigation by its members.

Resolved, That so much of the report of the Com-

mittee on Journalizing Transactions as relates to increase of membership of this Association by application from members of State and local societies be and the same is hereby approved.

Resolved, That so much of the report as relates to the appointment of a Board of Trustees, nine in number, and their duties, be and the same is hereby adopted, and that the President of the Association now appoint a special committee of seven, to recommend to this meeting of the Association the names of nine members for election, to constitute said Board.

Resolved, That the Board of Trustees so appointed be requested to proceed as early as possible to agree upon a plan of a "Medical Journal of the American Medical Association," and to send circulars, explaining such plan, and asking pledges of support by actual subscription, to the members of the medical profession throughout the whole country, and, therefore, ascertain as reliably as possible what degree of support the proposed journal can have, as a basis for commencing its publication, and that said Board also proceed to ascertain and agree upon the best method of publishing such journal, the best editorial services it can secure to take charge of the work, and the best plan of its issue.

Resolved, That said Board of Trustees is hereby instructed, under all circumstances, in whatever plans or contracts it proposes, to retain entire control over the advertising as well as all other pages of the journal that it is proposed to establish, and that said Board report in full at next meeting of this Association plans upon which it has been able to agree, together with response of the profession to its circulars asking actual subscription to the proposed journal, and that the constitutional amendments proposed by Dr. Packard last year be continued upon the table until the report of the Board of Trustees is received and acted upon.

Resolved, That the Treasurer of this Association is hereby authorized to pay out of funds in the treasury the necessary expenses of the Board of Trustees, in printing and distributing its circulars, and in conducting its proper correspondence.

Resolved, That the Committee on Publication proceed to publish the proceedings and transactions of this present meeting in a volume as heretofore, using all diligence to give it an early distribution to those entitled to receive it.

Adopted.

Dr. Gibson, from the Section on State Medicine, presented the following resolutions:—

EXPERT TESTIMONY.

Resolved, That the American Medical Association deems it advisable, and conducive to the ends of justice, that medical men shall be called as expert witnesses directly by the Court, instead of, as now, being called by either side of a suit in litigation.

Laid on the table.

A NATIONAL MUSEUM OF HYGIENE.

Resolved, That this Association heartily endorses and commends to Congress the proposition of the Surgeon-General of the Navy to establish at Washington, in connection with the Bureau of Medicine and Surgery of the Navy Department, and in co-operation with the American Public Health Association, and the American Medical Association, a National Museum of Hygiene, which shall exhibit the history and progress of sanitary science by a collection of publications, articles, models, drawings, etc., illustrating defects and improvements in foods, in water supply, bedding, clothing, marine architecture, house and hospital construc-

tion and furniture, apparatus for heating, illumination, ventilation, and removal of excreta, and refuse culinary, laundry, and bath facilities, and for physical culture and exercise, and whatever else tends to the preservation of health and prevention of disease.

Resolved, That the Association earnestly urges upon Congress the appropriation of the sum of ten thousand dollars which has been recommended for the purchase of exhibits and their subsequent care and preservation, and that the Secretary shall, without delay, send a copy of the above resolutions to each member of the Senate and House of Representatives in Congress and to the heads of Departments.

Adopted.

THE MUSEUM AND LIBRARY OF THE SURGEON-GENERAL'S OFFICE.

Dr. N. S. Davis of Illinois, offered the following:

Whereas, It appears from amended form of bill making appropriations for the army of 1882 to 1883, as recommended by the Military Committee of the Senate, that the amount appropriated for the support of the Army Medical Museum and Library has been reduced from ten thousand to five thousand dollars; therefore

Resolved, That this Association views with great regret and strong disapproval this attempt to cripple two institutions, whose great value is recognized by the medical profession of the United States as well as of Europe. That in the case of the library, whose collection of medical journals has required years of unceasing effort to bring to its present completeness, the intended reduction will be specially injurious, as from their transient character such publications would be in many instances irretrievably lost. That the publication now in progress of the *Index Catalogue* of the library of the Surgeon-General's Office is the most extensive work of the kind ever attempted, which makes it desirable that its completeness should not be lessened by the withdrawal of the means to procure current medical literature, therefore this Association expresses the earnest hope that Congress will restore the appropriation to its former amount, in the interest of the medical profession, and, therefore, of the community at large. Adopted.

Dr. Smith, of Dakota Territory, offered the following

AMENDMENT TO THE CONSTITUTION:

Resolved, That the Constitution of the American Medical Association be so amended as to provide for the admission to its membership of two delegates from the Medical Bureau of the United States Indian Service, to be nominated by the Surgeon-in-Chief of the Indian Medical Bureau, and appointed by the Secretary of the Interior.

Resolved, Also, that this resolution shall take immediate effect.

Laid over under the rules.

Dr. W. A. Byrd, Quincy, Ill., read the Address in Surgery and Dr. Gihon, U. S. N., the Address in State Medicine.

The President announced the followings committee on the nomination of a Board of Trustees for the Journal; Drs. J. A. Sayre, J. M. Toner, Foster Pratt, R. J. Dunglison, R. Battey, W. F. Peck, and P. O. Marcy.

Adjourned.

Telegraphic Report from the Medical News.

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A HITHERTO UNDESCRIBED LESION OF THE KNEE-JOINT.

Read before the New York Academy of Medicine, June 15, 1882,

BY

FREDERICK D. LENTE, A. M., M. D.

There is an injury of the knee-joint of very common occurrence in my experience, and not very infrequent in that of several experienced surgeons, whose attention I have called to the subject, which is scarcely alluded to in the systematic works on surgery; and which on this account, is almost sure to be neglected, or inefficiently treated by any except the practitioner of large experience, who has witnessed the troublesome and often serious consequences resulting from inefficient management.

It is an injury to which it is impossible to give a suitable name, and equally so to indicate its pathology. It is produced by a variety of accidents, most of them of apparently the most trivial character. Let us first glance at the peculiar construction of this joint, which will give us some explanation of the manner in which this lesion is produced. We notice that while it is uncommonly well protected in consequence of the number and strength of its ligaments, from complete luxa-

tion, rendering this accident comparatively rare, the result of only the most violent force, yet, the absence of surrounding bony or muscular projections, renders it more liable than any one of the other large joints to serious effects from slight injuries. We accordingly find that, while other joints are rarely liable to these, except in subjects of pronounced strumous diathesis, the knee-joint is peculiarly so.

I have no notes of the numerous cases which have fallen under my observation during the last ten or fifteen years, to go no farther back; but, to give you an idea of the causes and effects of the lesion, I will endeavor to narrate the leading facts of a few of these from memory.

About thirteen years ago, Dr. Y. while showing a laborer how to manage a rock which was in process of removal from his lawn, strained his left knee very slightly. It was apparently of so little consequence, that he paid no attention to it, and, on the following day he went to a neighboring town on business, and felt no inconvenience in walking about. But, on returning home, the joint troubled him a little. On the following day there was slight pain and stiffness, but as there was no heat or swelling he was induced by me to assist in an operation. This required him to stand for an hour or more. The next day he felt considerable pain, and there was slight tumefaction, but no heat. He kept quiet in bed for a time, and the pain on motion continuing, he applied a plaster or starched splint. This produced pain and spasmodic action of the muscles, and he removed it. I reapplied the splint for him and he felt considerable relief. After a week or so, the splint seemed to be uncomfortable, and a new one was applied; this happened a number of times during the months in which he was confined to the bed or his room. The pain was relieved a good deal by the application of blisters to the sides of the joint through openings cut in the splint. There was not at any time more than a very slight effusion into the joint; but, after some weeks, a good deal of thickening of the tissues about the joint. One reason for a more frequent change of splints than usual in this case was the occurrence of a sudden jerk of the extensor muscles of the leg, immediately on awaking, causing pain in the knee which lasted for hours; this could only be prevented by replacing the splint, loosened by shrinkage of the limb, with a tighter one. Various kinds of splints, which his own ingenuity or mine suggested, were applied. It was about two years before he was finally able to throw aside all such appliances; but during this time he had a number of relapses caused by imprudence, and the very natural anxiety to return to his business. One, for instance, was caused by hurrying up hill when late for church, when he had been walking for some time with no inconvenience. Other relapses were caused by falls in his room, when attempting to move about too rapidly. After the lapse of two years his relapses

occurred at long intervals from over exertion, but he is still liable to them, and a few months since, suffered for several weeks from one of the most obstinate he has ever had, brought on by hurrying to catch a train. For several months before this he had been quite free from trouble.

At the time of the doctor's accident a niece of his was just recovering from a disabled knee-joint which had laid her up for many months, resulting from a most insignificant injury, to which but little attention was paid at the time.

Miss P., a lady about thirty years of age, of delicate physique, and suffering from chronic phthisis, in descending the stairs of a hotel in the spring of 1879, was conscious of a slight twist, or "slipping," as she described it, in one of her knees. There was little or no pain, and she continued to descend, and to walk about until the following day without trouble or pain. The following day she felt pain which was increased by walking; but she did not lie up or call in any advice until the pain was so severe as to prevent locomotion. There was also a slight swelling about the joint. She was seen by an experienced surgeon of Washington, but as she was soon to leave there he applied some simple remedies. She came to New York, and the pain was still increasing, with any motion of the joint, but there was no heat and but little swelling, and the matter was not considered a serious one. She was under the treatment of a specialist for throat trouble. She was finally obliged to get an invalid chair with wheels, and to keep the limb quite straight. On arriving at Highland Falls, New York, whither she went to spend a portion of the summer, she sent for me, but as I had left the neighborhood, I wrote, advising her to call in Dr. Murdock, of Cold Spring, who was in the vicinity. He found so little evidence of disease of the joint from its appearance, that he suspected the disease might be of a nervous or hysterical character, she being an excessively nervous, timid person; but he found on more careful examination, that he was mistaken. He advised complete rest and other treatment; but she soon left, and came up to Saratoga Springs, to put herself under my charge. About four months had elapsed since the receipt of the injury, and she had lost what little courage and fortitude she had been able to command at first. She had made up her mind that she would have to wheel herself about in future. The case remained under my care for two months, and was an exceedingly troublesome one to manage, not on account of surgical difficulties, but of her nervous temperament. To cut the case short, I will merely say that with the aid of my friend Dr. T. H. Burchard, of New York, I applied a silicate of sodium splint, from the upper part of the thigh to just above the ankle; after which all pain subsided, and she could stand on her feet with assistance. This remained on over three weeks; it was then removed when it was discovered that all pain was gone, and that pressure on the inside of the joint, where it had before caused very severe suffering, could be borne without any. By the aid of judicious passive motion, *massage*, *electricity*, &c., and the use of crutches, she was soon able to go about the room. The splint was re-applied for some days, after each manipulation; but, after a couple of weeks, it was cut down to a short distance above and below the joint and then kept on some time longer as a protection. In October she threw away her cane, the last remnant of artificial support, and subsequently got the full use of her joint.

While this lady was under treatment, two other ladies, patients of mine in the same hotel, gave me the

history of the consequences of trivial injury of the knee-joint which had happened to them. One, an unmarried lady, suffered for over three years. The other did not completely recover for seven years, and finally was obliged to make a trip to Europe to recover her health. In the case of the latter, a married lady, the accident happened in this way. She was lying in bed, in the morning, when her husband accidentally knocked something off the mantel. On turning over quickly to ascertain what had fallen, the bed clothes caught the toe of one foot, which gave the knee a slight twist. I don't think she suffered actual pain. No notice was taken of it that day or the next, except that it was slightly sore. The soreness and pain gradually increased, and one remedy after another was tried, everything in fact except the remedy. She subsequently suffered so much with it that her general health was much impaired, although she was always in good health previously, and has been since her recovery from the effects of the accident.

Mrs. N., aged about forty. This patient, in excellent health and quite stout, while sitting in front of an oarsman on the St. John's River, in Florida, three winters ago, received a slight blow from the oar touching her knee in making the forward stroke. The pain was not severe, and soon subsided; but on walking, she felt the joint a little lame. On the following day, however, the pain had almost entirely subsided, and she walked about as usual; this again induced some pain and soreness, but no swelling. Being an active, energetic person, she paid but little attention to it, and continued to walk more or less until the time at which I saw her, which was, I think, about two weeks after the accident. The pain on motion was then getting to be quite severe, and she kept her room, still going down, however, to meals. There was little or no swelling. She was anxious to go at once to her home in Chicago, so I advised a plaster splint to enable her to travel with comfort, and without so much danger to the joint. It was applied at once, and as soon as she became accustomed to the inconvenience of it, she walked with considerable ease, and with no pain. She was advised to keep the apparatus on for at least three weeks, and to put herself under the care of a surgeon. I have lately seen her son, who says she completely recovered under the care of a surgeon who continued the treatment.

My friend, Dr. C., at the head of one of our large State hospitals, has had, from boyhood, a movable cartilage in his left knee-joint; but, for several years, it has given him little or no inconvenience. He also injured this joint while at college. This may have weakened the joint somewhat, as he always had a habit of giving way slightly on that side in walking, but he has always done a great deal of walking and climbing also, when superintending the construction of his hospital. In May last, he walked very rapidly for a long distance in New York to catch a train, and had been on his feet most of the day. That night he experienced some pain in the joint; the day following it was no better, and as he continued to go about constantly in the discharge of his multitudinous duties, the pain and lameness progressively increased. With his usual perseverance he continued at his work and used but little precaution for some time. Finally he took to crutches. In spite of my remonstrances, and advice to have a splint applied, he was loth to give up, and only rested a few days at a time, until the early part of July when he wrote to me to request me to apply the splint. During all this time there was no sign of active inflammation, and a very trifling effusion into the joint, with

slight thickening of the tissues in front, on either side of the patella. The pain on pressure was, as usual, in these cases, much greater just an inch or more from the inner side of the ligamentum patellæ than elsewhere. *Standing firmly on the injured limb, or very firm pressure transmitted from the sole of the foot to the end of the femur, failed to elicit any pain.* On examining the specimen of silicate of sodium ordered from New York for making an immovable apparatus, I was disappointed in finding it very liquid, instead of being of the consistence of syrup. As no other sample was at hand, and as I had traveled over a hundred miles to use it, and was compelled to return in a few hours, I was reluctantly compelled to proceed, which was unfortunate, as what I feared happened: The silicate failed to "set," and the limb, being exposed for some hours to admit of drying, although aided by the application of a hot smoothing-iron, became uncomfortably cold. This, added to the constrained position, and the fact that when the splint dried it did so in ridges at the back of the joint, producing disagreeable pressure, caused, as the patient thought, the painful spasms in the muscles of the limb, from which he afterwards suffered, especially on any attempt to stand on his other foot. It will be observed that these spasms occurred after the application of the first splint in Dr. Y's. case and disappeared after a re-application. They gradually subsided after some days. The splint was not removed, I think, until after the lapse of forty-eight hours. It would have been much better to have removed it before bedtime on the day of its application, as neither plaster nor soluble glass will set sufficiently to be of any service if it does not harden very decidedly within four or five hours.

I saw my friend in September and found him going about his wards with one crutch; there was little or no swelling of the joint, and he said no pain. Have learned lately that he has discarded all artificial support and is well.

A former patient, Mr. F. gave me, yesterday, the following particulars of an accident of this kind which happened to him in 1854, while a Senator of the United States. He was coming out of the Capitol, and slipped on an orange peel, twisting one of his knees, and causing great pain, which, however, passed off after a short time, although he continued to limp. The following day, he seemed all right, but, after walking a little, the lameness and some pain returned. There was no swelling nor evidence of inflammation. He could not conveniently lie up, and took to riding on horseback, but still his lameness and pain annoyed him; but he did not consult a surgeon until the lapse of four months, when he saw a Dr. Cushman who told him he must keep quiet for six weeks. He told him he could not spare the time, so he put him on his back for a week and applied blisters to the knee. At the end of this time he was somewhat relieved, and went about as usual, still limping and using a cane. He soon after went to Europe, remained four years, and on his return was still a little lame and using his cane; and for several years, although he finally discarded his cane, he would feel the effects of the injury slightly after walking up a mountain side, or other unusual exertion.

The following case is from a work by Wharton Hood, of London, on "Bone Setting (so-called)" which is well worth our study, as it deals with a class of injuries and diseases which are the opprobria of the surgeon, and sometimes give great *éclat* to the bone setter. It is related by the patient himself, a man in good health, from whose history I condense.

In July, 1859, I jumped from a low wall in my garden

to the gravel walk. Felt no ill effects at the time, but on waking in the morning found my left leg stiff; but, supposing it of little consequence, went about my business as usual. On walking, experienced pain on the inside of knee joint, which increased during the day, and at night I could scarcely walk. Next morning, sent for my medical adviser, who thought that a "cartilage had been strained," ordered cold water. After several days the pain had increased and the joint commenced to swell. Then leeches and a blister were applied; after this the leg became rigid at the knee joint. After two months my appetite failed, and my health became impaired." The account goes into the details of long suffering, and various ups and downs for over six years, trying the skill of various surgeons in and out of London.

The last case of this injury which has fallen under my observation is that of Prince Leopold, which, according to the papers, caused a postponement of his marriage. A proper splint timely applied, would in all probability, have rendered a postponement unnecessary. Instead of this, he persisted in traveling about, and finally sustained a relapse from slipping on an orange peel. His first injury, a very trivial one, was caused by simply kicking his toe against the root of a tree, while walking.

It is not very difficult to diagnose this affection from hysterical disease. There is, of course, always the history of an injury, slight though it be. The pain in hysteria is referred to either side or to both sides; the limb is kept semiflexed instead of straight; pain is complained of when the joint is at rest; superficial pressure often gives rise to more exhibition of suffering than deep pressure; and, by pressing on the most painful spot, when the patient's attention is diverted, she does not notice it; the limb is apt to start frequently, and when the patient is wide awake; whereas, this starting, in the injury which I am describing, occurs when the patient is just going to sleep or just awaking from it, unless it is occasioned by improper pressure of the splint. These points of difference, most of which are mentioned by Barwell and others, will easily lead to a correct diagnosis. Nor must this injury be confounded with what Hey first called "internal derangement of the knee joint," and which other surgeons have called "slipping of the semilunar cartilages," or "subluxation of the semilunar cartilages." In the latter accident, although some of the causes which give rise to it are very similar to those which induce the lesion herein described, the patient falls suddenly to the ground, and usually in severe pain; he is often "unable to move the limb or to stand upon it," (Hamilton.) Sometimes it requires to be pulled into place. "Considerable swelling of the knee rapidly supervenes and the synovial capsule becomes distended with fluid," (Gant.) It is worthy of mention also that in almost all cases of injury or disease of this joint, a flexed position is the most comfortable, whereas, in this injury, the patient feels less pain with the limb straight.

The very imperfect sketches which I have given of some of the cases of this injury which have fallen under my notice will serve to convey a tolerably correct idea of its causation and treatment, and will, I hope, impress on your minds the great importance of strenuously urging such patients as may meet with it to submit with patience to the comparatively slight inconvenience of an apparatus, which, in most cases, if properly applied in due time, need not confine the patient to his room, not necessarily even to the house.

In cases which have been neglected, and in which some weeks, perhaps months, have already elapsed,

before a surgeon is called in, the period of rest in the splint may require to be prolonged for four, five, perhaps six weeks, and the persistence of pain, in spite of the splint, a rare occurrence, however, may require small blisters, especially at the particular spot to which attention has been called. After having been kept so long in the extended position, there will be a considerable degree of immobility of the joint, and of pain on flexion. But, it will be observed, if the joint has been kept at rest a sufficient length of time, that this pain is not especially confined to the spot on the inner side of the ligamentum patellæ, but indicates only the points of stretching or rupture of adhesions, or condensed tissue. If there is a decided pain on pressure at this particular point, or if the pain of flexion is referred especially to it, we have a decided indication that our attempt at passive motion is premature, and that a longer rest is requisite. The fear of permanent rigidity of the joint, which is apt to deter the inexperienced in these cases, from insisting on a sufficiently prolonged rest in *neglected cases*, is altogether groundless in subjects who have no "arthritic diathesis." With this exception, no matter what the degree of rigidity may be, it can be overcome completely, and with but little suffering, if sufficient *tact* and *patience* are exercised in the passive motion and other manipulations, which must be employed daily, for a time, by the surgeon, and at other times during the day, perhaps, by the patient or nurse, in order to maintain what has been gained. Months may, however, elapse in bad cases, and a good deal of perseverance on the part of the patient be required before *complete* use of the joint is attained. If manipulation and the other adjuvants for overcoming rigidity, which I need not enumerate to you, fail, you have still forcible rupture of adhesions under *anæsthesia*; and this may be necessary especially in the case of excessively nervous females who have not the fortitude to submit to even the slight pain of proper passive motion. But this must be very rarely the case, as I have never met with one. In the case of the poor, who cannot command so many visits as may be required, and who cannot afford so much loss of time, the more heroic remedy may be preferable.

You may feel disposed to criticize the title of this paper, since all surgical writers describe injuries of the knee-joint affecting every part of its complicated structure, and also the various methods of treating these, laying special emphasis on the necessity for absolute rest, and, of late, generally preferring the same apparatus which is here recommended, when the nature of the injury is such as to render it appropriate. Therefore it may be claimed that there is little which has hitherto been left undescribed. But, if you will search any or all the treatises on diseases and injuries of the joints, or on surgery, you will hardly find one calling attention to the possibility of such trifling accidents, as those I have described, causing consequences sufficiently grave to justify a resort to measures usually advised only in tolerably severe accidents or diseases. Such being the case, although I have, in casting about for a suitable title, chosen one which may be open to criticism as rather pretentious, it is, at least one which will serve to arrest your attention and that of the profession, and to lead some to pay more heed to the prognosis and treatment of this class of cases than they might otherwise be disposed to do.

In connection with the injury which I have been attempting to describe it will be interesting to allude briefly to another, very similar, in many respects, which has, like this, eluded the observation of most surgical writers until very recently. It was first brought prom-

inently before the profession by Mr. Lindeman, in a brief article in the *Brit. Med. Jour.*, of March 18, 1882, and in a subsequent short article, in the same journal, by Mr. William Snedden, and republished in the *MEDICAL GAZETTE* (New York), May 6th. It had, it appears, been noticed previously by only two writers in England, Mr. McNab, and Mr. C. Heath, (*Minor Surgery*), who says it is rare.

The injury occurs exclusively in children, and not beyond six years of age, seldom beyond four. There is not only a diversity of opinion, among the few who have observed it, as to the nature of the lesion, but sometimes even as to the joint affected. "Mr. McNab," according to Dr. Snedden, "thinks it a dislocation of the lower end of the radius; Mr. Goyraud, a displacement of the inter-articular cartilage of the wrist at the end of the ulna. Other French surgeons, Dr. Hodges of Boston, and Mr. Lindeman think that it is the head of the radius. Mr. Heath thinks that it occurs, sometimes at the wrist, at other times near the elbow." And this is the opinion of Dr. Snedden. But he is not prepared to say "what the exact nature of the injury is."

The supposed rarity of this lesion, like that of the knee, is only apparent, for Dr. Snedden has seen "ten cases in as many years, and Mr. Lindeman says he saw ten cases in a year." It is evident that it has been overlooked from the circumstance that there is little or no pain or swelling attending it, and from the amount of adipose tissue in young children hiding any slight articular deformity. The cause of the injury, in the majority of cases, appears to have been the lifting or dragging of the child by the hand or the fore-arm, which should suggest the necessity of greater caution on the part of mothers and nurses in moving children by seizing them by the hands and arms.

No mention is made of the consequences of neglect of this injury, or the treatment necessary to prevent these. No doubt, however, many cases of feeble wrist and elbow joints are met with in adult life, which are attributable to this neglected lesion in childhood; and the treatment which suggests itself would be that advised for the knee. The joint should be reduced (as it is evidently a displacement of some kind) and an immovable apparatus applied, especially as a marked characteristic of the injury is said to be a disposition to relaxation after reduction. Doubtless many physicians will call to mind instances of this injury now that their attention has been called to it in the articles above alluded to.

The publication of Dr. Snedden has already attracted the attention of other English physicians, as I find Dr. Mackie, in the April 26th number of the *Brit. Med. Jour.*, saying that "this injury, though so trifling as to escape insertion in many of the standard works on surgery, is yet sufficiently great to cause the young practitioner considerable perplexity and possible annoyance when first brought under his notice." He states that he has had seven cases in less than four years. "I did not," he states, "recognize the nature of the injury in the first case, until, in the course of a very protracted examination, a slight click occurred at the elbow, with complete restoration of use of the fore-arm and cessation of pain."

Dr. May, surgeon to Queen's Hospital, Birmingham, also states, in the same number of the journal, that he has seen a number of cases of this injury, and that it seldom occurs after the age of four years. He says, "I have often speculated on the nature of the injury, and I have, by no means uniformly found a click on reduction, or any alteration in the bony prominences about

the joint; but when present the latter has always appeared to be a forward displacement of the head of the radius." "When asked by the dressers what diagnosis they should enter on the records, I have said, *pulled arm* or *pulled elbow*, and found this convenient for the purpose."

SARATOGA SPRINGS, June 17th, 1882.

THE OPIUM HABIT; ITS SUCCESSFUL TREATMENT BY THE AVENA SATIVA.

BY

E. H. M. SELL, A. M., M. D.

Fellow of the London Obstetrical Society, Etc.

I fully expected that my article on the Avena Sativa, published in the GAZETTE of April 22d, 1882, would meet with various objections. So far, however, I have seen but one reply to it which would seem to require any notice, namely, the article by Dr. Kane, which appeared in the GAZETTE of May 20th. If I have not answered that article before, it is solely because I was in hopes that other objections would come forth, which, in that case, I might, if possible, answer at the same time. In the absence of such objections, therefore, what I shall here say exclusively refers to Dr. Kane's paper. Unfortunately, not time, but space, prevents me from making such an answer as the matter calls for. I must, therefore, limit myself to the two salient points of the paper in question: The case of Mrs. L., and Dr. Kane's own 29 cases of non-success. A full reply to all of Dr. Kane's objections, together with new cases will shortly be published in brochure form. Those who are interested in the further discussion of this subject, can obtain it by addressing the writer.

In regard to the case of Mrs. L., it still stands to-day a living monument of the perfectly curative power of the Avena Sativa. My opponent labored under a great mistake when he said that I would not have offered this case in my paper, if at the time of my writing I knew as much of it as he did. What did he know of her then? I confess myself unable to answer so simple a question, and my readers will probably see at once that they are in this respect no wiser than I am. In his article, Dr. Kane asserts that Mrs. L., has never been cured of her opium habit, that she still uses a tincture of opium, and that her case proves nothing. On the other hand, in a letter to the patient, he congratulates her on her "deliverance from the terrible curse of morphine taking." In the presence of such a complete contradiction, I ask, is it not better to accept the patient's own version of her case? And here is what, at my request, she says of herself, writing under date of June 5th, 1882.

"Thirteen years ago, I first commenced taking morphine to relieve me from pain and disease brought on by constantly working beyond my strength. It was necessary for me to make every effort to support my family, and the only relief I found was in taking morphine. I continued it in all seven years. I made several attempts during that time to free myself from it. I applied to a number of physicians for help but none of them knew of anything that would take the place of opium. I heard of Dr. Beck's medicine and tried that till I had paid him eighty dollars, without receiving any benefit. I was completely discouraged and thought I would not try anything more. What I suffered in both body and mind I can never describe to any one. A short time after this, Dr. Sell came to

G—. I thought I would make one more effort for health. I sent for him and put myself in his care. He treated me for my disease, and at the same time gave me his opium cure, (the Avena Sativa), which sustained my nervous system so, that I felt no need of morphine. In about two weeks' time I got along without the avena. I was a month or two in getting my natural strength. The account that Dr. Sell gave in his paper of Mrs. L., (that being my case) was strictly true. At the time I called Dr. Sell, I was taking half a teaspoonful of morphine powder twice a day regularly. It is now nearly six years since I was cured. I have never gone back to the old habit and never mean to. Although I have been cured from taking morphine I am not exempt from all sickness. I sometimes have to take medicine the same as other folks. There is a physician in New York that seems to have an idea because I have taken cholera mixture when needing it, that I have never been cured. Between one and two years ago, if my memory serves me right and I think it does, I first heard of cholera mixture. I bought some and used it in the family when needed by any of us. I was attacked last summer with a diarrhoea that lasted till cold weather, during that time I took considerable cholera mixture till I was convinced it would not cure, but only help me while I was taking it.

I was afraid so much hot stuff would injure my stomach. I went to my physician and got something that regulated my stomach and bowels and acted as a tonic. Since then I have felt quite well. I am not taking cholera mixture now or anything of the kind, and have not for five or six months. If I wanted to take opiates steadily, I should send to New York and get morphine, and not run the risk of taking such fiery medicine very long. Should I see anyone wishing to be cured from opium habit, I should advise him to give the avena a fair trial. *It has cured, and I believe it will again if the physician understands using it.* Don't take anyone's word, but try it for yourself; then you will know. *I am entirely satisfied with my cure.*"

STATE OF NEW YORK, County of Suffolk, ss.:

Mrs. L. —, being duly sworn, says that the contents of the above statement are true in every particular
MRS. L. —.

Sworn to before me this }
5th day of June, 1882. }

S. B. H., Justice of the Peace for Suff. Co.

Under the circumstances, I submit whether so plain and definite a statement should not be accepted as final. But to leave no objection unanswered, I shall comment on the several special points made by my opponent in reference to this case. First, then, a "reputable and accomplished medical man" (whose name and initials are withheld) "has some doubt if Mrs. L. was ever in the habit of using opium very largely, though very likely habitually." Now, it would be very desirable that this "accomplished" gentleman should give his reason for his doubt. The patient, whom he calls "an excellent woman, widow of a clergyman;" who alone absolutely knows, says: "I have taken one of those little bottles, like the one I gave you" (½ oz.) "in five days." If this is so, she took *twelve grains daily*. She further declares that, besides one lady friend and those who sold her the morphia, not another person to her knowledge knew that she was taking any morphia at all. The only legitimate conclusion to be drawn from all this is, that so long as my opponent's informant does not state any better reasons for his opinion, we are bound to take the patient's own word; for in saying that the "moderate circumstances" of the lady

may account for the small quantity of morphine which he supposes her to have taken, he only proves that he knows nothing of those addicted to the opium habit.

The same informant further tells us that "the cure was of very short duration." Now, his own admission proves this false, even if all his assumptions and statements were true. He reports her as "now getting from one of their druggists about every three weeks a certain cholera mixture, she having done this for three or four years at least." For argument's sake let this be granted. The patient having been cured in 1876, there must have been a period of *two or three* years at least during which she *remained cured*. Does this "accomplished medical man" call that of very short duration? When a patient remains cured for two or three years, I was always under the impression that, especially in a cure like the present, his physician had the right to claim that he had cured him. Of course such a cure does not imply that the patient may not have a relapse. During an interval of two or three years a person might get sick very many times, and yet have been cured each time. A person might even have measles, scarlatina, or smallpox twice during that space of time. It is precisely so with the opium habit; a fact which, however elementary it may seem, my learned opponents appear not to know.

But I must go further, and deny that Mrs. L. ever used any medicine since her cure, in consequence of any remaining desire for opium. Can my readers believe that she or any other patient would take a mixture containing, as we are informed, one ounce of laudanum in a four ounce mixture, the balance being one ounce of tincture of camphor, one ounce and a half of tincture of cayenne, and half an ounce essence of peppermint? This a patient might do if he could not procure an opiate in any other form; but this was not and is not now the case with Mrs. L. As long as she was a slave to this habit, she managed to obtain the morphia in large quantities; and she did this for seven years, when she had to provide for three small children. Now her children are grown up, the youngest being fifteen years of age, and are of service to her. If she still were taking the drug, would she not now procure the morphia as before? And why should she buy camphor and cayenne pepper instead of morphia or laudanum by itself? Candidly, the story is too absurd in itself, not to bear its own refutation with it. But we are not left to our own inferences in regard to the purpose of this cholera mixture. Mrs. L. freely admits that she has used this mixture, not indeed during three or four years, as charged, but, so far as herself is concerned, only during the hot weather of 1881, as will appear from her statement given herewith. Now, this is all there is in regard to Mrs. L.'s case.

In reference to the twenty-nine cases of non-success reported by Dr. Kane, I have the following remarks to make: *First*, granting that those cases were all unsuccessful, no number of such cases disprove the positive cases which I have reported. *Secondly*, to give a personal opinion on them, I should, in a case like this, want to superintend the giving of the medicine myself; and, *Thirdly*, I hereby offer to take any one of these twenty-nine cases and treat it myself, but here, at New York, and under my own supervision, and thus test the virtues of the drug which I recommend. And let me say here, that the privilege which I thus claim for myself, I am willing to accord to any other member of the profession. I court the fullest and closest examination of the cases which I have reported, and in that view I have written to the principal patients requesting them to afford such investigators all facilities within

their power. All that I ask for is, that they shall be investigated in the same spirit as all similar cases are investigated.

Though my paper was written hurriedly, and was necessarily concise, I fail to see any occasion to change a single statement there made. Time will, I feel quite certain, establish the truth of every assertion.

In addition to the several new cases of the opium habit that have been cured, a number of other points of my paper will be found established in the brochure already referred to.

LECTURES.

CHRONIC RHEUMATIC ARTHRITIS.—GANGLION OF THE ANKLE JOINT.—LUMBAR ABSCESS.—MALIGNANT SARCOMA OF THE GROIN.

CLINICAL REMARKS

BY

THOMAS M. MARKOE, M. D.,

Professor of Surgery, College of Physicians and Surgeons, New York, Attending Surgeon New York and Roosevelt Hospitals; Consulting Surgeon Mt. Sinai and Woman's Hospitals, &c.

CASE I.—*Chronic Rheumatic Arthritis*.—Male. Elbow joint has been slowly encroached upon by morbid action. The condyles of the humerus appear not to be involved. There is considerable distension of the joint itself, and encroaching upon the upper end of the radius and ulna we have thickening. All the tissues of the joint are involved. As we travel down we find a little exostosis below. The joint is restricted in its motion. The patient complains of no rheumatic pains.

This history belongs to a class of cases in which the arthritis is more commonly found about the hip and knee-joints. This history ordinarily is supplemented by a great deal of pain on motion. You see this condition in the hip of old persons. It is called chronic rheumatic arthritis. The synovial membrane has undergone thickening, the ligaments have become dry and stiff and sometimes contain ossific deposit, or at any rate uric acid deposit. In these cases we often have the formation of loose cartilages or synovial fringes with cartilage tips projecting into the joint. A gradual change also takes place in the bones, but this change is not a proper inflammation. It is rather an aberration of nutrition in other parts whereby these changes are brought about.

Treatment.—The ordinary remedies for inflammation have not proved efficient in this case. The absence of pain induces me to think that the disease will be slow in its progress. In the painful cases the disturbance of the joint is more rapid and complete. In the painful cases counter-irritation is indicated. The application of blisters and croton oil, in my experience, has done more for chronic rheumatic arthritis than anything else. The part should be kept warm and moderately exercised. In this case I should think an elastic bandage, with oleate of mercury and morphia rubbed in twice a day might reduce some of the swelling. The patient has been taking the iodide of potassium before coming here. Absorbents and pressure do more good than counter-irritation or any other mode of treatment. With regard to the exostosis—that seems to be another manifestation of some tendency to fibrous and connective tissue changes.

I think the tip of this exostosis is covered with cartilage.

CASE II.—*Ganglion of the Ankle Joint.*—Female.—Has a ganglion of the tendon of one of the peronei muscles. These ganglia are simple sacs formed on the tendons, and are not necessarily connected with the synovial cavity of the joint, though sometimes they present that connection.

This case is particularly interesting from its unusual situation at the ankle-joint. There is no hope of dissipating these ganglia by any medicine. The proper treatment is extirpation. We should break them and extirpate the cyst, and by the process of absorption allow it to shrivel away. Pressure with the fingers does not effect a cure, although it causes the cyst to disappear temporarily. Sometimes the cyst is so strong and thick that you cannot break it. Then introduce a needle into the skin, open the cyst and squeeze the contents into the subcutaneous areolar tissues. There must be conjoined pressure to prevent refilling of the sac. This may be effected by simple bandaging or by instruments which compress with a spring, etc. In one case I recall, I finally succeeded in breaking up the cyst by an apparatus in which I had combined a screw and spring. The wrist was surrounded by a wristlet, and the apparatus screwed down and put under this spring to keep up the pressure.

CASE III.—*Abscess in the Lumbar Region.*—Male.—Six weeks ago patient strained himself, which was followed by the formation of an abscess in the lumbar region. This is a subacute abscess. This region has probably been the seat of a muscular lesion. The inflammation has concentrated about some of the fibres, and has terminated in suppuration. These swellings sometimes develop by a very slow process. In this case I find deep fluctuation. The patient should be advised to go to the hospital and have the abscess opened. In old abscesses the sinus itself becomes a true membrane, looking very much like a mucous membrane. Here there is no true membrane formed, but a layer of granulating tissue lining the parts, which would fill up the cavity if we gave it a chance. This layer of granulations is subject to inflammation. This is a subacute abscess, which is constantly increasing. If the pain increases externally, we might infer that the abscess is encroaching internally upon important organs.

CASE IV.—*Malignant Sarcoma of the Groin.*—Male.—Has a swelling in the region of the inguinal glands, which has been growing slowly for about a year. He has no wound or ulcer of the leg which might account for it. I can feel a swelling, which, anatomically speaking, occupies the space of a femoral hernia. It is below Poupart's ligament, and is a solid tumor. The patient gives no history of a sprain. I feel the swelling as big as an egg; it is flattened and ovoid. Whether the tumor be situated in the gland or not, it would be nothing remarkable for the lymphatic current to be obstructed, and there would be as a consequence some thickening of the areolar textures, which is due to the slow passage of the current through the gland structure. I am inclined to think this is a glandular structure which is involved. There is no very great distension here. If there were much oedema of the part, I should think that there was a vein involved; but as there is merely a fullness of the left limb, we have to deal with one or two, perhaps three, glands, which are the seat of enlargement.

The question arises as to the nature of this enlargement. If it were a young person, I should suspect that it was a strumous enlargement. Here, however, we have a man of tolerably good habits, at the age of 55,

who has a tumor which has lasted a year. That suggests something besides struma. It is probable that this gland is hypertrophied by a deposit, which is of a sarcomatous nature. This is my diagnosis, and the prognosis would be bad.

ANEURISM OF THE ARCH OF THE AORTA —GRAVES' DISEASE—PAINLESS JAUNDICE.—

CLINICAL LECTURE.

BY

ALONZO CLARK, M. D.

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CASE I.—*Graves' Disease.*—You observe, gentlemen, that the eyes in this patient are a little prominent. Her pulse this morning is 120, and you notice a moderate swelling of the thyroid gland, making the combination of the three elements that constitute Graves' disease. The chances are that in a few weeks the particular features of the disease may be more prominent than they are now. For the last four weeks, she has been taking the fluid extract of ergot, and she is not any better. You observe that the thyroid gland is larger on the right side than on the left. There is no difficulty in swallowing. I am listening now for the thrill or placental murmur, but I do not get it. I feel distinctly enough the pulsation of the carotid through the thyroid gland, but I do not get the particular noise that the blood makes when it circulates through the vessels in much greater volume than normal, and there is no particular enlargement of the veins of the skin. The disease has a variable duration. Some cases run a course of only a few months; others several years. On examining the heart I get no murmur.

CASE II.—*Aneurism of the Arch of Aorta.*—Male; has been troubled with palpitation on going up stairs for the past six months. Feels something at the upper part of the sternum that seems to stop his breath. Had a terrible attack of neuralgia, and the second day after that his voice became affected. Never had fever and ague. Has not slept in bed for two months. Has rheumatic pains in the right shoulder. Has been worse for the past two months.

You observe the prominence at the sternum is quite conspicuous and pulsating, you can count the heart beats upon it very easily. I am now feeling for a thrill or what would be a murmur if the ear were applied to it, but do not get it. It is a simple pulsation. I feel the impulse rather from behind, slightly from within outward, with both my fingers. I do not think there is any murmur.

The heart is of normal size, and there is nothing that seems to indicate any internal changes. The tumor is $3\frac{3}{4}$ " vertically, and $4\frac{1}{4}$ " horizontally. It extends from the sternum to the base of the trachea. The question arises as to the character of this tumor and its situation. It is undoubtedly an aneurism. I feel it a little at the origin of the left carotid, and it extends down to the top of the sternum. The aorta is here involved, and the fact that his voice is affected shows that the recurrent nerve is put upon the stretch, and there is partial or complete paralysis of one of the vocal cords. Why does this tumor extend to the right? The innominate artery is involved, and the right carotid to a certain extent. An aneurism of the arch does

not extend up into the neck though you can very often feel it at the top of the sternum. This is a pretty large tumor, and there does not seem to be much coagulation in it, because as far as we can reach it the pulsations are felt over its whole extent.

TREATMENT.—I suppose it would be hardly worth while to send him to the surgeon. If the innominate artery were alone involved, an operation might be performed. He should be kept as quiet as possible all the time, in bed; should eat moderately and take solid food in the smallest amount. He should take iodide of potassium ten grains three times a day for a term of weeks or months.

The pains in the shoulders that this patient complains of, are not at all uncommon in this form of disease. They are caused by the pressure of the innominate artery backward, which probably interferes with the function of the brachial plexus.

CASE III.—Jaundice.—Male has been jaundiced for past six months. Has pain in the joints; had some pain in the right leg. The stools are clay colored and there is considerable itching all over the body.

Jaundice is very often associated with irritation of the skin. The body is yellow all over. The liver is not very much enlarged in this case, and there is no irregularity. I do not feel the gall-bladder. It does not seem to be enlarged. There is therefore no marked enlargement of the liver, no distension of the gall-bladder, and no roughness perceptible on the surface of the liver. The question is what is the cause of this jaundice? This I cannot say. It is usually spoken of under the name of painless jaundice, unconnected with obstruction. I myself in 1847, had this variety of jaundice, and the best doctors I could find could not explain it for me. Dr. Parker said it was a swelling of the opening of the common bile duct into the duodenum, but I felt no sensation that would suggest that I had any duodenitis. There was no pain and nothing irregular except the color of the stools and of my skin, together with pain in the joints, and an insatiable desire for sleep.

This disease is almost never fatal and there is no opportunity for post-mortem examination. As to the itching in this case if it were local he could apply a solution of the extract of opium which is kept moist by glycerine. I should be afraid to apply it to his whole body. I should also recommend him to try the solution of carbonate of soda with or without the extract of opium. He should take 30 grs. of the bicarbonate of soda four times a day for five or six days. It seems to facilitate the production of bile better than calomel. The bile cannot form without a certain amount of soda. It moreover deprives it of the cholesterolin so that it cannot form coagula or clots.

ABOUT BOOKS.

The Physician Himself, and What he Should add to the Strictly Scientific—By D. W. Cathell, M. D., Late Professor of Pathology in the College of Physicians and Surgeons of Baltimore; Ex-President of the Medical and Surgical Society; Active Member of the Medical and Chirurgical Faculty of Maryland; Honorary Member of the Lincoln Philosophical Society, etc., etc. Cushings and Bailey, Baltimore, 1882. Price, \$1.25.

No fact has been more often proven true in the practice of medicine than that success in acquiring fame and wealth or competence depends on something else besides scientific attainments. As the author of

this most sensible, entertaining, and highly instructive little book puts it:—"You will find that intellect, genius, temperance, correct personal habits, and other excellent qualities, will all fail unless you add ambition, self-reliance and aggressiveness to them."

The book is an essay on personal questions in medical practice. It bristles all over with common sense hints and shrewd observations regarding human nature as the doctor meets with it, and how to deal with it. It shows the importance of professional tact and business sagacity in promoting the welfare of the physician. It points out types of the various kinds of patients met with and tells the doctor how to adapt himself to their various natures. It teaches him what should be his relations with his fellow physician and what with the quack. It lays down most excellent rules regarding his conduct, both professional and social, in his office and out. It defines a system by which he may avoid the many stumbling blocks that obstruct the way of the young physician. It tells him how to dress, what manners to assume, what companions to choose, what fees to charge. It gives some much needed hints about the abuse of specialism and the tendency to magnify the importance and significance of feminine ills. It embodies some very useful hints on prescribing. It touches on the hundred and one different matters that go to make up the successful physician, tamblarity with which is not always acquired by the old, and which are usually ignored by the young practitioner until the experience of a life-time perhaps teaches him their importance. In fine it is so pregnant with advice that text books do not supply, and that is usually the fruit of long experience, that it should be read and re-read by every recent graduate, every student of medicine who is looking forward to practicing, every practitioner who has failed to obtain that measure of success which his attainments justify. We would like to quote in full many of its excellent maxims. But a fragment broken off here and there from the surface of the rock will show the vein of gold that runs through it.

In alluding to the influence of social connections in acquiring practice, the author says: "You must not rely strongly on social influence for getting practice. You may be socially a great favorite while all are well, but when sickness comes and death threatens, the impulses of friendship are dormant and do not influence the choice of a doctor. Persons instinctively send for the doctor in whose skill they have the most confidence. They go past the beginner about whom they know too little,—past the one about whom they know too much,—past the gay, the fickle, the sentimental and the unchaste,—past all whose professional demeanor proves them to be either unripe or unsuited to a stewardship so solemn, so precious, so weighty as that of a family physician,—past all till they reach the one in whom their faith centres; faith is the great controlling lever."

"As a rule, it is better in the family group to lend attention at your visits chiefly to the conversation of the husband, and to address your opinions and explanations to him or whoever is at the head of those you meet in the sick room."

"Beware of confidants. Never become so fond of patients or any one else as to make them the repository either of your professional or personal secrets."

"Never guarantee a cure, or certain success, or a sure recovery, even for a mosquito bite; guarantee nothing, except that you know your duty and will do it. Medicine is not a science, and life is not a definite quantity. When pressed to tell, whether any case of

sickness is dangerous, reply promptly, 'Of course it is; all sickness is dangerous.' And then tell them what you think of the case in point; even in doing this, do not fail to leave yourself a little margin for uncertainties."

"Do not lend yourself too freely to other physicians and surgeons; never make a habit of playing second fiddle by giving anæsthetics, etc., in *surgical* cases. Do not habitually play the part of utility man, or unpaid assistant to any one. Servility and obsequiousness will never advance you, either in the community or in the profession."

"Do not over-visit your patients. Excessive attention and numerous visits are rarely appreciated. You have no right to tell the affairs of patients to any one without their consent. Your ears will hear and your eyes will see many things that illustrate the moral and physical infirmities of poor fallen humanity, but in the midst of all you must have a silent tongue."

"Never solicit people, either by word or manner, to employ you, for such a course would surely either repel them or prevent your enjoying the necessary esteem."

"The laity expect you to examine your patient at every visit. Never neglect the following five cardinal duties: To feel the pulse, to examine the tongue, to inquire about the appetite, the sleep and the bowels."

"Study to be fertile in expedients, and never confess or allow the inference that you are hopelessly puzzled about a case, or have reached the limit of your resources."

"When in doubt whether duty requires you to do this or that, or not to do it, remember that the sin of omission is apparently not as great as the sin of commission."

"Never recommend sexual intercourse as a remedy for self-pollution, nocturnal emissions, spermatorrhœa, hypochondriasis or acne. If such people risk syphilis, gonorrhœa, bastardy or exposure, or commit rape, adultery or self-pollution, let it be on their own responsibility, not on yours."

"Every minute spent in studying to make your remedies agreeable will be more profitable to you than half an hour of any other kind of study."

"Remember that Dr. Quiet, Dr. Hope, Dr. Diet and Dr. Faith are four excellent assistants, whose aid you should constantly invoke."

It will thus be seen that the author's admonitions, though apparently commonplace, are in the highest degree practical. The book is full of just such advice as the young physician needs and can not get on without.

Dr. Cathell is to be congratulated on publishing these jottings from a busy life. We have no doubt they will receive the appreciation and commendation of that large class to whom they are addressed, and if conformed to, make successful aspirants for fame, of those who otherwise, with all their talents, might have wasted their fragrance on the desert air, and gained neither reputation nor competence.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDECINE JUNE, 15TH, 1882.

Dr. Robert F. Weir presided. The minutes of the previous meeting were read and approved.

A paper entitled, "STATIC ELECTRICITY AS A THERAPEUTIC AGENT"

was read by its author, Dr. J. Knight. The paper

embodied a historical resumé of the medical uses of static electricity and a narration of cases in which this agent had been used with success in the author's practice during the past fifty years. Dr. Knight emphasized the utility of this agent and congratulated the Academy on the efforts which had been made to improve the apparatus for its application so that now it could be given in damp as well as dry weather. He believed in mild rather than strong and prolonged applications.

In the discussion which followed, Drs. Dana, Morton and Rockwell took part.

Dr. Dana said he had used static electricity a great deal during the past six months and was very well satisfied with it. There was one interesting point in connection with it to which he would confine his remarks. He had had two cases in which by the application of sparks over the region of the liver, in biliousness and constipation, these symptoms had been magically dissipated. These patients had for a long time been treated by the Faradic current without result. The point in question was as to how deep the electricity penetrated. The theory is that a body is charged with electricity only on its surface, and static electricity would therefore only charge the surface of the body, that its application was apparently a superficial electric bath. To determine this point he had made a series of experiments which only served to confirm him in the belief that the electricity did not penetrate deeply, but its influence on internal organs was explicable by reflex action. It is the best of all electrical agents for peripheral affections. In rheumatic pains, sciatica, etc., he had obtained the best results with it.

Dr. W. J. Morton said he had not heard the earlier portion of Dr. Knight's paper, but he had heard enough to discover that it was an interesting historical review of the progress of static electricity. There were three main periods in the history of static electricity. That from 1740 to 1800 when the most extraordinary pretensions were put forth for electricity, which was supposed to be the vital force itself. From this time up to 1868 the growth of galvanism threw static electricity in the shade. From 1868 when Charcot took up the subject in France, dates the revival of interest in static electricity as a therapeutic agent. Previous to this time it went about the country principally in the hands of charlatans. Its reassertion now-a-days to its place in the estimation of the regular physician is due to the fact that we are able to take specific cases and point out specific results obtained by it instead of merely generalizing as in the past. It is doubtless a very valuable therapeutic agent. I was so impressed with the fact that it was comparatively unknown in America that I brought the subject before this Academy in a paper about two years ago. From the reading of this paper dates the revival of the use of static electricity as a medicinal agent in this country. Since that time four or five hundred machines have been sold while before there were but a few in existence here.

My own experience with this agent has been consistent. Much depends upon the method of its application. We must have machines of large capacity to give electricity of high tension and we must use it in large, not in small, quantities. I have carefully investigated the question of shock in my clinical and private practice and I find that there is no foundation for a claim for any result from the shock of the Leyden. We are not justified in drawing the conclusion that the debilitated nervous system takes up electricity as so

much nerve restorative power. If used specifically it will produce specific effects. I have obtained the best results in a certain class of cases such as hysteria, spinal irritation, where there is hemi-anæsthesia, color blindness, etc. Frequently in such cases we get a most wonderful and valuable effect in two or three days. Also in the soreness of subacute and chronic rheumatism and gouty pain, in all forms of paralysis where we desire to excite muscular action it is highly serviceable. As regards Dr. Dana's cases when he related them to me I narrated a parallel case. I do not think we are justified in drawing any deductions from experiments based only on a few cases. The subject is rapidly progressing, is meeting with most favorable consideration and I am glad to see that it has at length gotten into the hands of the regular profession.

Dr. Rockwell said: It is unnecessary for me to sound the praises of static electricity, since already a chorus of voices have proclaimed it. The question is as to its merit, compared with the other forms of electricity. I experimented a few winters ago to determine this point, and reached the conclusion that it was inferior to dynamic electricity. I have seen no reason to change this opinion since. I cannot believe its effects are equal in extent and variety to those of other forms of electricity. The successful application of electricity is a matter of detail. I am using it with increasing satisfaction each day. I think it would be unfortunate to have the opinion get abroad that it is the best form of electricity for therapeutic use. I have found it very valuable in supplementing other forms of electricity.

Dr. Knight closed the discussion.

A paper entitled

"A HITHERTO UNDESCRIBED LESION OF THE KNEE JOINT."

was read by its author, Dr. Fred'k D. Lente. We publish the paper in full in another column.

The Society then adjourned.

SELECTIONS FROM JOURNALS.

ICHTHYOSIS INVOLVING THE ENTIRE SURFACE OF THE BODY.

Dr. O'Connor illustrated his remarks on this subject before the Clinical Society of London by exhibiting two sisters, æt. respectively 29 and 27 years, presenting universal and congenital ichthyosis. The elder one has been under his treatment during the preceding three months. She was brought before the Society early in March last, when the characteristic scales covered the entire surface of the body, including the palms of the hands, the soles of the feet, and, though to a less extent, the eyelids and the forehead. The family history, as far as could be obtained, was good. No cutaneous affection had ever been known in either the father's or the mother's family. The patient is the second born of a family of seven. The eldest is a son; the remaining five children are daughters. The patient and the second daughter were born with the affection. The fifth also had it, but whether born with it or not is uncertain; she died at the age of nine months. The three remaining girls were unaffected. No particular odor was observable on the surface of the body. The unaffected portions of the face, the palms and the backs of the hands (especially the latter), perspired freely. No perspiration was ever discoverable in any other situation. During the few days preceding the

catamenia, scales always fell off in abundance, particularly when the patient was in bed, but other scales immediately appeared in their place. Her general health was found to be excellent, though a scrofulous aspect was noticeable. Prior to coming under recent treatment she had never been more susceptible of the influence of cold than are the majority of individuals, but lately, since the scaliness has diminished, she has frequently complained of the changes of temperature. She regards this last fact as quite a new feature in her case. These two sisters had been, especially during their earlier years, the subjects of medical treatment in various quarters. She herself had given up all idea of any improvement in her condition. There is now a marked diminution of the scaliness all over the surface. The face is perfectly free. The affection on the neck is reduced to a mere roughness. The forearms, wrists and hands are clear, and the front of the chest, though leathery to the touch, no longer presents the imbricated appearance noticed three months ago. Dr. O'Connor then referred to the treatment. Jaborandi had on a few occasions caused a profuse shedding of the scales; warm baths and emollient applications, lotions containing borax, glycerine, &c., &c., rendered the surface softer; blistering acted as on a normal skin, but the ichthyotic condition was quickly renewed. On the whole he placed no reliance on external treatment. Arsenic (combined with iron) and cod-liver oil internally are the means which he has found most serviceable. As to the pathology of ichthyosis, Dr. O'Connor inclines to the belief that an hypertrophied condition of the papillary layer, and a thickening of the true skin are probably the essential elements in the affection. Respecting the distribution of the disease, out of 13 well-marked cases that have come under his notice, only three have occurred in females. This, he believes, is in accordance with general observation. Ichthyosis resembles some other disorders (such as pseudo-hypertrophic muscular paralysis, color-blindness, the hæmorrhagic diathesis, &c.) in that, while it generally affects the sons, it descends through the daughters, of an affected family.—*Med. Press.*

ON DIET IN CASES OF ASTHMA AND BRONCHITIS, by JOHN C. THOROWGOOD, M. D., F. R. C. P., Physician to the City of London Hospital for Diseases of the Chest, Victoria Park, &c.

On three occasions, among hospital out-patients, I have known sudden death occur to men who were under treatment for bronchitis with emphysema of lungs and some amount of cardiac dilatation. One man, who had been driving a van about London during a very foggy afternoon, put up his horse, went home, took a hearty tea, sat down in his chair and expired before any medical aid could be called. In the two other cases the patients were not dangerously ill, but they both died very suddenly, and that after partaking of a tolerably ample meal.

A few weeks ago I observed recorded by Dr. Augustus Bampton an instance of the worst fright he ever had in his experience with anesthetics. It was a case in which the patient, contrary to orders, had taken a full meal before inhaling the methylene vapor.

These facts show how important it is that the diaphragm should have free play if respiration is to be efficiently maintained. The way in which the diaphragm, when pressed upwards by an over-distended stomach, may embarrass the action of lungs and heart is pretty well known, and yet we are apt to overlook the practical application of this piece of knowledge.

The late Mr. Pridham, of Barnstaple, acquired great celebrity for curing bronchitis and bronchial asthma by diet. The great secret of this diet cure was judiciously starving the patient for a time.

A large number of persons afflicted with chronic bronchitis and asthma are hearty feeders, and have to submit to some annoyance by being often and inopportunistly complimented by their friends, and told how well they are looking, just at the time perhaps when a congested liver, plethoric abdomen, and constipated bowels are sorely adding to the difficulties in the breathing apparatus. Expectorants for the cough, and spirits and water, or port wine, to strengthen the palpitating and oppressed heart, are means not likely to improve matters, and the patient comes to regard his case as a severe and intractable one.

These are, however, just the cases in which much good may be done simply by dietetic means, and attention to stomach and liver, while the heart and lungs are left to take care of themselves.

The great principle in regard to diet seems to me to be to avoid bulk, or mass of food. Often the patient shows a large, thick, atonic tongue, indicative of a torpid condition of stomach, so that the organ will receive a large amount of simple food without resenting it at the time; though acidity and heartburn may come on one or two hours after a hearty meal. The patient then must not, under the impression that he is likely to die from weakness, eat as much as ever he can at every meal, but must make up his mind to rise from the table capable of taking more, but wisely abstaining from so doing, and the food he does take should be nutritious without being bulky. A lightly boiled egg, the wing of a chicken, or some fish, with one cup of tea, coffee, or cocoa, and dry toast with butter, will form three alternations of breakfast fare. At dinner soups should be avoided, as tending to cause distension of stomach. Vegetables must be taken sparingly. All malt liquors, with pastry and cheese and dessert should be rigidly eschewed, and for drink claret with water, or lemon-juice and water may be allowed. Effervescing drinks of all kinds are not to be commended for habitual use; though sometimes, after dinner, an effervescing water slowly taken acts as a stimulant to the stomach and so may promote digestion.

If the dinner be taken at midday, then before going to bed a small meal of bread and meat, or of rusks scalded with hot water and mixed with milk may be taken, but a full meal at night will press heavily on the diaphragm, and cause great distress and discomfort.

By this arrangement of diet we keep up nutrition, while we avoid overloading the stomach and so oppressing the diaphragm. The heart and lungs are enabled to work freely, and danger of sudden stoppage of the first-named organ is put at a distance.

Under circumstances of extra fatigue, it is well before commencing a meal to take a wine-glass of sherry, but never should alcohol in any form be taken without some kind of food. Large quantities of liquid in the way of drinks of all kinds with the meals are bad; and one glass of wine, with or without water added, will prevent that great craving for copious libations of non-alcoholic liquors with the meals that appears to affect some of those whose practice it is totally to abstain from all forms of alcohol.

The venous congestion of the mucous surfaces of the alimentary canal prevents ready absorption of watery fluids and becomes a cause of great oppression. To relieve this state I do not know any plan of treatment better than the persistent use of small doses of some saline laxative—such as sulphate of magnesia, Carlsbad

salt, or acid tartrate of potash. At first there may be some discomfort and increase of venous plethora from the use of these remedies, but as their effect in the way of moderate purgation becomes manifest this will pass away, and the amount of benefit that will result be in every way satisfactory.—*Medical Press.*

FORMULARY AND POINTS IN PRACTICE.

IN INCONTINENCE OF URINE.

- ℞ Liquor strychniæ.....min. ij
Tinct. belladonnæ.....min. v
Inf. cascarillæ.....3 ii
Sig. Two or three times a day for a child five years old.

IN INTESTINAL IRRITATION OCCURRING SHORTLY AFTER MEALS.

- ℞ Liquor strychniæ.....min. ij
Tinct. chinchonæ co.....min. v
Inf. calumbæ.....3 ij

IN HABITUAL CONSTIPATION FOR CHILDREN NINE OR TEN YEARS OF AGE AND YOUNG GIRLS SHORTLY BEFORE THE MENSTRUAL PERIOD IS ESTABLISHED.

- ℞ Extract. nucis vomicæ.....grs. iij
Fellis bovini inspiss.....grs. xij
Extract. taraxaci.....grs. xx
Extract. gentianæ.....grs. xx
Divid. in pil. xxiv.
Sig. Take one twice a day.

A POWERFUL DIFFUSIBLE STIMULANT FOR A CHILD FIVE OR SIX YEARS OLD.

- ℞ Aetheris vel spts. ætheris.....min. v
Sp. chloroformi.....min. v
Spir. myristicæ.....min. x
Inf. carophylli.....3 iij

IN PARALYSIS AND LOSS OF NERVE POWER.

- ℞ Phosphori.....grs. ss
Olei succini.....3 ss
Sig. One or two minims t. i. d. in water.

FOR THE VERY YOUNGEST INFANTS WHEN OPIUM IS REQUIRED.

- ℞ Tinct. camph. co.....min. xv
Syrup rhæados.....3 ij
Aquæ camphoræ ad.....3 i
Dose—3 j.

IN SEVERE COUGH FOR A CHILD FOUR YEARS OF AGE.

- ℞ Tinct. camph. co.....min. xx
Vin. ipecac.....min. xx
Syrup tolutan.....3 ii
Mucilag. acaciæ ad.....3 j
Dose—3 ii every four hours.

MEDICAL NEWS AND NOTES.

Billroth's Operations.—It is no wonder that Billroth does remarkable operations. In the first place, he is responsible to no one; there is nobody to question him and to ask, why do you do this or why do

that? The patient has not a word to say in the matter. If Billroth determines to do an operation, that is the end of it; he is supreme. If the patient recovers, all right; if he dies, all right; not a particle of difference either way. I do not know if he even has any particular satisfaction in the recovery of the patient; it all lies in the fact of having done the operation. In the second place, Billroth has been first professor for years. He has the most abundant material of all classes, qualities and kinds. He does all kinds of surgery, including everything relating to the female generative tract. There is no specialty of gynæcology of any consequence here. There is not a day in the year, and has not been for years, that Billroth has not done major operations. I do not mean amputation of limbs or resection of joints—he would not look at such a thing. Why! he whips out a goitre as a sort of by-play while the patient is being etherized. To take out a tongue is easy for him, and he ties the lingual arteries on both sides with the utmost ease. So exceedingly familiar is he with the topographical anatomy of the body that he rarely uses a director, but cuts right down to the place. He stops at nothing. The other day he was removing a cancerous ovary which was found to be adherent to the bladder and part of the small intestine. Does he stop? No! He cuts out a section of the bladder, stitches it up, cuts off seven inches of the intestine, stitches the ends together, removes the growth, closes the wound, and the woman recovers. I saw a man in the ward with a cancer of the stomach at the pyloric end, and after opening the abdomen, he found the disease so extensive, involving so much that he could not remove the growth at all. Does he close up the wound? Not he! He cuts down to the healthy gut, snips it off, cuts a hole in the healthy part of the stomach, stitches the gut to it, and the man is getting fat. Now I say that, to be sure, they are wonderful operations; but why shouldn't they be? Billroth has attained this boldness and amazing skill in surgery by easy stages and after years of daily operating. Another thing, if he proposes doing an operation a little new or out of the way, he has one cadaver or a dozen to experiment upon, if he wants them, at any time or hour of the day. There are twenty to thirty bodies in the pathological rooms every morning.—*Dr. McClelland, in the Philadelphia Med. Times.*

A Very Juvenile Murderer.—Probably the youngest example of the genus murderer is Master Alfred Burdett, æt. 33 months, a native of Leicester, who was last week declared to have, in all probability, caused the death of another infant twenty-two months old. The victim of this homicidal child had been playing apparently with his murderer, who, at any rate, was discovered walking away with blood-stained pinafore from the unconscious body of the deceased; and at the same time the former held in his hand a piece of tin with which he had presumably fractured the latter's skull. The tender years of this promising candidate for distinction in the criminal ranks of the future serve to remove him from criminally-responsible breakers of the law; but it is with small surprise that we hear of frequent complaints of his ill-using children having been made. This instance of precocious depravity is perhaps an unusual one, but it possesses an interest of its own as showing the possibility of the

worst passions being developed in children of even such immature years. As a psychological study the case possesses an unusual interest, and is worthy of very careful consideration on its bearing on the development of the human mind.—*Medical Press.*

Poisonous Bullets.—A German journal refers to a discovery made by a M. Gros, of Paris, which tends to throw some light on the complaints which were made (but not seriously inquired into) during the Franco-German war, as to the use of poisoned bullets by the combatants on both sides. M. Gros explains that the construction of the modern breech-loading arms causes the bullet to convey with it a portion of the hydrocyanic acid which the explosion of the powder has caused to be accumulated in the barrel. Even if poisoning to a mortal extent does not take place, it is remarked that the healing of wounds is materially retarded by this circumstance.

Hygiene Among the Chinese.—The "Heathen China" has not a few revilers who are ever ready to point to features in his social character which render him an undesirable neighbor. The medical officer of the State Board of Health at San Francisco has, however, something to say in favor of the Celestials. In his report lately presented to Congress he states that he never knew any disease or pestilence originating or spreading in the Chinese quarters of the city. He admits that they live quite close, and attributes their healthy condition and immunity from disease to their frugal life. "They eat to live, and do not live to eat. They are clean in their habits, and they drink no whiskey. I have never seen a drunken Chinaman in my life. They consequently obtain a better resisting power to the attack of disease. They constantly wash themselves, and keep themselves and their clothes clean. The death-rate is greater among the whites than among the Chinese; greater with adult white people than with adult Chinamen. There have been no epidemics among them; and there has been less small-pox among them than among the whites, the ratio of population being allowed."

Among the wide-spread and steadily increasing race of bores, a high place must be claimed for those fussy and objectionable people who, under cover of social relations, persist in endeavoring to obtain a medical opinion without payment of a fee. An old lady the other day asked an eminent London surgeon, who was seated beside her at a dinner table, what was the best "cure for corns." To this the surgeon replied: "You can adopt no better plan, my dear madam, than to grease the corn over night with a tallow candle, when I venture to say you will find the corn kicking about the bottom of your bed next morning." The old lady was profuse in her thanks, but the surgeon cut them short by adding, "I should say, my dear madam, that it would still be on your foot."—*Can. Med. Jour.*

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LECTURES.

HEART MURMURS.

A CLINICAL LECTURE.

BY

AUSTIN FLINT, M.D.

Professor Practice of Medicine Bellevue Hospital Medical College, Visiting Physician Bellevue Hospital, Consulting Physician Charity, St. Mary's and St. Elizabeth's Hospital, etc.

GENTLEMEN:—I shall occupy your attention to-day with the subject of heart murmurs, and limit my remarks to the left side of the heart, where the organic murmurs within the heart are usually found. Murmurs of the right side of the heart, *i.e.* those pertaining to the tricuspid and pulmonic orifices are comparatively rare and unimportant. The important murmurs pertain to the mitral and the aortic orifices and they are four in number, two at each orifice. At the mitral orifice we have mitral direct, called sometimes mitral obstructive or presystolic. We also have at this orifice mitral regurgitant. The first generally denotes obstruction to the free passage of blood from the left auricle to the left ventricle. Mitral regurgitant implies an insufficiency of the mitral valve and consequent regurgitation from the left ventricle into the left

auricle. The two murmurs at the aorta are aortic direct and aortic regurgitant. The former may imply obstruction or a rough surface over the aortic valve. The latter involves insufficiency of the aortic valve. A knowledge of these murmurs signifies our ability to recognize each, both when existing alone and when combined. By the name murmur is meant every adventitious sound, and these are to be distinguished from the heart sounds which we hear in health. These may be modified by disease. The modification of heart sounds, however, constitutes an entirely distinct class from the murmurs which have adventitious sounds, *i.e.* sounds adding to the proper sounds of the heart. These murmurs present different characters. They may be more or less loud, feeble or strong. They are soft or rough. A murmur is soft when it has a resemblance to the sound which is produced by a current of air or bellows and hence the first term applied to designate these murmurs was bellows; but they have not always this character, though in the larger proportion of cases they are bellows like. They are said to be rough when they have not that bellows character, but characters which may be described by different terms, such as rasping, racking, etc. Sometimes these murmurs give us a regular musical note and then they are distinguished as musical murmurs. We have thus three kinds of murmurs based on differences in their character as regards sound, *viz.*, soft, rough and musical. The character of murmurs as regards sounds, however, gives us no definite information as to their tone. In other words each one of the four different murmurs enumerated may be soft, rough or musical. Now comes the question by what points do we recognize these different murmurs, and how do we differentiate them from one another when present in combination? We have here two patients, both of whom present each of the four important cardiac murmurs.

CASE I.—Sarah A., æt 28, native of Ireland, admitted May 16. Has been troubled with headaches since childhood. Ten years ago had a severe attack of acute articular rheumatism, which has been repeated every spring with less intensity. About five years ago she began to be troubled with palpitation and occasional sensation of fainting. Since then she has suffered from dyspnœa, which has been more intense on going upstairs. Face and feet are often swollen. Sight is sometimes misty. She has vomited at times, and has coughed a good deal, raising a sputum sometimes thick and frothy.

On admission suffers from dyspnœa and coma. Heart enlarged, acts forcibly. Several murmurs are heard. Urine, sp. gr. 1010, contains no albumen. Feet are not now swollen. This patient very probably had endocarditis with her first attack of rheumatism. This is rendered probable by the fact that for five years she has suffered from palpitation and dyspnœa on exertion. As a rule, valvular lesions which result from organ-

ic endocarditis do not give symptoms for several years. It is five years since she began to have symptoms referred to the heart. This renders it probable that the endocarditis from which the lesions took place had occurred five years ago.

In the first place, gentlemen, I wish to call your attention to the marked visible pulsation that you see in the arteries of the neck. This fact possesses considerable significance as a physical sign. It points to aortic regurgitation. If marked, we are pretty safe to infer therefrom that there exists insufficiency of the aortic valve. By means of the stethoscope we can circumscribe the space from which the sounds come much better. On applying the stethoscope, I distinguish an adventitious sound—a rough murmur. With which of the two heart sounds is this murmur connected? I find that it is connected with the first sound of the heart. It is therefore a systolic murmur. Suppose I had some difficulty in determining that fact. Say the heart is beating with great rapidity and irregularly. We may feel doubtful as to the first and second sounds. Under these circumstances we may do one of two things. While listening to the murmur we may place our finger upon the carotid artery. The pulsation of the carotid artery represents the time when the first sound of the heart takes place. Sometimes we may place the hand over the apex of the heart and connect the murmur with the impulse of the heart which occurs synchronously with the first sound. When I carry my stethoscope up to the neck, I also hear a murmur, and I find that the murmur corresponds with the first murmur as regards sound. Therefore I say that the murmur I hear at the base of the heart is propagated to the carotid artery. From these points I draw my conclusion that I have an aortic direct murmur. This signifies either that there is an obstruction at this orifice or that there is a roughened surface over which the current of blood flows. While listening to this murmur I recognize another point. There are two murmurs; the second follows the first. This second murmur occurs with the second sound of the heart. This murmur I find is propagated downwards. I also hear it down at the apex. This is also a rough murmur. It signifies insufficiency of the aortic valve. The loudness of the murmur, whether rough, soft or musical, is no ground for deciding whether the insufficiency be small or great. Naturally we would say in proportion as we get a loud murmur the insufficiency is great. That conclusion is not warranted. In fact the murmur is more likely to be loud the less insufficient, and the same may be said of its being musical. It may be loud with little insufficiency of valve. It may be soft and feeble with a great amount of insufficiency.

We have then two murmurs here, which succeed each other just as the heart sounds succeed each other. Let me refer in this connection to the only liability of error which obtains as regards these murmurs, when both are present. They may be mistaken for a rough friction murmur which is exocardial. Bear in mind that, when present, all we have to do is to decide that we have not the aortic direct or aortic regurgitant. In other words, only these two murmurs can be mistaken for the præcordial friction murmurs.

Now I go down to the apex of the heart. If there is much enlargement of the heart, we get impulse not at the apex alone as in health, but everywhere about that point, as in the pericardium. I get indeed a stronger impulse in the pericardium than at the apex. This is explained by the fact that when the heart is enlarged it frequently changes its form and becomes globular. The apex becomes absorbed, and its impinging against

the thoracic wall does not give so strong an impulse as the body of the heart does. As the heart enlarges it pushes away the lung, and beats in actual contact with the walls of the chest for a considerably larger space. Above the apex the heart beats much stronger than at the apex, where it is comparatively weak. In every intercostal space throughout the pericardium I get the impulse, and the lowest is at the apex.

For the organic murmurs produced at the mitral orifice we go to the apex of the heart or near it. Just above the impulse I get a murmur, *i. e.*, an adventitious sound. This is a little rough and short. I get it within a circumscribed space. This murmur ends when I get the first sound of the heart. The first sound of the heart seems to cut it off. From these points I know that we have here a mitral obstructive or mitral direct or presystolic murmur. A murmur, usually rough, which precedes the first sound of the heart, and which may be described as a vibratory sound, is indicative of mitral obstruction, the blood flowing from the left auricle into the left ventricle with some degree of obstacle. When a murmur is almost rough, as here, we are quite warranted in saying that not only is there mitral obstruction but that the obstruction is produced in a particular way, namely, by adhesion of the mitral valves at the site of the roughened orifice. As I listen still further I get another murmur, which begins with the first sound. This is a soft, blowing murmur. I hear it extended around the left mitral aspect of the chest, and if I place my ear behind, near the lower end of the scapula, I get that murmur very distinctly. We have then a soft murmur beginning with the first sound of the heart, heard loudest at the apex and propagated around the chest and heard at the back. This shows a certain amount of insufficiency of the mitral valve. The loudness of murmur, the quality of it, give us no definite information as to the amount of insufficiency of these valves.

This patient then affords us an illustration of four different murmurs. Two of these four sounds occur at the same time, *viz.*: aortic direct and mitral regurgitant, both systolic. The murmur with the second sound is diastolic. Sometimes the mitral direct has been called diastolic, more properly presystolic. With the aortic direct the murmur is heard with maximum intensity at the base of the heart. It is generally propagated to the neck. It is propagated less far and less rapidly as we go from the base of the heart downward. It is better propagated in an upward direction. This is because the sound is carried up by the normal current of blood in the vessels. In the mitral regurgitant murmur we have the maximum intensity at or near the apex of the heart, and if propagated, it is not so well propagated in an upward direction as in a lateral direction. This murmur is more loudly heard in the back than the aortic direct and in the neighborhood of the lower angle of the scapula. You might have aortic direct and mitral regurgitant both soft, in which case we carry the stethoscope from the apex to the base. It will happen that at some intermediate space we lose both. If we find that the aortic direct murmur becomes less and less intense as we go down, then carry the stethoscope farther and we get another sound, which increases in intensity until we get over the apex. In that way we make certain that there are two murmurs and not one.

CASE II.—*Locomotor Ataxia complicated by Heart Disease.*—This patient has locomotor ataxia and heart disease. On putting the stethoscope in the second intercostal space on the right side, I get a murmur with the first and with the second sound of the heart.

There is, therefore, either aortic obstruction or aortic roughness. In listening to the physical signs it is important to make your position comfortable, so that your attention will not be distracted. We have here two aortic presystolic and two mitral regurgitant murmurs.

Here then, gentlemen, are two cases which I have brought before you, showing each four organic murmurs of the left side of the heart in combination. I have brought these before you partly with reference to the fact that we find four murmurs with each patient. I also call your attention to the fact that although there are four murmurs here this patient suffers very little inconvenience. His greatest source of trouble pertains to the affection of the spinal cord. There is no class of diseases better tolerated than affections of the heart, provided the condition of the system be good in other respects.

ABOUT BOOKS.

The Experimental Method in Medical Science—Second Course of the Cartwright Lectures of the Alumni Association, College of Physicians and Surgeons, New York, Delivered by John C. Dalton, M. D.—G. P. Putnam's Sons—New York, 1882.

These lectures of a distinguished physiologist which are thus presented in a permanent form, were those, as is stated in the title, which were originally delivered as the second series of Cartwright lectures. They include three lectures, viz.: "Galvani and Galvanism in the Study of the Nervous System;" "Buffon and Bonnet in the Eighteenth Century," and "Nervous Degenerations and the Theory of Sir Charles Bell."

They are, as might be anticipated, coming from the pen of Prof. Dalton, a thoroughly scientific historical resumé of some interesting periods of physiological research. They narrate the theories, the gropings after truth, the methods of research, and brilliant discoveries of scientists, with whose names the student of physiology is familiar. They will, no doubt, be read with pleasure by those who are interested in studying these phases of the development of physiological science.

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK.

COMPOUND DEPRESSED FRACTURE OF SKULL—OPERATION—RECOVERY.

SERVICE OF
GEO. A. PETERS, M. D.

J. S., æt. 18, U. S., single, clerk, admitted March 22d, 1880.

Patient was struck in the head by a piece of iron. He was taken to House of Relief by police and transferred here the same evening.

Admission.—No shock present. No pain or cerebral symptoms of note. Patient sitting up. Upon the vertex of the head over the left parietal bone, distant from the sagittal suture one inch and running from before backwards is seen a lacerated wound one-half an inch long, with edges beveled; the internal opening being very small. Upon opening the flaps and introducing a probe a depressed fracture of bone is detected directly beneath the compound opening. Pulse, 100; respiration, 20; temperature, 98°. Patient is somewhat excited, but suffers little or no pain.

Treatment, carbolic dressing.—About 3 p. m. patient removed to operating room. Ether; dorsal decubitus: crucial incision made at the site of wound with scalpel down to bone and flaps retracted. Depressed or rather punctured fracture of outer table of skull seen as before described. After consultation it was decided expedient to trephine at seat of fracture.

A button one inch in diameter was removed with trephine and bone elevator. When this had been removed a depressed fracture of the inner table with a fragment the size of a silver five cent piece attached to the dura mater was seen. This piece was removed with care, and a small vessel found ruptured at its superior edge. Wound washed, and flaps brought into apposition and sutured with carbolized silk.

March 24th.—Complains of pain in the back and headache. Slight serous discharge from wound. Pulse, 108; respiration, 20; temperature, 99.6°. Ordered Ol. ricini $\frac{3}{4}$ i.

March 26th.—Sutures removed, union complete except a small spot at posterior extremity of antero-posterior incision from which serous discharge escapes in small quantity.

March 29th.—No note since last entry. Patient's condition good. Temperature and pulse normal. Discharge more purulent. Balance of sutures removed.

March 30th.—No complaint except cold in head. Ordered:

R Ammon. carb. 3 iiss
Syr. pruni. virg. $\frac{3}{4}$ ij
Aque $\frac{3}{4}$ iv
Sig. 3 i every two hours.

Wound looks well. Ordered irrigated t. i. d.

June 15th.—No note of importance to this date, when only a very small ulcer remains. Patient discharged cured, and directed to outdoor patient department if needed.

SELECTIONS FROM JOURNALS.

THE TREATMENT OF DIABETES. BY WILLIAM SQUIRE, M.D., F. R. C. P., Physician to the Hampstead Hospital for diseases of the Chest, and to the St. George's (Hanover Square) Dispensary.

Whether diabetes be itself a disease, or a disturbance arising in the course of various diseases, whether prominent in acute illness, or one among the obscure symptoms of chronic ailments, and whatever its origin may be, the conditions to be observed in its management are invariably the same;—the first essential of successful treatment is a carefully restricted diet.

During the temporary glycosuria of some febrile states, the use of starchy and saccharine foods and diluents, such as arrow-root, corn-flour, cocoa, barley-water, and gruel, is to be avoided; milk is only to be used sparingly, cream is better; glycerine should replace sugar in cookery and in sweetening tea and coffee. Lemonade is best made with lemon-juice, glycerine, and cold water; in this white of egg may well be diffused. A little toast may be allowed, with plenty of butter, eggs, and beef-tea. The conscious subject of diabetes mostly adopts this method of nursing the more trifling ailments resulting from cold or fatigue; beef-tea is habitually substituted for gruel; limes and lemons are known as almost the only fruits free from sugar. Alcoholic stimulants would generally afford grateful help, but no wine can be quite without sugar, no brandy is without liqueur. Hollands,

unsweetened gin, and some, but not all kinds of whisky are fit adjuncts to the diabetic dietary.

When glycosuria is first detected during an attack of severe illness, it may be difficult to say how far diabetes is an accidental complication or an underlying condition, and impossible to estimate the originating causes at work; hence may arise a caution as to prognosis, but there is no place for hesitation as to treatment. Mostly in grave disease, as of lung or kidney, the diabetic condition has been foreknown, perhaps guarded against by a partial avoidance of starchy and saccharine food; in these cases, restrictions, which had been gradually relaxed as one or another slight departure from a rigid dietary had been found possible, have now to be reinforced. Where this condition had not been suspected, the safety of the patient will depend upon its early recognition and prompt treatment. The good effects of a rigid dietary have to be waited for with more patience in presence of a confirmed diathesis than where glycosuria may be dependent on a less persistent cause; but in either case steady perseverance in the same line of treatment is required, however different may be the primary causes.

Very variable is the power recovered by diabetic patients, of assimilating some articles of diet at certain times which at others would surely lead to a marked increase of their infirmity. Some can indulge in forbidden fruits with impunity, or occasionally a doubtful vegetable. Many can take milk fairly well, or need not entirely abstain from it. Sugar must always be excluded from stewed fruits, and from every kind of drink. A lump of sugar weighing two drachms, taken inadvertently in a cup of tea, has determined a secretion of six times that weight of glucose in the next twenty-four hours, and made rigorous care for some days needful to overcome the wrong tendency. There are times when all soluble ingesta should be tried for sugar by Fehling's test, and the bread and sauces with iodine. Starch will be found in some of the prepared flours said to be freed from it, or partly converted into dextrin. Gluten bread should habitually form part of the dietary; the rusks made by Bonthon are agreeable, either dry, or toasted with butter. Under careless diet a feeling of weakness, loss of flesh, irritability of manner, or some neuralgic pain, indicate an increase of sugar in the urine, which chemical examination confirms. Here a restricted diet has restored, within one week, 5 lbs. of weight to the body, or removed neuralgic pains in two days. A patient, under slightly modified diet, had severe neuralgic pains across both thighs after the fatigue of a journey to London; this ceased shortly after all starch, milk, and sugar had been avoided.

Among the remedial agents recommended in diabetes, salicylate of soda has been used with success in the symmetrical neuralgia of this state; the remedy had no effect on the diabetes itself in several cases under my own observation. In one of these cases, the utter uselessness of the Bethesda water was fully demonstrated three years ago; this proof of its inefficiency did not deter my patient from undertaking a journey to America to try its worth at the source, but with no favorable result. The water itself is not much more than a common table-water, a little too hard for ordinary use, but harmless and inert in moderate amount. In large quantities it is injurious, in the same way that a large quantity of any fluid is injurious in diabetes; with the further danger, not imaginary, but confirmed by distressing experience, that misplaced confidence in a futile resort leads to neglect of ordinary precautions, and so to danger and to death.

Of the good to be obtained from codeia and from extract of opium, in certain conditions attendant upon diabetes, my experience is amply confirmatory; half a grain of either is given with advantage in a pill, or a solution of codeia with dilute hydrochloric acid after meals. The improvement secured by their aid is not merely temporary, nor is it obtained at the cost of any decline of vital power, rather by a conservation of the nervous energy most readily exhausted in diabetes. Once where complete recovery resulted, after three and a half ounces of sugar were excreted daily, codeia in full doses was one of the means employed.

The author of an able article on diabetes, in the last number of the *Practitioner*, is biased by a supposed analogy between the therapeutics of diabetes and of phthisis; the analogy is slight, so that the small dose of pilocarpin recommended for moistening the mouth in diabetes seems well worthy of trial in the manner directed. Moisture is restored to the skin by giving two or three grains of carbolic acid in an ounce of water three or four times a day for short periods, a solution of this strength, sprayed into the mouth and swallowed, relieves dryness of the tongue and throat; this solution of carbolic acid should always be administered during an intercurrent abscess or boil for two days before any incision is practised in diabetic subjects.

Our ability to excite the secreting glands, except by the simplest aperients, is very limited; nor in the treatment of diabetes is this to be regretted, for the kidneys act too much, and there is no marked diminution in the activity of the other secreting organs of the body; the skin may be dry, but perspiration is not uncommon; the peptic glands act freely, for the appetite is large; the liver may be at fault, but is not inactive; many men diabetic for years are not therefore childless. The activity of the kidneys is directly excited by the presence of sugar; these organs, healthy at first, by degrees suffer from the overwork forced on them.

The two forms of albuminuria met with in diabetes are, perhaps, more readily distinguishable than when uncomplicated in this way. In contracting kidney, associated with gouty glycosuria, the quantity both of albumen and of sugar is small and the urine is of comparatively low specific gravity; the two conditions have gone on together, the diabetes being the less prominent, and not the primary one. The other form of albuminuria, with parenchymatous nephritis, appears in the course of typical diabetes; it comes on when the urine has been for some time in large quantity and of high specific gravity, and may co-exist with an excess of urea and of uric acid. The first of these two conditions only is that in which a milk diet is to be recommended, or is even allowable; in the second the use of milk must sometimes be at once prohibited. Grave anxiety, caused by the persistence of both sugar and albumen in the urine after many of the restrictions in diet known to be requisite have been put in force, has been relieved shortly after the use of milk has been entirely stopped, and cream exclusively used as a substitute. As the sugar diminishes, the albumen disappears and the quantity of urea increases.

In the course of the diabetes sugar may completely disappear from the urine in some unfavorable contingencies. It is not rarely absent for considerable periods during favorable convalescence; at these times the diet may be varied to almost any extent, and milk need not be excluded. Such disappearance of the sugar must not be considered as cure of the diabetes; let any shock or fatigue shake the precarious balance of health, and a return to the more strict rules of dietary becomes

again necessary. Milk must be again prohibited for a time, because of the large quantity of sugar contained in the whey; very little of this remains in the cream, and least in Devonshire cream; cheese and curd are nearly free from it; butter is entirely unobjectionable. If skim milk is to be recommended in diabetes, why not whey? It is free from curd as well as from cream, while both contain all the sugar of milk. Indeed, it is not surprising that sugar has been recommended in diabetes;—could it be given not only on homœopathic principles, but strictly in homœopathic doses, so that all the sugar ingested could be reduced to some minute fraction of a grain a day, improvement would soon be evident.

Curd should be more utilized in the diabetic diet. Cheese-cakes made with it vary the fare that so much needs variation. The variety of supply for the more substantial dishes is ample; but for the lighter additions to a meal, that make eating less a duty than a pleasure, there is always room for some new combination. An agreeable cheese-cake, baked in ramakin papers instead of in pastry, can be made, with or without gluten bread and curd, in the following way:—Grate one ounce of bread with the rind of two lemons, and mix with half an ounce of glycerine; with this whisk up the whites of three eggs, two ounces of cream, and one ounce of fresh butter, melted by heat; add also the juice of the two lemons, and the yolks of the three eggs, well beaten; mix all together, and bake in ramakin cups for about twenty minutes, in a rather quick oven. A little more glycerine, or a little less lemon juice, will modify the flavor and consistence of this confection; it is to be eaten when cold.

The management of diabetes, besides attention to diet, requires moderation in exercise, very complete intervals of repose, plenty of fresh air, and avoidance of any excess in mental or bodily exertion. To control the exacerbations of the disease, absolute rest as well as rigid diet must be enjoined. At these times, for days together, the quantity of sugar excreted exceeds the amount to be derived from the starchy and saccharine food taken; a considerable amount of it must therefore come from amyloid material, and from waste products within the body. The protein compounds may be represented by sugar and ammonia, and their rapid disintegration may give rise to both products; with a less degree of disturbance this change would be less, some of the ammonia would be converted into urea and excreted as such, while less sugar would be formed. Rest and diet without medicine, in the course of diabetes mellitus, has gradually brought about a great diminution in the quantity of urine, a complete absence from it of sugar, with great proportional increase in the urea; and this favorable change has continued for weeks and months with but rare re-appearance of the sugar, though fruit, wine, milk, and ordinary bread, the greatest luxury to a diabetic convalescent, have been allowed.—*Practitioner*.

PARTIAL RESECTION OF THE LUNGS.

Abdominal surgery is every day achieving fresh successes, and while ovariectomy remains, and probably will remain, its greatest triumph, the later successes have been neither few nor small. So recently as the close of 1879, Professor Nussbaum, of Munich, said in a public lecture, "So soon as the physician diagnoses with certainty a cancer of the pylorus, the surgeon will allow but little time to pass before he excises the cancerous growth." The words seem almost pro-

phetic, for within a year and a half we have from Dr. Wolfer an account of several such operations, some of them successful, performed in the clinic of Professor Billroth. The operation is now recognized, the cases suitable for it described, and the method of performance fully detailed. With regard to abdominal surgery generally, we may say that operations which a very few years since would have been scouted as utterly beyond the pale of rational and justifiable surgery, have been performed with a success which more than justifies the boldness of the operators. The question very naturally suggests itself, how far the thoracic organs lie outside the domain of surgery. The successful treatment by free incision and drainage of pleuritic and pericarditic effusions, whether serous or purulent, is the last advance in this direction; but in the localized catarrhal pneumonia, the phthisical cavity, and the limited pulmonary tumor, there seems to be a field for further advance, although it is admittedly beset with difficulties of diagnosis for the physician, of technique for the surgeon. As a contribution to the subject, Dr. Schmid, of Berlin, details (*Berliner Klin. Wochenschrift*, No. 51, 1881) the result of certain experiments he has performed on the dog. These results are put forward in the most modest possible manner, with full knowledge of what they do and what they do not prove. The operation performed by Dr. Schmid consisted in the resection of apex of the lung on one side. On the day before the operation one side of the dog's chest was shaved and thoroughly cleaned, and the animal was operated upon while under the influence of morphia and ether. A portion of the fourth or fifth rib was excised subperiosteally, the portion being made as large and as far from the sternum as possible. A lobe of the lung was now drawn through the opening, or as much of it as possible. This was transfixed with a double catgut thread below the part to be excised, and a part of the lung, including the wedge to be excised was then ligatured. The wedge was excised with scissors, all the larger bloodvessels and bronchi ligatured, and the edges of the lung brought together with catgut sutures. The double catgut ligature round the base of the lobe was now removed, and after seeing that no hemorrhage occurred, the part was returned into the thorax and the external wound closed. Almost no antiseptic precautions were adopted throughout, with the exception of disinfection of instruments, sponges, etc., with salicylic acid. The operation was performed eight times in all, and succeeded in three cases, while in five death occurred. The first dog operated on died within half an hour from carbolic poisoning, the spray having been used; while the other four died within two to five days from purulent pleurisy, evidently the result of septic infection. There was no hemorrhage or gangrene in these cases, and in only two was there a slight local pneumonia. Several of the animals had subcutaneous emphysema. In no case was there loss of blood from the lungs. Two of the successful operations were on the same animal. Dr. Schmid has performed the same operation, *post-mortem*, on the healthy and the phthisical human lung. He finds the great difficulty lies in getting the lung drawn through the opening, more especially when there are extensive adhesions. The operation, he believes, however, is perfectly practicable, and with the choice of suitable cases, and the use of all antiseptic precautions, he considers that the operation is one that can justifiably be attempted on the human body. The results of incision and drainage of phthisical cavities have not as yet proved very encouraging, but it must be admitted that the procedure has not yet had a fair trial. Any

advance in the treatment of this terrible malady, before which, in the great majority of cases we stand so hopeless and helpless, will be welcomed by us all. Whether such an advance is possible, can be determined only by the skilful diagnosis of the physician, the bold and careful operating of the surgeon.—*Med. Times and Gazette.*

ON THE PHYSIOLOGICAL AND THERAPEUTICAL ACTION OF ERGOT, BY JOHN DEWAR, L. R. C. P., &c.

Very much has been written on the physiological and therapeutical action of this important drug, many and varied have been the experiments on the lower animals, and by competent authorities, but the results have often been very contradictory; the same may be said of its action as a medicine. Several things may account for this: the inertia of the drug, the dose administered, and the manner in which it has been given. Certain preparations are inert, or nearly so, as the stale powder and the ordinary tincture. Heat is said to be destructive in preparing it, though old practitioners who have for a lifetime been in the habit of making at the bedside "tea" from the powder or the "beans" will doubt this. Alcoholic extracts are less powerful than aqueous ones. But it is even now a disputed point among chemists and physiologists as to what its active principle is. Levi says it is due to phosphoric acid, Winckler to the trimethylamine it contains, and Dragendorff to sclerotic acid, and this seems the most likely. Most observers agree that ecbolin and ergotin are *not* active principles, and that these never bring about the specific action of the drug—the so-called *ergotin* in use not being ergotin, but a compound body. However, all this is of minor importance to the physician provided he obtains an active preparation. The liquid extract and the ammoniated tincture are the best, the latter especially, in obstetric practice. Ergotin is most convenient for subcutaneous injection.

Physiological action. I shall not discuss toxic effects, which are never produced by any dose ever given by the medical practitioner. But the physiological action of Ergot is most important. All experimenters are agreed on certain things, *viz.* that the arteries of the body are contracted by it, that blood-pressure is increased, that there is slowing of the heart's beat and pulse, and, if the remedy be pushed, that the pupils become dilated, that there is coldness of the surface and anæsthesia. Nearly all physiologists agree thus far. But how does Ergot bring about the contraction of the arteries? are veins as well as arteries equally affected? and does it act on nerve centres, or the peripheral ends?

All physiologists agree that ergot increases the inhibitory action of the sympathetic (nerves of Remak), and thus causes the arteries to contract. If the sympathetic fibres are paralyzed or cut through the arteries dilate, if they are stimulated they contract, therefore ergot stimulates the sympathetic. But Brown-Sequard, Holmes, and Wernich, tell us that Ergot acts when the sympathetic is cut. That being so, ergot must act in one of two ways; either through the sensori-motor nerves, or by stimulating the cut or peripheral ends of the sympathetic in the same way that galvanism does.

Let us call to mind the composition of that (to use the language of Charcot) "physiologically complex totality called a nerve." Every sympathetic ganglion has three sets of fibres; a motor, a sensory and sympathetic proper (grey fibres of Remak), and the action of these are antagonistic. Thus secretion in a gland is

arrested when the motor fibres are cut, *increased* when the fibres of Remak are cut, also increased if the sensory fibres of the vaso-motor are *irritated* or excited. Let us suppose then that ergot is given where the fibres of Remak have been cut, in order to get *diminished* secretion (and that implies diminished supply of blood) a *paralyzing* effect must be produced on both the motor and sensory fibres. This I believe actually takes place, judging from a therapeutical fact I shall presently mention, as well as from the anæsthesia and coldness of surface found in cases of poisoning by ergot. Nicotine, who has experimented with sclerotic acid, says the peripheral ends of the sensory nerves are paralyzed. Kohler confirms this view. That the nerve centres themselves are affected there is no proof, nor is that required to explain the action of ergot. That some dulling of a nerve centre should take place from the anæmia produced by the contractions of the vessels is likely enough, but beyond this there is no satisfactory experimental evidence of ergot affecting the nerve centres.

How does ergot act on the uterus? The usual theory is that it *irritates*, or that it causes *anæmia* of the motor centre of the uterus, wherever that may be, and so causes muscular contractions. But all the evidence—experimental and therapeutical—goes to prove that ergot has rather a *sedative* than an irritative effect. Kussmaul records a fact which better explains its action. He says that "spasm of arteries causes clonic contractions of muscles." We know that from its inhibitory action on the sympathetic Ergot contracts the arteries, and thus is explained the *clonic* or *intermittent* contractions on the parturient uterus. There is also evidence that ergot acts on all involuntary muscles, on the heart, on the muscular fibres of the bowels increasing peristalsis, &c.; and in toxic doses general convulsions are produced. This action on muscle is most probably through the nervous system, and not from any special action on muscles themselves.

Therapeutical action: From its action on the circulation and the nervous system it is evident that Ergot possesses a wide therapeutical range. In mentioning a few diseases in which I have found it useful I would place at the head of the list *Pertussis*.

I am aware that in this disease a vast number of remedies are useful, but after a pretty extensive trial both in hospital and private practice I am inclined to regard ergot as the best and safest. Up to the time when I began to use ergot I regarded the combination of bromide of potassium and tincture of belladonna, or sulphate of zinc and tincture of belladonna, as the best remedies with which I was acquainted, but that sometimes necessitated the belladonna being pushed to its physiological action before the disease would yield. That was sometimes not unattended with danger in young children unless they were carefully watched, which cannot be easily done in hospital or dispensary practice. Ergot seldom fails to cure whooping cough in from one to three weeks; the cases that are longer in getting better are those complicated with bronchitis, or with troublesome bronchial catarrh. I give from four to fifteen minims of the liquid extract every three or four hours to children of three months and upwards. The benefit of the secale is at once apparent, the fits of coughing occur less frequently, and are not so severe when they do occur. I usually give it alone with a little sugar, but in complicated cases it may be combined with other remedies, and especially with the compound syrup of the phosphates to complete the cure when there is debility.

What is the action of ergot in whooping cough? We must regard the spasmodic cough as due to reflex action, and that in its turn brought about by the peculiar condition of the blood irritating the peripheral ends of the sensory nerves. Ergot dulls or paralyses these nerve ends and so lessens and eventually prevents the spasms. The true pathology of whooping cough may yet be considered doubtful, but I regard it as a germ disease, as only on that ground can we explain its infectious nature. I do not here claim for ergot any *specific* power, but rather a physiological one. It *may* have a specific action, but of that there is as yet no proof. However, of its power to cut short the disease there can be no doubt, whatever be the theory of its action. This I have in scores of cases proved, nor is it necessary to give cases in detail, as all the cases would simply show a daily declension of the disease till, at the end of a fortnight or three weeks, the cough quite ceased. But in some cases the cough returns when the medicine is left off, so it may have to be continued for two or even three months, this however is the exception.

The power of ergot on whooping cough throws some light on its physiological action. Indeed clinical or therapeutical observation often aids physiological research, though without experimental (vivisectional) investigation the therapist would be in hopeless darkness. Its action in whooping cough appears to me to favor the theory that the sensory peripheral endings only are affected, as central anæmia of the cord from constricted vessels could scarcely account for the *speedy* antispasmodic action of the drug, though later on it may have something to do in bringing about a cure.

On the uterus.—On the parturient uterus every one has tried the effects of ergot, yet obstetricians are frequently disappointed in its action, so much so that many say it is useless; and I suppose every one has felt it to be provokingly uncertain, even in a most suitable case—a well-advanced labor free from mechanical obstruction, a dilated or dilatable os, and a multipara. In vain are large and oft-repeated doses given, the sluggish uterus will not act. Whether it be the only one or not, I know one cause to be due to the drug being inert. After a pretty extensive trial of powder, tea, tincture and liquid extract, I have found the best results from the *Liquor Secale Ammoniatum* when well prepared. Let one typical case suffice: Mrs. M—in labor with her seventh child; usually *very* quick. Visited patient at 8 o'clock in the morning. She had been in labor in night, during which time the membranes ruptured. Pains very feeble; os dilatable and as large as the mouth of a teacup. Went home, returned about twelve and found her much in the same condition. I then gave *Liq. Sec. Ammon.* (Ferris) 3 i.; in thirty-five minutes sharp pains came on, and in other fifteen minutes the child was born. Placenta came away easily. In this case the labor had lasted eighteen hours. In cases where I have given 3 iss. of the secale for a dose violent uterine contractions have taken place, expelling the child and retaining the placenta for some time by hour-glass contractions. This retention of the placenta I have frequently found after giving large doses, but not with drachm or half-drachm doses.

Has ergot any action on the unimpregnated uterus, or on the impregnated before parturition has commenced? As far as my experience goes ergot has no appreciable effect on the impregnated uterus when given in therapeutical doses. On the unimpregnated uterus its action is not very marked unless it be given

for a lengthened period. In sub-involution and in chronic congestion and enlargement, the cavity of the uterus—the sound being judge—does not become diminished by the action of secale alone, but with rest and other remedies it helps. I have not much faith in its action on uterine fibroids. If they are submucoid ergot will assist their enucleation after an incision has been made. But it is too much to expect from a remedy that a tumor of any size will have its blood supply so cut off as to destroy the growth, or to cause enucleation by contractions; in such cases however it will assist natural efforts of expulsion when such have commenced.

Theoretically, ergot should have some effect on all hæmorrhages, congestions, and atonic conditions of the system. In *hæmoptysis* it has been highly spoken of, but my experience of it in that disease is small, as I have found such good results from the tincture of hamamelis that I seldom luse any other remedy. Again, it is constantly used alone or combined with sulphuric acid in menorrhagia, metrorrhagia, and with more or less success. So also in leucorrhœa and galactorrhœa, though I have not found it of much use in preventing or cutting short mammary abscess.

In *atonic* and enfeebled conditions so often met with in women where anæmia is associated with a weak heart, inertia, &c., ergot, combined with tincture of iron, often acts better than strychnine and iron, or digitalis and iron. Allbutt has used it with great benefit in men who are worn out from worry, and who need bracing up. So I have found it in some cases of children a useful adjunct to the compound syrup of the phosphates where the latter is indicated.

In *diarrhœa* several writers have spoken highly of Ergot, but in my hands it has invariably failed, indeed it has always increased the diarrhœa, and this from its action on the muscular fibres of the intestines, is what one would expect. Any theoretical advantage to be gained by contraction of congested vessels in the mucous membrane is more than counterbalanced by the increased peristalsis. In a typical case of chronic diarrhœa which I had under my care a short time ago, and which continued for months despite every kind of treatment, I gave some ergot, but the patient could not be persuaded to finish one bottle, as he said it made him "worse than ever." The diarrhœa was due to muco-enteritis, and it eventually did well on large doses of bismuth. In children who have been taking ergot for some time diarrhœa frequently sets in. This is the only bad effect I find from its prolonged use—two or three months—in children, and when it is given in ordinary therapeutical doses, five to ten drops every four or six hours, it may be continued for a very long time without doing harm.

The action of ergot on the spinal cord is well known; but in congestion of the *brain* in children I have been most unfortunate in its use, even in large doses. In some of my cases, however, there was a suspicion of tubercle.

The following case which was under my care a few weeks ago may be looked upon as illustrating the speedy action of ergot on what appeared to be localized congestion of the cord: A little boy, aged four and rather delicate, was suddenly seized with what his mother thought a slight convulsion, in which he threw his head back, rolled his eyes, &c. On recovering he lay with the back of his head almost touching his spine, and he was in that condition when I saw him. On attempting to bring his head forward he strongly resisted and screamed. In this state the child lay for a

fortnight appearing to get worse, for, besides his head being retracted, when he was held up his legs were found to be powerfully flexed on his thighs, and they could with difficulty be straightened. Iodide of potassium and various other internal and external remedies were used for a fortnight without the slightest effect. I then gave him *Liq. Ergotæ*, mx. every four hours. In two days he showed symptoms of improvement, which continued till, at the end of a month from the commencement of the attack, he quite recovered. During the last week the compound syrup of the phosphates was added to the secale. There are several interesting points connected with this case, but I am only concerned here with the action of the ergot.

The only other affection I shall mention where ergot seems to be useful and deserving of further trial is *nasal catarrh*. This troublesome complaint, which has hitherto resisted all remedies, if taken in its early stage may be cut short by a full dose of ergot—repeated if necessary.—*Practitioner*.

TRACHELORAPHY. BY EDWARD JOHN TILT, M. D.

It is difficult to exaggerate what gynæcology owes to American surgeons. Their fertility of conception, boldness of execution, and mechanical dexterity is only equalled by the marvellous surgical endurance of American women. There is, however, something too sensational in their mode of introducing surgical novelties. The new operation is introduced with a grand flourish of trumpets; it is supported by an overwhelming array of figures, although detailed cases be few. Nothing is said about difficulties, failures or deaths; then a book is written, and the dazzled Britisher is told to go and do likewise; and, if he do not soon do so, it is attributed to insular conservatism, and even to national jealousy. Soon, however, intelligent American practitioners, unknown to fame, publish cases of failure of the new operation to fulfill its promises, and of the deaths it has caused; and by degrees the operation is ignored, discredited or abused.

This is the plain statement of what has occurred with regard to Dr. Marion Sims' advocacy of the slitting up the cervix on both sides, up to its union with the body of the womb, as a cure for the generality of uterine diseases. It is in the memory of most men how this strange assertion was supported by the 500 operations that Dr. Marion Sims performed in a short time in one hospital, and by the 200 or 300 women operated on by his pupils, in the same limited space of time, in the same city. It is well known that Dr. M. Sims sought to impress on us the value of his operation, in the work he did us the honor to publish in London, and that some enthusiastic young gynæcologists for a time followed his teaching.

A few years passed, and even American gynæcologists discovered that there was great exaggeration in the promised value of this extensive slitting of the cervix; that it was highly objectionable in many cases; and Dr. Emmet found himself occupied in sewing up the wombs he had helped to divide. Loss of faith in his teacher was, however, soon followed by the conviction in Dr. Emmet's mind that he himself had made several great discoveries. He discovered that inflammation and ulceration of the cervix was nothing but the rim of the cervical canal, everted by cervical laceration, and that all troublesome cases of enlarged cervix were nothing else but cervical lacerations, injudiciously patched up by nature with cicatricial tissue; and, lastly, he discovered the dangerous properties of this

cicatricial tissue, and the urgency of cutting it out, to restore women to health.

This new teaching was supported by the usual dazzling statistics—by hundreds of cases of his own, and of his enthusiastic pupils. Dr. Emmet embodied his teaching in several chapters of a very valuable work, and his school is disappointed that we British gynæcologists have not fallen down upon our knees before this new teaching. This is too bad. Dr. Marion Sims' operation was vouched for in the same way, and was supported by a numerous array of successful cases; now his countrymen own that the operation is well-nigh valueless; and yet they wonder at our being cautious, after having been once bitten. That we should point to Dr. Emmet's having been obliged to sew up the wombs divided by Dr. M. Sims, is called a "facetious argument" by Dr. Playfair, but I doubt how far those who had to pay for both operations saw any fun in the matter. It seems to me rather a grim kind of practical joke, fraught with salutary meaning. That this should have occurred to distinguished American gynæcologists, teaches us to well weigh any new departure of theirs, and to wait till it has been ascertained that the new operation fulfils its promises, and does not tell too heavily on the bills of mortality. Dr. Emmet's book appeared in 1879, so I think we ought to feel indebted to Dr. William Playfair for having lately called on the Obstetrical Society of London to discuss tracheloraphy. His paper seems to have been partly written to soothe the feelings of our esteemed American brethren, but this was scarcely necessary, as Dr. H. Bennet's paper on the same subject led to its full discussion, at the London meeting of the International Medical Congress.

Dr. Playfair, in his remarks on Dr. Emmet's work, raises no objections to his questionable pathology; he considers tracheloraphy to be the greatest improvement ever introduced into practice, but he thinks the operation only justifiable when laceration has produced ectropion and other signs of uterine disease. Dr. Playfair owns to having "seen several cases of most extensive laceration, in which the surfaces were quite cicatrized; and that, to subject such cases to a difficult and complicated operation, would be a most glaring evil." This is what might have been expected from so sound a practitioner, but the American practice seems to be to operate in all such cases, for fear of future mischief. When Dr. Emmet kindly gave me his book, he asked me to tell him frankly what I thought of his new operation, and I apologize to him for having so long delayed to do so. Now is a fitting time, however, and I propose to give my estimate of tracheloraphy under the following heads:

1. The frequency and import of laceration of the cervix.
2. Cervical ulceration, nothing but cervical ectropion.
3. The part ascribed to cicatricial tissue in uterine pathology.
4. Tracheloraphy, as the only way to cure certain diseases of the cervix.

1. *Frequency of Cervical Lacerations*.—Gynæcologists have been attaching more and more importance to laceration of the cervix, by labor or by abortion, instrumental and otherwise; and Dr. Emmet's assertion, that half the uterine ailments of those who have borne children were caused by laceration, confirms what I have stated in my *Hand-book of Uterine Therapeutics*. As Dr. H. Bennet maintains, laceration is often due to unhealthy uterine tissues being unable to bear the strain of parturition; and it may be taken as settled, that un-

healed cervical laceration plays a very important part in the etiology of uterine disease, both acute and chronic. There is, doubtless, some exaggeration in the belief subsequently expressed by Dr. Emmet that women cannot be confined without the womb being lacerated, for this would be to admit its being utterly unfit for the work it was intended to do; neither should I have alluded to this, had not his disciples already settled, that every healed rent requires operation.

2. *Cervical Ulceration is nothing but Cervical Ectropion.*—Dr. Emmet denies the existence of inflammation in uterine pathology. Happy man, he has never seen an acute case of non-puerperal uterine inflammation; he has never had to watch cases of acute internal metritis, than which I have seen none so painful and so difficult to treat; and he does not believe in the possibility of chronic uterine inflammation. Uterine ulceration is said to be a mere illusion; it is only the more or less extensive eversion of the torn mouth of the womb. Approximate the torn fragments by a proper instrument, and the ulceration disappears. Carefully pare the lips, unite their opposing surfaces by sutures, so as to hide and rectify this ectropion, and you cure your patient. I admit this; but, if we look at ectropion in the eye, we find that the everted portion of the conjunctiva becomes inflamed, and inflames the rest of the conjunctiva, which inflammation the surgeon cures by such an operation as may prevent the eversion of the eyelid. In like manner, any considerable everted portion of the cervical mouth is not only unnaturally pressed and rubbed, as Dr. Emmet suggests, but it is offended by the acid fluids of the vagina, because it is accustomed to be lubricated by the alkaline secretions of the womb. As in the eye, so in the womb; inflammation passes from the ectropion to the rest of the mucous membrane, and may be cured by the cure of ectropion. In explaining his operation, Dr. Emmet attaches no importance to the deep drainage of long-congested tissues by that complete division of the cervical walls, which imply considerable loss, first of blood and then of serum, but I consider it a most important part of the treatment. It will be thus seen that I admit that Dr. Emmet has taught us the etiology of *some* cases of uterine ulceration, and added to our means of curing them; but his theory leaves unexplained the uterine ulceration, often observed in married women who have had neither child nor miscarriage, and in single women. There is no difference between the extensive exfoliation of cervical epithelium in these women, and that resulting from cervical ectropion. There is no difference in the symptoms of endocervicitis in these three classes of women, for it would be a miserable caricature of what has been taught by Dr. H. Bennet and myself, to make us suppose that a rim of cervical exfoliation determines serious uterine symptoms and permanent damage of health. Uterine ulceration is to be taken as the sign of the whole of the lining membrane of the cervix, and sometimes of the body, being in the same condition, and of its submucous tissues being in a congestive, or otherwise unhealthy condition. These cases of endocervicitis in virgins, of which Dr. Priestley lately spoke as most difficult to cure, are quite out of the pale of Dr. Emmet's theory of uterine disease. It cannot be seriously proposed to cure them and the married women who have never conceived, by tracheloraphy, but any good gynecologist can cure such cases by much milder treatment, therefore I am in a position to say that the same treatment is sufficient to cure most of the cases of uterine ulceration that really originate in laceration and in cervical ectropion, without recurring to a serious ope-

ration, that may lead to dangerous loss of blood and to pelvic inflammation. Instead of performing tracheloraphy so frequently as it is proposed in America, I should like to see it reserved for a certain number of well defined cases. To do otherwise would be to lay the operation open to the charge of its being "*une debauche chirurgicale*," as it is called on the other side of the Channel.

3. *Cicatricial Tissue.*—Those who have written on general pathology, never tire of admiring the marvelous manner in which organs and tissues repair their damaged structure; they bid us remark that cicatricial tissue is always analogous to the nature of the repaired tissue, bones being mended by bone, tendons by tendon, the cervix uteri by fibro-cellular tissue. We gynecologists know that this cicatricial tissue can scarcely be distinguished from the original cervical tissue, and that it admirably does its work, softening at the appointed time, to let women be delivered with safety to mother and child. Nevertheless, Dr. Emmet and his followers look on this cicatricial tissue as something most dangerous to health. No matter how well laceration may have been repaired by nature—no matter how quiet may be the condition of the tissues—"if the womb be enlarged, or if there be neuralgia," an operation is necessary, says Dr. Emmet; but his pupils affirm that an operation is necessary whenever traces of laceration can be detected in an otherwise sound womb. They say it is best to remove cicatricial tissue, to prevent the possibility of future mischief, and the development of epithelioma.

No doubt, the presence of too much cicatricial tissue in a womb damaged by labor is to be taken into account in the etiology of long-standing cases of cervical enlargement; but this is not their only cause, as Dr. Emmet seems to imply by alluding to none other. The cervix is not unfrequently found greatly and uniformly enlarged, very hard, sometimes with an angry rim of ulceration dipping into the cervix, and a more or less troublesome set of uterine symptoms, in single women, and in unmarried women who have never conceived. I never did cut into so hard a cervix as when some years ago, I had to re-establish a cervical canal in a lady aged 25. The cervical tissue in that case would have done famously for cicatricial tissue, for it screeched under the knife. Menstruation had been regular till marriage at twenty-three; and, most unwisely, the honeymoon was spent in a riding tour. Riding soon caused great pelvic pain, but it was persisted in nevertheless, and brought on a permanent state of uterine congestion, heat, and tenderness, gradually checked the menstrual flow, and ultimately resulted in the hardness of tissue I have described. In sterile women, as in this case, I have seen similar hardness of tissue caused by what I call subacute or chronic inflammation; but in others the hardness has come on of itself, no one can tell how or why. These cases are described as hypertrophy or hyperplasia; I call them cacoplasmic, because all I know about them is, that the cervical tissues are unhealthy, and that they lead to cervicitis, and to a miserable state of health. It is not unfair to suppose, that tracheloraphy is now being performed in similar cases in America; and, if so, the operation must be advocated on other grounds than laceration.

It is a very serious matter to be asked by our American friends to adopt tracheloraphy as the usual mode of treatment in cases that are very troublesome, but susceptible of being cured without the slightest risk. Dr. Emmet does not warn the reader, that his operation may be followed by very untoward accidents; but

one of his pupils gives us an idea of the very serious nature of these accidents. Dr. Pallen (*British Medical Journal*, May, 1881) says: "Sometimes we cut very large vessels; and, when they are found ramifying in the dense hard cicatricial tissue, the bleeding goes on until the edges are firmly approximated by the silver wires. If this cicatricial tissue be not all cut away, it may interfere with the healing entirely or may retract after the process of healing has commenced, to set up a secondary hemorrhage—three such accidents happening within a period of forty days of each other, in May and June, 1880: the first in the service of Dr. Emmet, at the Woman's Hospital of New York; the third in the same institution, in the service of Dr. Lee; and the second in a private patient of my own, where, on the sixth day after the operation, the nurse, in facilitating an evacuation of the rectum, stretched and re-opened the union, which was followed by such profuse bleeding as to endanger the life of the lady in question. The hemorrhage was only checked after all of the sutures were removed, the uterus emptied of clots, and nine new and deeper wires placed. Fortunately, her life was saved, and the operation succeeded." Fortunately indeed! And it is also fortunate that we thus get a glimpse of the dangers attending an operation we are asked to perform, if the womb be enlarged, and if there be neuralgia.

4. *Tracheloraphy the only Means of Cure.*—This is Dr. Playfair's argument in the paper he lately read. He has not been able to cure cases of enlarged cacoplastic cervix with ulcerative ectropion which often tell disastrously on women: so he tried tracheloraphy, and has found it to succeed admirably in about twenty cases. As Dr. Playfair mentions having tried all sorts of remedies before resorting to this operation, the first point to ascertain is, what he really did try in such cases. In the only case reported in his paper he mentions having swabbed the body of the womb with nitric acid to abate flooding, but the only other topic mentioned as having been used is carbolic acid, and, of course, it was not to be expected that he could do much with it in such a case. The question is pertinent; for, in 1869, Dr. Playfair, in some papers which appeared in the *British Medical Journal*, mentions that, having extensively tried carbolic acid in cases of chronic uterine catarrh with cervical erosion, he was so well satisfied with its action in such cases, that he "has practically come to limit himself to the use of that alone." Dr. Playfair may have modified his treatment during the last ten years: but it would be really interesting to know what other topical agents he did try in the only case he gave, besides his solution of carbolic acid in glycerine and water, which cured everything ten years ago. I cannot accept tracheloraphy as a *sine qua non* of treatment in the very severe cases under discussion, because I have long been in the habit of curing cacoplastic hardness of the cervix, with or without endocervicitis, in the following way, which I can only give briefly, referring those who may want fuller details to the fourth edition of my *Handbook on Uterine Therapeutics*.

I begin by making an intracervical incision, right and left, with Sims' knife, the incisions being at least an inch long, and about a third of an inch deep at the mouth of the womb; and I seldom interfere with the bleeding, for I want to thoroughly disgorge tissues that have been congested for years. Three days afterwards, if I find that portion of the cervix projecting at the bottom of a large cylindrical speculum to be covered by sound mucous membrane, I rub it well with the solid nitrate of silver, so as to remove the epithe-

lium from about as much of it as could be covered by a shilling, and I freely apply potassa fusa cum calce to this spot on the following day. The morning after this little operation, I apply to the same spot a large tampon well laden with glycerine, and I repeat this every morning, so long as it causes a copious discharge of serum. Ten days after the application of the caustic, I freely swab the whole cervix with tincture of iodine, repeating this every third or fourth day for a month or six weeks; and I then suspend all active surgical treatment, relying on injections and treatment, medical and hygienic. When my patients return to me from the country, at the end of from four to six months, I often find them cured—that is, the womb is much softer and smaller, looking healthy, and without signs of endocervicitis. If, instead of being cured, the cervix is only improved, I repeat the successive operations as before. During the course of a long practice, it has repeatedly occurred to me to see no more of a patient, after my first round of this treatment; in that case, my well known modesty has always made me believe that my patient had gone over to some of my distinguished *confrères*; I have, however, been sometimes agreeably surprised to see them return, after five or eight years, for some other ailment, and to learn then that they had been radically cured of all uterine disease. It is unnecessary for me to state that Dr. H. Bennet would endorse all I have said on the treatment of the disease in question by potassa fusa cum calce. In the discussion which followed the reading of Dr. Playfair's paper, Dr. Matthews Duncan strongly objected to tracheloraphy, because he cured his cases by "the good old plan"—potassa caustica. Dr. Heywood Smith made a similar statement; and a staunch opponent of caustic treatment, Dr. Greenhalgh, has owned to me that when placed in the larger field of practice of St. Bartholomew's, he had found out the great value of potassa fusa in the cases under consideration. It will seem strange in America, where the knife is the exclusive object of worship, to find that men of note still pin their faith to caustic in the treatment of chronic cervical disease, but so it is, and, with regard to the assertion that caustic only cures disease by mutilating the cervix and by hardening its tissues, I have answered this at considerable length in the third edition of my *Handbook*, and my statements have never been contradicted. I have still to define the cases to which I think tracheloraphy should be limited: but I must leave this for a concluding paper.—*Brit. Med. Jour.*

FORMULARY AND POINTS IN PRACTICE.

IN CHRONIC DIARRHŒA AND PASSIVE HÆMORRHAGE.

R Aluminis.....grs. iij—xv
Acid. sulph. dil.....min. ij—x
Syrupi q. s.....
Infus. rosæ acid.....℥ j—iv
Sig. To be given every 3 or 4 hours.

—Ellis.

IN THE SECOND STAGE OF PERTUSSIS.

R Aluminis.....grs. xxv
Ext. conii.....grs. xij
Syrupi rhœados.....℥ ii
Aque anethi.....℥ ij
Ft. mist.

Sig. A dessert spoonful every four or six hours.

—Golding Bird.

IN THE HEMORRHAGE OF TYPHOID FEVER.

- ℞ Plumbi acetatis.....grs. j
 Pulver. opii.....grs. ʒi
 Pulv. glycyrrhizæ.....grs. ʒij
 Ft. pulv.

To be given every six hours for a child five years old.

TO RESTRAIN EXCESSIVE SECRETION AND IN HEMORRHAGE.

- ℞ Acidi tannici.....grs. v
 Acidi nitrici dil.....min. vi
 Inf. gentian. co.....3 ii
 Ft. mist. et. sig. Every three or four hours for a child ten years old.

IN DIARRHŒA.

- ℞ Acid. sulph. aromat.....min. ij
 Aquæ.....3 ii
 Dose for a child five years old.

IN MUCOUS AND PHOSPHATIC URINE.

- ℞ Acid. phosphorici dil.....min. ʒij
 Acid. hydrochlorici dil.....min. ʒij
 Infus. calumbæ.....3 iv

STOMACHIC TONIC FOR CHILDREN.

- ℞ Acid. nitrici dil.....min. ii—x
 Infus. chirettæ, inf. gent. co vel de-
 coct. cinchonæ.....3 iv—3 i

IN TYPHOID AND OTHER FEVERS.

- ℞ Acidi nitrici. dil.....min. ij—vj
 Syrupi q. s.
 Aquæ.....3 iv—3 j
 Dose for child.

IN SYPHILITIC CACHEXIA OF CHILDREN.

- ℞ Acid. nitrohydrochlor. dil.....min. ij—v
 Syrupi sarsæ.....3 i
 Aquæ ad.....3 iv

HEPATIC ALTERATIVE AND TONIC.

- ℞ Acid. nitrohydrochlor. dil.....min. ij—v
 Ext. tarax. liquid.....min. x—3 ss.
 Inf. cascariillæ.....3 ij—iv

MEDICAL NOTES AND NEWS.

Questionable Surgery.—Oophorectomy.—The operation introduced by Dr. Battey is, unfortunately, being widely performed in this country. It is perfectly safe to assert that on no organ of the body are more doubtful operations performed than on the uterus and its appendages, and that in no department of medicine is the intellectual crippling of specialism more signally demonstrated than in that of obstetrics. Greed and the predilection engendered by special and limited study are apt to compel men to unravel all forms of disease, from the standpoint of the particular department of which they may happen to have taken parental charge. This is daily illustrated in the experience of every practitioner who chooses to have his eyes and his mind open to conviction. Quite recently, at the Obstetrical Society of London, Dr. Braithwaite, of Leeds, read a paper "On Two Cases of Unilateral Oophorectomy," the first of which was performed for a *cardiac affection* associated with dyspnoea! and the

other for pain in the left ovarian region. We thoroughly endorse the remarks of the President—Dr. Matthews Duncan—on these cases, that "to remove one ovary as a treatment of cardiac dyspnoea he regarded as a wild proceeding; nor could he imagine that it ever could come within the range of rational medicine." Surely the unfortunate women thus operated on do not properly apprehend the nature of the operation to which they are subjected. It is not so long ago since obloquy and contumely were showered on an unquestionably able surgeon—the late Mr. Baker Brown—for the operation of clitoridectomy; we seem to have made rapid strides since then; yet, we have no hesitation in saying that in the cases indicated by Baker Brown, clitoridectomy was an infinitely more justifiable operation than oophorectomy. We hope to hear less of this barbarous operation in future. At the same time we would protest against the indiscriminate examination of women at public institutions before crowds of students as demoralizing to all concerned. At a certain *clinique* for women, in Scotland, we understand that the vast majority of women who present themselves are examined with the speculum in the presence of the students, and the *os* daubed with "iodized thymol" for all conceivable diseases. This disgusting and degrading practice should be circumscribed, not less in public than in private. It is saddening to reflect on the amount of mischief which is fairly chargeable to meddlesome surgery in the course of one single year.—*Med. Press.*

Pompeian Surgery.—An interesting sketch of the surgical instruments collected at Pompeii, and preserved in the museum at Naples, has been given in a recent number of the *Revue Médicale* by M. Jouin. At the museum they are arbitrarily divided into surgical and obstetrical instruments, but there is little in the latter to suggest that they were intended for obstetrical purposes. A pair of forceps, for instance, classed among the obstetrical instruments, does not appear to have been ever intended for such use. The blades are twenty-one centimeters long, they cross one another, and are articulated by a pivot; the handles are curved; they are apparently similar to the instruments now used to remove sequestra, etc. There is, however, a tube clearly intended for injections into the vagina. It is twelve centimeters long; one extremity is manifestly designed to receive the nozzle of a syringe, while the other is perforated with holes, one terminal and the others arranged in two circles, so that the jet may be broken and spread, just as in the similar tubes in use at the present day. There is also a very ingenious trivalve speculum, evidently intended for the vagina, so made that the three blades can be opened or closed simultaneously. There is a rectal speculum, fifteen centimeters long, composed of two blades which can be closed or opened by means of a pivot placed in the center of the instrument, and presenting the type according to which all similar specula are made at the present day.

There are catheters for women, straight, made of silver. A curious instrument, which consists of an iron rod, at the extremity of which is a small rectangular plate of iron, two centimeters long and three wide, fixed to the rod at angle of 135 degrees, is exhibited as a cautery for wounds, the Italian surgeons believing that it is intended to cauterize deep structures, such as the uterus or pharynx. The perfect resemblance in form to the laryngeal mirrors now in use suggested to M. Jouin that it may really have been intended for a similar use, to examine deep structures,

if not the larynx. Catheters for men have also been found; they are twenty-seven centimeters long, and have a very peculiar double curve like a very long S. M. Jouin thinks that this form shows a very imperfect knowledge of the real curves of the urethra; but under ordinary circumstances this is nearly the form of the urethral canal, and although the introduction of such an instrument may have been a matter of some difficulty, its shape would facilitate the emptying of the bladder.

Among the other instruments are a metallic trocar in two pieces, similar to those in use at the present day, bistouries, very large lancets, various forms of stylets, curved and straight, some probably intended for the examination of carious teeth, curette spatulas, small forceps, and various needles and hooks. There are also some surgical cases with instruments, and cases for pills, ointments, etc. All these instruments were found in one house, and in number they will certainly bear comparison with those possessed by an average practitioner in a provincial town at the present day.—*Lancet*.

A Possible Rival to Cinchona.—During the last two or three years a bark containing quinine and quinidine has been obtained from Columbia in enormous quantities. The botanical source of this bark, which is known in commerce under the name of *Cuprea Cinchona*, on account of its peculiar coppery tint, has hitherto been a mystery. M. Triana, the well-known quinologist, has recently succeeded in tracing it out, and has stated in the *British Pharmaceutical Journal* for April 22, that it is derived in great measure from two species of the nearly allied genus *Remijia*, none of the members of which were previously known to contain quinine. Several species of *Remijia* have leaves resembling those of the true *Cinchonas*, and of these M. Triana has determined that *R. Purdieana*, Wedd., and *R. pedunculata*, Karsten, certainly yield *Cuprea* bark, the former being the species which contains the alkaloid Cinchonamine recently discovered by M. Arnaud. It appears probable that other species also yield the *Cuprea Cinchona* of commerce, but definite information on this point is still wanting. The value of this bark has led, according to M. Triana, to great devastation of the forests in which the trees grow, and has produced a financial stagnation, business being neglected in order to follow the more profitable occupation of collecting the bark. The tree is likely to prove valuable for cultivation in countries where malarial fever abounds, since it grows at an elevation of 200-1,000 metres above the sea, at which even red *Cinchona* bark will not flourish.

But a still more formidable rival to *Cinchona* is occupying public attention. M. E. S. Maumene, a distinguished French chemist, has definitely announced verbally that he has succeeded in making quinine artificially, that is to say, without having recourse to the natural bark. He does not wish to announce the details of his process just yet, as he does not consider them perfect; but he has deposited a sealed packet containing an account of them with the Secretary of the French Academy of Sciences. M. Maumene's announcement is clear and distinct, and his reputation as a philosopher is too high for him to imperil it by a premature or ill-considered statement. If M. Maumene has succeeded in making artificial quinine at a cheaper rate than by extracting it from bark, he has both fame and fortune before him; and the Peruvian bark plantations of South America, India, Ceylon and

Java, whether natural or artificial, may be cut down for firewood. If, on the contrary, he can only produce it at a dearer rate, he will have achieved a result that will hand down his name to posterity as the first chemist who has succeeded in the artificial formation of a vegetable alkaloid.

Pirogoff's Last Illness.—In a letter to the *Wiener Medizinische Blätter*, Professor Billroth states that he has had the opportunity of examining a portion of the tumor which caused the death of Professor Pirogoff. The Russian surgeon had recently consulted his German colleague, who writes as follows: "When Pirogoff consulted me in Vienna, I was under the impression that his disease had begun as a chronic inflammatory process in the alveolus of the left second upper bicuspid tooth, which came away, the growth then projecting into the gap, and resembling the infiltrated sarcomatous epulis which I have frequently seen in old subjects." After Pirogoff left Vienna, this growth increased greatly in size, and ultimately showed epitheliomatous changes, and the lymphatics behind the angle of the jaw became indurated. Dr. Wywodzow forwarded a piece of the tumor, removed after death, to Professor Billroth, who found that more than two-thirds of the sections he prepared consisted of a small-celled highly vascular fibro-sarcomatous tissue; on the free surface of one section, epithelial proliferation could distinctly be seen; and in one example all the appearance of ordinary epithelioma, with nests, were detected. Professor Billroth was, from the first, strongly opposed to operative interference. His distinguished patient, over seventy years of age, was suffering from double cataract, and had become very emaciated during the last few years of his life, besides showing other symptoms of senile physical weakness. Operation for a growth that had begun as a sarcoma, had undergone cancerous degeneration, and could not have been taken away without the removal of a large part of the upper jaw, would have been too hazardous, and too likely to be followed by recurrence, to be justifiable under these circumstances. Professor Billroth, in conclusion, declares, with an emphasis increased by the aid of typography, that "I am no longer the bold and dauntless operator I was known to be when in Zurich; now I always ask myself this question: Would you let this operation be performed upon yourself if you were in your patient's place? As years pass by, one becomes more and more resigned; still I feel that, in each succeeding year of life that destiny may yet allow me, I will be more and more affected by hearing of failures and bad results in the work of our profession."

Scarlet Fever Propagated by Raw Meat.—In the *British Medical Journal*, Dr. Robertson, England, reports two examples of epidemic scarlet fever, which he thinks were caused by the distribution of butcher's meat through the neighborhood. The first case having occurred in the butcher's family.

The Academy of Medicine, Paris.—Announces that the world is at present supplied with about 189,000 doctors; and of this number the United States of America furnishes 65,000. A larger number than any other nation. This is probably due to the remarkable fertility of the soil. Plants grow to maturity here with great rapidity, and with the least possible amount of cultivation. Certain species mature and bear fruit within less than a year after they are planted.

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ENTERIC FEVER.

BY

WILLIAM PEPPER, M. D.

Professor of the Practice of Medicine in the Medical Department of the University of Pennsylvania.

I have no intention, in the limited time at my disposal, of entering into a full discussion of the treatment of typhoid fever in its various forms, and with all its complications, but simply to state in a brief manner the results of my observation as to the management of the ordinary form of this fever, as I have met with it both in hospital and in private practice in this city and its neighborhood. Although the attempts to isolate the particular poison of typhoid fever have not met with full success, it seems to be generally accepted that this disease is caused by a special *materies morbi*, for the most part admitted to the system through the alimentary canal, although capable also of gaining admittance by inhalation. I am not disposed myself to believe that this poison is capable of being produced or brought into activity under conditions much more varied than it has recently been the habit to assert. However this may be, the poison presents certain peculiarities which are important to note from their bearing upon the treatment of the disease. It is undoubtedly capable

of retaining its power of infection for a long time latent, so that as soon as proper conditions are present it will manifest activity. Carefully observed cases also establish the fact that it is capable of producing typhoid fever, although admitted to the system in very minute quantities, and much diluted. It seems that the opportunities for the admission of the virus in such small amounts as have been known to produce typical typhoid fever, must be so frequent and general that a vast majority of the community must at some time or other have been exposed to it. Probably, therefore, it requires, in a degree even greater than do other zymotic poisons, suitable pabulum for its development, and a state of system predisposing to its zymotic action. At times the virus is so concentrated and active that, in whatever way it gains entrance to the body, it infects the system in nearly every instance, and causes a virulent zymosis. On the other hand, the virus may be much less active; so that, supposing it to be taken into the alimentary canal, if the secretions are normal, and the glands of the mucous membrane not susceptible or vulnerable, it may be thrown off without the production of the disease. Again, the virus may be more active or more fully propagated in the intestinal canal, and cause marked irritation of the enlarged solitary and Peyerian glands of the mucous membrane, so that the intestinal lesions become considerable; and yet the virus may be arrested in the swollen mesenteric glands, and no marked infection of the system occur. This agrees with the well-known fact that no constant relation exists between the degree of intestinal lesion and the intensity of the primary constitutional infection of system. It is further to be noted that even in cases where primary infection of the system has not been intense, and where the intestinal lesions have been quite marked, it is quite possible, and indeed probably quite frequent, for the morbid intestinal contents to favor development of the specific virus, and thus endanger continued absorption, or else for the putrid debris and secretion to give rise to a secondary non-specific septicæmia. It thus seems to me that we must recognize practically the following different primary forms: first, ordinary typhoid fever, with moderate intestinal lesions and moderate zymosis; second, cases with grave intestinal lesions and moderate zymosis; third cases with grave zymosis and profound constitutional symptoms from the start. I have spoken of the first form as ordinary typhoid fever, because my own experience would indicate that this, and to a less degree, the second form, are by far the most common in this district, although far too frequently individual cases or limited outbreaks of the grave primary zymotic type occur. I have referred to these familiar views simply to call attention to the immense importance of the role which the gastro-intestinal mucous membrane plays in typhoid fever from the earliest moment. It is very important also to recognize the fact that the stadium of

the typhoid fever presents two stages theoretically distinct, namely, the primary true zymotic stage, and the subsequent irritative or secondary septic stage. The first of these is probably the more definite in its duration, lasting, perhaps, from twelve to sixteen days, although the data do not exist for determining its duration accurately. In speaking of the actual treatment, I would first consider ordinary cases of typhoid fever in private practice coming under observation at the first development of symptoms of malaise. It is my profound conviction that in a great majority of cases of this form—that is, of course, excluding those of grave primary zymosis—proper treatment of this forming stage will modify and moderate the whole subsequent course of the case, and will prevent the development of those grave and alarming conditions to the treatment of which so much time and attention are bestowed in most discussions upon this disease. It is universally recognized that continued exposure and efforts during the forming-stage of typhoid fever greatly increase the gravity and danger of the subsequent attack, and I have often seen patients who after the symptoms have actually developed themselves, have been allowed to leave the bed merely to use the close stool or to sit in an easy chair while the bed clothes were being arranged, exhibit early and alarming exhaustion that was at least partially due to these injudicious efforts. The first essential to secure this result should be absolute rest in bed. I have been surprised to find that some writers who begin by recommending early and complete rest make later allusions which show that their idea of such rest is far from being as thorough as I believe should be enforced. Every case in which the symptoms justify even a suspicion of typhoid fever should, in my opinion, be immediately consigned to bed and the use of the urinal and bed-pan be at once insisted upon. I have even seen such patients, when allowed to leave bed merely to use a close stool or while the bed clothes were being changed, exhibit such exhaustion at a subsequent stage of the disease as could only be explained by these injudicious efforts; more frequently still have I seen the gastro-intestinal irritation increased seriously by the improper exposure to currents of air while out of bed. In the next place, a most rapidly restricted diet should be insisted upon. Later in the case more abundant and concentrated nourishment and stimulants will perhaps be called for, but in this forming stage I believe that a very limited amount of very light nourishment is sufficient and that its use will exert a happy influence upon the subsequent course of the case. Not only should all solid food be at once forbidden, but the liquid food allowed should be light and very digestible. Equally important is the avoidance of all irritating medicines, and especially purgatives, at this stage. It is scarcely possible that an emetic or a purgative should remove every particle of the virus from the intestinal canal, and yet we know that the virus will act even when present only in minute quantity and very dilute state if favorable conditions exist; and it is probable that the morbid secretion favored by the action of a purgative in this state of the system constitutes the best possible pabulum for the propagation of the virus, while at the same time it must render the glandular apparatus of the mucous membrane more sensitive and vulnerable. Digestion is disturbed and strength impaired, the intestinal lesions are aggravated, and the case is rendered more serious. If the state of the tongue and secretions indicates a laxative, good results will usually be obtained from the administration of the following: *R. Hydrargyri chloridi mitis, gr. ij; sodii bicarbonatis, gr. xviii; M., ft. mis. et div. in pil. No. xii.* Of

these one may be taken every two or three hours until the bowels are moved, or until all have been taken, when a movement can be secured by an enema of tepid water or gruel. During this early stage the remedy which seems to me most constantly called for is quinia, which I am in the habit of giving in larger doses than at the later periods of the disease, except in a particular condition. My reasons for so doing are the following: during this stage the irregular febrile movement frequently stimulates a mild malarial attack and undoubtedly a malarial element is not unfrequently present when true typhoid also exists. Again, it is probable that the use of quinine may lessen the activity of the virus and the danger and degree of infection. If, however, the gastro-intestinal irritation is at all marked, I invariably administer the quinia by suppository, as follows.

R. Quinia sulph., ʒi;

Pulv. opii, gr. iv;

Ol. theom bromae, q. s.

M. et div. in suppositoria No. xii.

S.—One every four, six or eight hours, while the powders above mentioned are administered by the mouth. I have found very many attacks of mild gastro-intestinal catarrh, with or without malarial complication, with symptoms closely simulating the early ones of typhoid fever, subside rapidly under the above treatment, together with a diet of chicken, or mutton broth, gruel, skim-milk, or milk and water in equal proportions. If, however, the symptoms persist, it can soon be seen that a true typhoid fever is developing, and, if so, the observance of the course above described will have tended much to lessen its gravity. Of course the same absolute, scrupulous observance of rest continues essential. The diet should now be as nourishing as the state of the digestion will permit. I believe, however, that it should be liquid in character throughout the entire course of the disease. I have repeatedly seen ill results from the infringement of this rule, while I have rarely seen a case where the digestion had been carefully managed from the start in which liquid nourishment did not suffice to maintain nutrition. Indeed, such is my conviction of the supreme importance of the condition of the mucous membranes in this disease, and of the necessity of giving only such food as can be fully digested and absorbed, that I am inclined to believe that far more patients are over-fed than under-fed in typhoid fever. I have seen many cases where, while beef tea and pure milk were freely administered, dryness of the tongue, nausea or vomiting, and diarrhoea existed, and where the substitution of light chicken or mutton broth, and of skim-milk or milk diluted with equal parts of water, has led to the subsidence of these symptoms and the re-establishment of good digestion. With regard to the use of stimulants I have been led to feel that they are not to be regarded as a necessary part of the routine treatment of typhoid fever. During the early stage of the disease, indeed,—unless exceptional symptoms arise demanding them,—their use is often injurious and tends to increase the derangement of digestion and the gastro-intestinal catarrh then existing. When the early stage is carefully managed, stimulants are often not called for throughout the whole course of the case, or only towards the close to hasten convalescence. On the other hand, in cases where the constitutional infection is serious, and marked nervous prostration and heart failure exists, their free use may be demanded. No question in the treatment of typhoid fever has seemed to me to rival in difficulty that of de-

ciding, in cases which do not come under notice until high hyperpyrexia, serious nervous symptoms, a rapid and feeble circulation, together with marked derangement of digestion, have supervened, how far these symptoms are the result of nervous exhaustion from protracted surface irritation which may be increased by the free use of stimulants, and how far they are the result of poisoning of the nerve centres and depression of the vital forces by the zymotic poison. In such cases it is probably better to use stimulants at once, but with the greatest caution and with a mind fully awake to the fact that their use may aggravate the very symptoms they are given to relieve. Where the case has been under observation from the very beginning, and stimulants have been withheld until the appearance of symptoms actually demanding them, it is generally a comparatively easy matter to determine when they are called for, and to decide in what form and to what extent they shall be given. In every case of typhoid fever the febrile movement should be carefully watched, and the temperature be recorded two or three times in twenty-four hours, say at 9 A.M., 2 P.M., 9 P.M. In many cases no special treatment is called for to reduce the temperature. If the primary zymosis is not violent, and the gastro-intestinal irritation is moderated by proper means the febrile movement preserves its well known course without the maxima attaining, in most cases, a dangerous point. So long as the temperature fluctuates 2° or thereabouts within each twenty-four hours, and the maximum alone, lasting for a few hours or less, reaches 102° to $103\frac{1}{2}^{\circ}$, while the nervous symptoms and the heart's action are reasonably favorable, no special anxiety need be felt about the pyrexia. This is especially true in women with sensitive nervous systems and in children, since in them high temperatures are most readily produced and have less serious significance. It is, however, desirable for the comfort of the patient and for the promotion of healthy action of the skin that the surface should be sponged several times daily. The water may contain a little alcohol, vinegar, or carbolic acid, and its temperature should be determined by that of the body and by the sensations of the patient. For instance, in a highly nervous and delicately organized young woman of 25 years, with marked typhoid fever in which the maximum daily temperature reached 104° , $104\frac{1}{2}^{\circ}$, even 105° , for ten or twelve days successively, sponging even with tepid water produced a sense of chilliness, so that it was entirely abandoned, and a perfectly satisfactory recovery was made. I am entirely convinced that any "cold water treatment" of typhoid fever, with rigid rules for cool bathing, etc., as soon and as often as the temperature reaches a certain point (102° to 103°) or so on, is unphilosophical, unnecessary, and less successful than the simpler mode of treatment here advocated. The excellent results obtained by some of the advocates of frequent cool bathing show that such baths are well borne and may be safely conjoined with scrupulous attention to all the other details of rational treatment. But I have preserved the notes of the last one hundred cases of typhoid fever of whose treatment I have had the direction from the beginning of the attack, and the mortality has been but three per cent., and in only five or six of these cases were full baths employed. In the great majority of cases, then, I believe that cool bathing can be dispensed with, and sponging of the surface be found sufficient. But, on the other hand, there are certain conditions that seem to call imperatively for rapid reduction of temperature by cold baths. The first of these is when early in the case the temper-

ature rises very high ($104\frac{1}{2}^{\circ}$ or over) without any sufficiently severe local irritation to explain it, so that there is clearly a grave zymosis present. Again, when at any period of the disease, the daily maximum reaches $105\frac{1}{2}^{\circ}$, and the daily average is very high, and the hyperpyrexia is maintained despite the free use of cool sponging and the judicious use of antipyretics, cool bathing should, as a rule, be instituted. I follow this rule whether the hyperpyrexia is due apparently to increased septicæmia or to the failure of the inhibitory action of the nervous system; but if severe pulmonary inflammation or a serious exacerbation of intestinal inflammation has occurred to cause it, I do not advise the use of cool baths until the character of the symptoms or the failure of the force of cardiac action indicate that the exalted temperature is producing dangerous secondary results. A few words must be added in regard to the use of other means for reducing hyperpyrexia. Undoubtedly quinine is the most reliable of these. I have already spoken of its use in the later stages of the disease, either by mouth or rectum, and I think its judicious use thus greatly lessens danger of hyperpyrexia later. When, however, the temperature runs up as the disease advances, it does not seem to me advisable to give large single doses of quinia, but to persevere with the use of twelve to twenty-four grains given in divided doses during the twenty-four hours. The elevation of temperature is so frequently connected with the evolution of gastro-intestinal lesions that it appears desirable to avoid any measure liable to increase this surface irritation. The administration of colossal doses of quinia (twenty-five to forty grains at a single dose), while capable in some cases of lowering the excessive temperature, it seems to me has in more than one instance shown itself to be open to serious objection. If, however, the temperature persistently rises despite absolute rest, judicious diet, the regular use of quinine in moderate doses, repeated sponging, and if any special reason exists why cool bathing should not be used, or if after cool baths have been used the dangerous hyperpyrexia persists, then only would I recommend the administration of very large doses of quinia, nor would I use them even then unless the state of the stomach encouraged the hope that a severe gastric irritation would not result. Digitalis, which is very valuable where failure of the innervation of the heart exists, has not in my experience proved itself valuable as an antipyretic or a tonic to the heart when its feeble action results from degeneration of the muscular walls from hyperpyrexia. Salicylic acid and its salts have also disappointed me, often failing to reduce the temperature satisfactorily, and often causing a most unsatisfactory amount of gastro-intestinal irritation. To return from this consideration of the treatment of the pyrexia in typhoid fever, there is one other condition and only one that seems to me to demand attention in every case of this disease. Pulmonary or venous complications may or may not exist in any pronounced degree, but unquestionably there is widespread irritation of the gastro-intestinal mucous membrane in every case. This may or may not be so intense as to prove the source of the greatest danger in the case, it may not be associated with severe diarrhoea,—nay, there may not be the slightest diarrhoea present,—and yet there is always hyperæmia and follicular enlargement. Differences between individual constitutions as well as differences in the degree of these local lesions, cause them to exist in different degrees of reflex irritation, and thus to influence, very differently the symptoms and course of the case but the essential fact is that they are present in every

case to an unknown extent, and the obvious inference would seem to be that they should receive suitable treatment in every case. My own feeling is that this treatment should be instituted as soon as reasonable suspicion exists that the case is one of typhoid fever, and that it should, if possible, be steadily maintained until it may be thought that the mucous membrane has returned to its healthy state. It seems to me altogether probable, even despite the presence of a special poison in the intestinal contents, that some control can be exercised over the extent and progress of these local lesions; and I must add that prolonged clinical observation has convinced me of the truth of this view. The substances which would seem most appropriate for this purpose are the salts of silver and of bismuth, and creasote or carbolic acid. Of these, my own preference is very decidedly for nitrate of silver, the use of which now constitutes an essential and, in my judgment, a most important part of my treatment of typhoid fever. After the preliminary measures before described, I direct nitrate of silver in the dose of one-quarter or one-sixth of a grain for an adult, usually in pill, or for children in solution in mucilage of acacia three or four times daily, to be taken soon after food. If the bowels are constipated, extract of belladonna is combined; if a tendency to looseness exists, a small amount of powdered opium is added in the form of a few drops of deodorized laudanum. Since I was led to the adoption of this remedy by the study of the morbid anatomy of typhoid fever, I have acquired a constantly increasing confidence in its value as an element of the rational treatment of this disease. By modifying, as I believe it does, the state of the mucous membrane, it modifies the symptoms that are dependent on the irritation reflected from the mucous membrane, and the result has seemed to me to be that in a long series of cases treated with most scrupulous attention to every detail, and in all of which nitrate of silver was administered, there has been a remarkable freedom from grave complications and a most gratifying percentage of recoveries (ninety-seven per cent). As may be inferred from the above remarks, there does not seem to me any objection to the judicious use of opium in typhoid fever. Not only have I seen it useful in checking diarrhoea, but it has often proved the most valuable remedy for the insomnia, headache, and excessive nervous excitability that may be present in this disease. It is true that I have known one of the bromides or chloral or spirit of chloroform produce good results in some cases where such symptoms existed, but far more frequently I have succeeded in relieving them by the use of carefully graduated small doses of deodorized laudanum, given alone, or with sweet spirit of nitre, or with a moderate dose of bromide of potassium. Not until opium has failed, unless decided constipation exists, do I resort to the use of chloral or the bromides alone. Time will not allow me to allude in detail to the measures which have proved, in my experience, most valuable in the treatment of the numerous complications of typhoid fever. When bronchitis becomes severe or pneumonia ensues, I substitute carbonate of ammonia for the nitrate of silver, continuing the use of full doses of quinine, increasing the amount of alcohol, and avoiding the use even of sponging with cool water unless the temperature goes over 105° Fahr. By the observance of a very carefully regulated diet, and the early use of nitrate of silver with minute doses of opium, the occurrence of troublesome diarrhoea is rendered rare. When it does occur, the diet should be even more carefully guarded, and the amount of opium be increased, and, if necessary, acetate of lead, or a carefully pre-

pared mixture of chalk and bismuth, with an opiate, be administered. Tympanitic distention of the abdomen often results from the fermentation of excessive or unsuitable food, and will be relieved by modification of the diet and the administration of some such combination as the following:

℞ Creasoti purificat., gtt. v. vel. x.; Bismuthi subnitrat, 3 i. vel. 3 iss.; Tinct. cardamoni comp., f 3 iij; Aquæ, q.s. ad. f 3 v.

M. One tablespoonful every six hours.

But often also it comes from a quasi-paralytic condition of the intestinal coats which renders them incapable of resisting the expansive force of the gas enclosed. It is when tympanites is due to this latter cause, and associated with the general symptoms of prostration, and with wasted development of the typhoid state, but without much diarrhoea, that the internal use of oil of turpentine in emulsion (ten drops every three or four hours), will usually produce excellent results.

CONTRACTED KIDNEY COMPLICATED BY LEAD POISONING AND GOUT.—CHRONIC BRIGHT'S DISEASE COMPLICATED BY PHLEGMASIA DOLENS.—ANEURISM OF THE ARCH OF THE AORTA.

A CLINICAL LECTURE,

BY

AUSTIN FLINT, M. D.,

Professor Practice of Medicine, Bellevue Hospital Medical College, Visiting Physician Bellevue Hospital, Consulting Physician Charity, St. Mary's and St. Elizabeth's Hospital, New York, Etc., Etc.

CASE I.—John S., æt 32; German; occupation painter. Admitted May 24th. Family history negative. Drinks a good deal of ale (three or four glasses of German ale daily for the past ten years). For the past two years he has passed a good deal of water, getting up several times at night to micturate. Four years ago had a severe attack of lead colic and again nine months later had another similar attack. A year ago after working day and night at flatting he was suddenly seized with paralysis of the extensor muscles of the forearm. This improved in a few months, when he went to work again. Soon after he again became worse and entered the hospital. Three years ago, left ankle became swollen and painful. Eight weeks ago same ankle was attacked but the pain spread to most of the joints of the body. One year ago he had typhus fever. Has not been troubled much with headaches, but has had some dizziness, spots before the eyes and ringing in the ears. He has lately had dyspnoea on going up stairs.

On admission there is marked paresis of the muscles of the forearm and pain in many joints, particularly in the great toe of the right foot. There are small deposits of urates in the left ear which show under the microscope acicular crystals of urate sodium. Urine sp. gr. 1017; passes large quantities 100-150 ounces per diem. Contains hyaline and granular casts; albumen.

June 5th.—Has intercostal neuralgia on the 'right side.

This patient, gentlemen, has several different affections, each one of which possesses interest, and the fact of their being combined is interesting and instructive. He has in the first place the evidence of contracted kidney. That evidence consists in this case in a large amount of urinary secretion, the quantity varying from 100-150 oz. in the 24 hours. The urine contains albumen, large and small hyaline and granular casts.

Here are facts enough to show disease of the kidneys. He has no dropsy and no uræmic symptoms. He has headache, however, which perhaps is indicative of uræmia. This patient has hypertrophy of the heart without valvular lesion. Whenever we find that, we have strong presumptive evidence that there is disease of the kidney, and in all probability that form of disease of the kidney which this case exemplifies, namely, the contracted or fibroid kidney. The area of cardiac dullness is a little increased here. The aortic sound is a little intensified and there are no murmurs. Why has this patient not uræmic symptoms? He is passing a large amount of urine which is not of extremely low specific gravity. He is therefore eliminating enough at the present time to escape the effects of the accumulation of urea in the blood.

In the second place this patient is suffering from the effects of lead poisoning. He has the characteristic form of lead paralysis, known as wrist-drop, which consists in a paresis of the extensor muscles of the forearm with a remaining use of the flexor muscles.

Now, is there any connection between lead-poisoning and the effects upon the kidney? We have no right to suppose that there is any direct connection, but there may be an indirect relation. It has been shown by Garrod, who is the classical authority on gout, that lead is capable of producing gout, and it has been further shown that the contracted kidney and gout not very infrequently go together; so much so that the late Dr. ———, distinguished the small contracted kidney as the gouty kidney.

Another affection that this patient has is gout. Generally our gouty patients show in their habits the use of wine or malt liquors, more frequently claret. Sometimes we meet with cases where patients have not been addicted to these alcoholics in any form. In this case it manifests itself in the ankles and knee, but usually affects the toes. In order to determine the question of gout as distinguished from articular rheumatism (for the diagnosis is often difficult, so as to have given rise to the vague term rheumatic gout, which is neither rheumatism nor gout,) we resort to a little device of examining the ears, where we are apt to find the characteristic deposit of urate of soda.

CASE II.—George K., æt. 19, native U. S. Admitted May 16. Has had a slight cough for several years. Last December had a severe pain in the back of right kidney. This continued for about two weeks. Since then he has occasional shooting pains through all the parts of the thigh. In April his urine became scanty, dark-red in color and occasioned a burning sensation when passed. At the same time the right thigh became swollen, afterwards the knee, privates, face and right hand.

On admission patient presents the physical signs of cavity and consolidation on the upper part of the right lung. Has cough and expectoration with numerous moist rales. Right leg œdematous. Complains of no trouble in sight or hearing.

Heart is normal. Urine sp. gr. 1024; contains 75 per cent. albumen, and granular casts.

June 1st.—(Edema of face and left leg has disappeared. That of right face and leg is present. There is no general dropsy.

We have here in a certain sense a pathological specimen. In the first place our patient has some pulmonary affection. He gives the physical signs of excavation and consolidation in the upper part of the right lung. He gives evidence of renal disease, moreover he has what would have been called in a partur-

ient woman "milk leg" or phlegmasia dolens. It is a case of œdema of the right leg due to thrombosis of the femoral vein. I can feel the vein filled with coagulum feeling like a hard cord and somewhat tender. The patient should be kept absolutely quiet in order to avoid the danger of the lodgment of more or less of the coagulum and its transportation along the veins to the right side of the heart and entrance into the pulmonary artery plugging the pulmonary artery with perhaps fatal results. This thrombosis is generally due to the coagulation of blood occurring under circumstances where the blood is enfeebled. It occurs in a certain number of cases of phthisis and also after confinement.

This condition of the limb should be treated by the use of bandages to allow compression, and also by gentle friction. The movement should be from below upward.

CASE III.—This patient, gentlemen, was presented here several weeks ago for cardiac murmurs. As I listened to the patient at that time I was struck with one fact viz: the aortic sound of the heart was unusually intense in its normal situation. After that day examination showed what had not been thought of before, the question as to secondary dilatation of the aorta. This affection is most likely to occur at the junction of the ascending and transverse portion of the arch. On auscultation we can very well mark the aortic systolic and diastolic murmurs. Beside that we get the heart sounds transmitted with greater intensity. Murmurs are not always present here. You do not get evidences of this dilatation pressing upon the right primary bronchus. You do not get the evidence in this case of pressure of the sac upon the trachea. There is no obstruction here to the superior vena cava. There is no evidence of interference with the glosso-pharyngeal nerve. There is no evidence that the sac presses upon the subclavian artery, nor does it press upon the sympathetic nerve which affects the breathing. We get more of those signs which depend upon pressure of the sac upon adjacent parts. But the direct physical evidence is sufficient.

This patient was placed at once upon the iodide of potassium, which is a remedy of very marked utility in a certain proportion of cases of aneurism. I have in several instances seen the remarkable effect of this remedy not only in affording relief of pain and other symptoms, but the favorable effect shown in the marked diminution of the aneurismal sac. In one case there seemed to be recovery. The patient, who had suffered intensely and who had great œdema of the right extremities and great dyspnœa, so that he was unable to lie down for a long time, recovered from all these symptoms and declared he was well. After imprudence there came on symptoms showing pressure upon the trachea and a second aneurismal development took place upon the old aneurism, that contracted down. This new aneurism pressed upon the trachea so as to produce suffocation.

Now the question arises as to the cause of the aneurism in this case. Considering that the patient is only twenty-eight years of age and that she is a woman, I said that the patient must have had syphilis, but she denies having had the disease, and there is very little evidence of her having had it. There is enlargement of the inguinal glands, and yet in such a case it seems to me that with her youth and sex it would be so remarkable that the aneurism should occur unless syphilis had existed that I am inclined to think that she has had syphilis.

NEURALGIA OF THE EYE.—AORTIC ANEURISM.—STRUMA.

CLINICAL REMARKS.

BY

T. M. MARKOE, M. D.

Professor of Surgery, College of Physicians and Surgeons, New York; Attending Surgeon New York and Roosevelt Hospitals; Consulting Surgeon Mt Sinai and Woman's Hospitals, etc., etc.

CASE I.—Female, æt. 30; has neuralgia in one eye. The eye is shrivelled and sunk back in its socket. The cornea is opaque and in a condition of chronic inflammation. The pain abates sometimes; every now and then however the patient is liable to exacerbations of pain with irritability and inflammation until the use of the eye is totally destroyed and the ball becomes a constant source of irritation. The treatment is to remove the ball, because this localized cause of irritation is exceedingly apt to be reflected to the other eye, so that after one eye has been in this condition for years, the other begins to sympathize with it and both eyes are lost. The paroxysmal attacks of pain alternate with periods of comparative comfort, and these are the conditions of neuralgia when produced chiefly by exposure to cold. This is a neuralgia associated with a chronic inflammation of an eye damaged by acute inflammation. This chronic inflammation can be met by minute doses of mercury, by blisters on the side of the eye, and by the application sometimes of a few leeches to the temple. Also as an antiperiodic and antineuralgic remedy we may give quinine, iron and arsenic. Ten grains of quinine every night and five grains every morning for a week. A blister behind the ear is better than on the temple, and if there is any acuteness of pain about the temple a couple of leeches may be applied there as well.

CASE II.—Male; has a tumor between third and fourth intercostal spaces that gives rise to pulsation. I hear a breathing sound over the tumor. The second sound of the heart is heard very distinctly through this pulsating tumor. I do not hear the bruit soufflant. The heart beats rather strongly, like an hypertrophied heart. There is no displacement of the apex. The question arises where is the seat of the aneurism and whence does it come? It does not distend symmetrically on all sides of the artery. This seems to be an aneurism of the ascending arch of the aorta. One way of recognizing aneurism is by dulness on percussion. The aneurism projects probably from the arch of the aorta toward the right. The fact that the aneurism reaches so far to the right of the anatomical seat of the ascending arch of the aorta would lead me to infer that it might be a subclavian aneurism with a very small orifice.

There is a method of treatment by which we do sometimes succeed in curing aneurism. It consists in reducing the diet in such a way as that the bulk of the diet, which shall be nutritious, shall be very small. The amount of fluid should be small. This treatment together with keeping the patient absolutely still upon his back does good in favorable cases.

These cases are almost always benefited by something that increases the plasticity and tone of the blood itself. Almost all cases of internal aneurism are accompanied by anæmia which is progressive. Other methods of treatment are by iodide of iron and citrate of iron and quinine, and the iodide of potassium.

CASE III.—This is one of those numerous forms of

the great class of diseases which grow out of the strumous diathesis. Large lip, chalky complexion and the general appearance of struma. This boy gives a strumous history. He has had Pott's disease of the cervical vertebræ, from which he recovered, and has been rather a valetudinarian. He has distention of the synovial membrane of the knee-joint, which indicates a state of chronic or strumous inflammation of the parts. Besides that there is a collection of matter in some of the tendons of the extensors of the wrist and fingers on the inner side of the radial portion of the forearm. Whether it be extra capsular or not I cannot tell.

This case is to be treated by anti-strumous remedies. The local treatment must not be too depressing. It would not do to blister and bleed that part locally. The tincture of iodine is used together with the external application of the inunction of mercurial ointment: either pure mercurial ointment or oleate of mercury and morphine. The limb should furthermore be supported with an elastic bandage so as to secure firm pressure. This inflicts little pain on the central nervous system. If otherwise he does well, both these diseases will gradually subside. If on the other hand his constitution does not come up under iron, cod liver oil, and the best of nourishment, these local mischiefs will assume a more important character.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK COUNTY MEDICAL SOCIETY, JUNE 26TH, 1882.

The President, Dr. F. R. Sturgis, in the chair. The minutes of the preceding meeting were read and approved. The report of the comitia minora recommending candidates for admission to the society was adopted. The scientific business of the evening was the presentation by Dr. H. G. Piffard of

"A CASE OF LEPROSY WITH REMARKS."

Dr. Piffard first stated that in a previous paper he had described the features of leprosy, he wished tonight to present an additional case and to call attention to the increasing prevalence of the disease. (The patient was then exhibited to the Society). He was a native of Japan and had lived in that country until two years ago when he came to New York. As far as could be ascertained his family history was good. His occupation in Japan was that of a farmer. He denied all venereal disease though he gave an obscure history of gonorrhœa and bubo. He was treated for leprosy for two months at the New York Hospital. He now thinks he has syphilis, though he says he has not had connection for ten years.

I first saw him in May of the present year, and could not determine whether he was suffering from syphilis or leprosy or both, since these diseases are very similar in some of their manifestations. Dr. J. J. Henna, of this city, sent me a case a short time ago in which the distinction between the two diseases was not well marked and I was unable to determine if the patient had leprosy or syphilis or both. He had been placed on anti-syphilitic treatment and subsequently treated for leprosy and apparently improved under both.

Dr. Piffard next read a letter from Dr. N. D. Emerson of Honolulu, which embodied a report from a leper settlement and asked a number of questions regarding the disease which were answered by Dr. Piffard. Dr. Emerson's letter had been written with the

view of refuting the claim of Dr. Fitch of Honolulu, who maintained that leprosy was the fourth stage of syphilis.

The features of Dr. Fitch's theory were that leprosy was the fourth stage of syphilis, that it did not develop among European nations at the present day on account of the fact that they were all syphilized through their ancestry at the time the syphilis scourge appeared in Europe, when everybody had syphilis. Syphilis only went on to the fourth stage or leprosy (according to Dr. Fitch), when it attacked a virgin race who had not been syphilized through their ancestry.

He had charge of a leper hospital at Honolulu, and in an examination of 700 cases he was only able to find six who did not give a previous history of syphilis. During the 40 years leprosy had existed in the Sandwich Islands only 20 whites had acquired the disease, all the rest had been protected through their ancestors having been syphilized. Dr. Fitch defied any one to produce a case of leprosy without antecedent syphilis. The two diseases had the same symptoms, the same sequelæ, and the only treatment which did any good in syphilis was that which had been proven best for leprosy and *vice versa*.

Dr. Piffard said that the fact was that the great majority of the natives of the Sandwich Islands suffered from acquired syphilis, probably 67 per cent. of the natives had both syphilis and leprosy. There was nothing in the nature of either disease which prevented their existing together. Leprosy was not contagious by simple contact but was propagated by the blood or leprous secretions gaining access to the system. It had no doubt been propagated by sexual intercourse and by heredity. There had been many cases in New York but he had yet to find a single case which had been developed in those who were continuously natives of the city. He only knew of one case which had occurred without previous leprous intimacy, and that one had been presented to the Dermatological Society.

In no case he had met with could a clear history of syphilis be made out. He had met with no facts which led him to believe that syphilis changed into leprosy. The microscopic pathology of the two diseases was totally at variance. Leprosy was a disease of the skin and nervous system. A distinctive feature of the disease being primarily swelling of the ulnar nerve which, however, subsequently shrunk. Dr. Fitch was unquestionably wrong. Dr. Piffard said in conclusion that as our intercourse with foreign nations extended we were getting more and more cases of leprosy. Only last week Dr. Henna had written him that he had met with an advanced case. It was important that measures be taken looking toward the isolation of lepers.

Apropos of Dr. Piffard's suggestion that special provisions should be made for the isolation of lepers, Dr. Jacobi remarked that it was not yet known that the disease was contagious; moreover no cases had been developed among those who had remained natives of this country, the cases observed having come from countries to which leprosy was indigenous, why then was there any necessity for isolating these cases? In the 14th and 15th centuries Europe was full of lepers and hospitals for lepers, and now it was not known if the disease was contagious. This was after all the important point to determine before taking measures to isolate those suffering from the disease. He humorously alluded to the few cases in this country, and the loss to Medical Societies of opportunities of seeing and studying cases if Dr. Piffard shut

up the few there were in Charity Hospital or some other place.

Dr. W. M. Carpenter read the history of a case reported by Dr. Low, in which the most marked feature of the disease was the scaly nature of the eruption, the scales coming off in quantities. The starch bandage has been used combined with general tonic treatment. Erysipelas supervened but proved amenable to treatment; and the patient eventually recovered.

In reply to the question whether leprosy was ever developed before puberty, Dr. Piffard said that it was, as by vaccination. He said there was much confusion in the terms used to describe leprosy. The old Greeks recognized two diseases, elephantiasis and lepra; the former true leprosy, the latter the psoriasis of the present day. The average life of lepers was from ten to twelve years.

Dr. Sturgis gave a careful resumé of the points by which the differential diagnosis between syphilis and leprosy could be made out. The macules of leprosy were large, those of syphilis small; in leprosy there was enlargement of the ulnar nerve which did not appear in syphilis; in leprosy there was increasing anæsthesia, swelling and ultimately necrosis of the hands and feet, the fingers and toes dropping off without sensation.

The question of isolation was agitated not on account of the danger from contagion but for the sake of the lepers themselves, who were unable to perform the commonest offices for themselves, in some cases even that of eating. As regards treatment everything had been tried; the best results had been obtained with chaulmugra oil and hoang nan, but the disease was not curable.

The Society then adjourned till the fourth Monday in September.

ABOUT BOOKS.

The Psychology of the Salem Witchcraft Excitement of 1692, and Its Practical Application to Our Own Time. By George M. Beard, A. M., M. D. G. P. Putnam's Sons, New York: 1882. Price, \$1.00.

This interesting little book is based on a lecture illustrated by experiments, delivered by the author before the New York Academy of Sciences, April 3d, 1882. To the substance of this lecture has been added a careful analysis or rather comparison of the trials of Guiteau and Whittaker with the Salem witchcraft trials, interspersed with what might be called scientific comments on various phases of psychology.

The book, outside of the instructive historical details which have been gathered and presented in a crisp incisive way to illustrate the author's views regarding insanity and the responsibility of the insane, is a strong plea for the humanitarian solution of what have been made in this as well as other ages, unnecessarily intricate questions.

It is at once apparent to the reader that the author, in writing, is prompted by convictions born of careful scientific study, and these convictions are for the most part clearly stated, although around them is sometimes thrown the glamour with which the enthusiast is wont to invest his opinions. It seems to us as if the author in his search after truth, is ever meeting with some new phase of his subject which enchains his imagination and perhaps for a while leads him away from the point at issue, and yet these excursions are gladly followed by the reader, who, if not convinced at last, from his inability to soar so near the sun as his guide, is at least

impressed with the genuineness of his teacher's enthusiasm, and gets up from the intellectual feast pleased and instructed, but withal a little mystified.

SELECTIONS FROM JOURNALS.

SLEEP AND SLEEPLESSNESS.

"A Natural Philosopher," writing to the *Daily News*, propounds what he conceives to be a new method of inducing sleep, and claims for his excogitation the dignity of a "proud discovery." To tell the story in his own words, the notion which has occurred to him is "to marry the mind to the body." For example, he makes the finger of his right hand describe a series of circles, while he is thinking of the books in his library; and, as he says, "thus turning over in my mind books and circles, it will go hard with me if the one does not presently melt into the other, and the whole into a dream." The conditions of success are laid down as follows: "I maintain sleep must follow, if this process is carried on with the strength of mind to sternly check all quitting of those two great points—a congenial walk for the fancy and persistence in describing circles. But the jade fancy must not turn aside, nor must the mind swerve. Circle must follow circle, book must follow book, like the stroke of a pendulum." "A Natural Philosopher," is apparently ignorant of two facts about sleep, which are all-important in the treatment of sleeplessness, and which are curiously illustrated in his ingenious device, and the success which seems to have attended its employment in the experience of the "discoverer". It may be worth while to note these facts, and the lessons they teach, by way of receding certain practical phases of the physiological process of periodic rest, to the mind of the busy practitioner, who is almost daily called upon to treat the troublesome and destructive malady of sleeplessness.

As Dr. Mortimer Granville, the most recent systematic writer on this subject pointed out, general sleep is the aggregate of independent though normally correlated sleeps induced in various parts of the system. Cerebral sleep, or physiological rest of the higher brain centres; automatic sleep, or rest of the executive centres; sensory sleep; muscular sleep; visceral sleep—are all component parts and factors of the sum-total of general sleep. Any one of these varieties, or integers, of sleep may be deficient or excessive, and the result will be marred by the disturbance of that harmony which is essential to the perfection of all organic functions. This is the first fact to be noted. "A Natural Philosopher" gives evidence of the need that, in this case, for a special induction of somnolence in the automatic and muscular systems, by the recourse to monotonous movements, which weary the centre that presides over the right hand; and, at the same time, weary the muscular system through one of its most highly organized combinations. The second fact to which we allude, as concerned in the production of the result described, is that of which every student of sleep, with a view to treat sleeplessness, ought to be cognizant and mindful—namely, that the periodic recurrence of sleep is normally a matter of habit; and, therefore, the act of "going to sleep" ought to be also a habit. Dr. Mortimer Granville insists strongly on this point. He says: "The cultivation of a habit of going to sleep in a particular way, at a particular time, will do more to procure regular and healthy sleep than any other artifice. The formation of the habit is, in fact, the crea-

tion or development of special centre, or combination, of the nervous system, which will henceforward produce sleep by natural rhythmical process.....It is not very important what a person does with the intention of going to sleep; but he should do precisely the same thing, in the same way, at the same time, and under as nearly as possible the same conditions, night after night, for a considerable period—say three or four weeks, at least. The result will amply reward the effort." If "A Natural Philosopher" had formed any other habit, involving a sufficient amount of muscular exercise to meet the special needs of his case, he would have been equally successful.

Sleeplessness is wakefulness, and it should always be treated from this point of view. A very common cause of insomnia in certain of its most troublesome forms, namely those accompanied with mental restlessness and worry, is such vaso-motor disturbance or debility—it may be either or both—as prevents the conversion of the jactatory or pulsating current of the blood into a continuous and steady flow before it reaches the capillaries. When this state of affairs exists, relief may occasionally be obtained from a moderate use of some stimulant in the form of a "night-cap," but that is a mere expedient for the service of the moment, and does nothing towards permanent cure. The rational remedy for this form of insomnia is undoubtedly a tonic treatment, acting as directly as possible on the vaso-motor centre or system; sedatives do harm. The commonest cause of sleeplessness is, however, disproportionate fatigue, by which some part or system of the organism is over-worked, while others are not sufficiently exercised. The diagnosis of cases of this class requires a very close scrutiny of the habits of life of the sufferer, and a rigorous testing of his senses and functional activities in detail. Dr. Mortimer Granville has described thirty-six causes or forms of sleeplessness falling into this category. A scientific treatment of insomnia must obviously consist in something widely different from the administration of opium, chloral, or bromide of potassium, in such doses as may suffice to stupify the faculties, and perhaps in a roundabout way induce sleep.

The subject is one which has not yet received that close study at the hands of physiologists and practitioners which its practical importance would justify. The most painstaking experimenter has been Vulpian. He wholly rejects the anæmic theory, and has, as it would seem, conclusively demonstrated the fallacy of that generally accepted view. Not only for its own sake, but for the sake of the many mysterious phenomena of health and disease upon which a full elucidation of the nature and causes of sleep and sleeplessness would probably throw light, it is much to be desired that the whole question may before long engage the serious attention of the many able investigators in our midst.—*Brit. Med. Jour.*

THE BIRTH OF AN ELEPHANT.

Dr. Gustavus E. Sussdorff, of New York, contributes to the July number of the *New York Medical Journal* an account of the process of parturition as it took place in the case of the elephant "Queen" last February. The period of gestation was 597 days. There was no noticeable enlargement of the abdomen until it suddenly became quite prominent the day before labor began. This enlargement did not subside with the expulsion of the foetus and after-birth, but continued four days longer. During the latter months the mammæ became swollen, and soon filled with

serous milk. These were the only signs of pregnancy to be seen. The labor began at 3 P. M., February 2d. At this time the mammae were greatly distended with milk, which came away continuously in drops. The vagina now began to drop down and swell. In a short time thick mucus began to come from the vagina in long ropy strings, and almost poured out just before delivery. From 3 until 8 o'clock "Queen" was evidently uneasy, as she constantly moved her body from side to side, but did not seem to suffer pain, and quietly munched some hay up to the very moment of delivery. At 8.10 the young elephant was born, the head presenting, completely enveloped by the unbroken membranes. The head and part of the body rested between the hind-legs of the mother, and touched the ground. Without waiting a moment, the mother ruptured the membranes with her two hind-feet, when the young one rolled out, on its back. The membranes were no sooner liberated than they quickly returned into the vagina. The umbilical cord had not been seen at all, having probably been torn away during the descent of the foetus. The mother now quickly turned to the young, and, on seeing it, began to roar and bellow furiously, which she continued for ten minutes. As soon as she saw the baby she also at once placed one fore-foot on it and rolled it several times, as one does a lemon under the palm of the hand, the bellowing and roaring continuing. In a moment or two more she placed her abdomen upon a short post in the ground, to which she was chained, standing almost upon her head, and grasping the post with her trunk, thus forcing the abdomen with great power against the post. "Queen" remained in that position for about ten minutes; then became quiet, and, while playing with her young, took some food. Nothing indicative of after pains could be recognized after this, and in one hour and thirty minutes the placenta was expelled. With it there came about two quarts of clotted blood. There was no hæmorrhage either from the uterus or from the umbilicus of the calf. The duration of labor was five hours and ten minutes. The calf, a female, weighed 245 pounds, and stood just three feet high. It began nursing one hour and forty minutes after birth. It had two middle upper teeth. The umbilical cord entered the abdomen about three inches anterior to the vagina, and had been detached very close to the abdomen, as none was visible at that point, the canal being open and large enough to admit a good-sized finger for half an inch. Dr. Sussdorff remarks that there are several very interesting and instructive points in this history. First, the period of gestation is evidently not affected by change of climate and captivity, lasting about nineteen and a half months. The time of labor is short, and evidently there is not much pain. The sagacity of the animal is remarkable, as shown by the manner in which she ruptured the membranes, the means she took to excite respiration by rolling the young, and, finally, her effort to express the placenta from the uterus. He then describes the placenta and the foetal membranes, comparing them with those described by Owen, and adds a summary of various observations that have been made of the milk of the elephant as compared with that of other animals, giving drawings which show its microscopical character in comparison with those of cow's milk.

AN OVARIAN TUMOR WITH RARE COMPLICATIONS.

Dr. A. P. DUDLEY and Dr. H. D. Coe, of the house staff of the Woman's Hospital, in a joint communica-

tion published in the *New York Medical Journal* for July, 1882, remark that it is a well-recognized fact that statistics of ovariectomy are among the least satisfactory of any in surgery. For a man to report that he has had so many "successful cases" may mean simply that he has had the good luck to secure a run of uncomplicated ones, such as would have recovered under the hands of any other operator. The public, and even the medical public, are too prone to judge of success by the outward results alone, overlooking the skill, judgment, boldness in meeting emergencies, and the care and anxiety in after-treatment, which a surgeon has bestowed upon a desperate case, and in spite of which it has terminated fatally. To judge of an ovariectomist by the bare statement of the number of his patients who have survived the operation would be most unjust. So varied are the elements which enter into *every case* of ovariectomy, and which render it complete in itself, that it is quite impossible to institute close comparisons, either between individual cases or between the statistics of two different operators. They then give the history of a case that occurred recently in Dr. Thomas's service at the hospital. The patient had a severe illness at the age of sixteen—an acute intestinal trouble of some sort. After that she was always obstinately constipated, and occasionally had severe colic, with vomiting and tympanites, and was said to have passed gall stones on several occasions. When she entered the hospital she had been married twenty years, but had had no children, and for ten years she had not menstruated. Eighteen months before her admission her health began to fail, and she noticed a slight enlargement of the abdomen, attended with severe pain, localized on the left side. Soon after this she passed several concretions by the urethra, and began to discharge fecal matter and gas by the same channel. The tumor grew slowly, confined almost wholly to the left side, and attended with constant intense pain and marked gastric disturbance. It was tapped shortly before her admission, but no fluid was obtained. Dr. Thomas regarded it as uncertain whether the tumor was an ovarian cystoma or a uterine fibro-cyst, but felt that its removal would be quite impossible on account of its complete fixity and firm adhesion to all surrounding parts. He made an incision four inches in length to the left of the median line, this being the most prominent part of the tumor, thus dividing the abdominal muscles. The sac, which was found to be firmly adherent on all sides, was punctured, and a quantity of dark-brownish, colloid material evacuated, with the patient turned upon the side. The external incision was extended to five inches; the cyst opening was also enlarged, and the operator introduced his hand and broke up a number of secondary cysts, removing their contents. The cyst was found firmly adherent to the intestines and pelvic viscera. Accordingly, the edges of the cyst-opening were stitched into the edges of the wound, a Thomas's double drainage-tube being introduced into the sac, brought out at the lower angle of the incision, and held in position by interrupted wire sutures. The patient died on the eighth day. At the autopsy the visceral and parietal layers of the peritonæum were found so firmly united by old adhesions that it was with difficulty that the cavity could be opened at all. The liver was adherent to the diaphragm, anterior abdominal wall, stomach, duodenum, and transverse colon. The spleen was surrounded by old adhesions. The coils of small intestine were adherent to the abdominal parietes, and so firmly glued together that they formed an inextricable mass. The intestines were also adhe-

rent to the posterior wall of the bladder, the superior and posterior aspects of the uterus, and to the surface of tumor. Douglas's fossa was entirely obliterated. Upon separating the adhesions near the fundus of the bladder, a cavity of about the size of a hen's egg (diameter four centimetres) was found, which seemed to be a portion of the general peritoneal cavity, shut off by adhesions. It was bounded in front by the posterior surface of the bladder, at its upper third, laterally and posteriorly, by the mass of adherent intestines. This cavity communicated both with the small intestine and with the bladder, in the former case, by two fistulous openings about six mm. in diameter, situated close together, and each leading into a separate knuckle of small intestine. As nearly as could be ascertained, one communication was with the ileum, the other with the jejunum. There were three openings from this false cavity into the bladder, situated side by side, and separated only by narrow bridges of tissue; the largest measured one centimetre in diameter, the others two and three mm., respectively. The bladder was thus opened through its posterior wall, near the fundus. The cavity above described contained a mass of soft, yellowish fecal matter, and three hard, black calculi of irregular shape all too large to have passed, fully formed, through the fistulous openings in the intestines. (Analysis of these calculi showed them to be enteroliths.) The pelves and calyces of the kidneys were much dilated, the renal parenchyma being atrophied and the seat of a chronic diffuse nephritis. No evidence of an acute interstitial nephritis. The dilated pelves contained a dirty, brownish, purulent fluid, having an offensive urinous odor. Both ureters were greatly dilated, the dilatation extending along their whole course, the caliber of the right being nearly equal to that of the small intestine. They contained an offensive fluid similar to that in the pelves. The bladder was capacious, its long diameter being eleven ctm. It contained soft fecal matter, turbid urine, and gas. The uterus was normal. On the right side the adnexa were completely buried in a mass of adhesions. Upon the left side the site of the ovary was occupied by a polycystic tumor, which filled the pelvic cavity and extended upward into the abdomen. Its diameter was four ctm. It was adherent to the small intestines and to the sigmoid flexure, which lay behind it. The upper half of the tumor had a peritoneal covering, while the lower half was devoid of it. The growth was found to be a multilocular ovarian cyst, having one large cavity, the inner wall of which was covered with papillomatous growths. This inner surface was of a black color, and in places was sloughing.

FORMULARY AND POINTS IN PRACTICE.

FOR A CHILD THREE YEARS OLD IN PLETHORA OF TROPYDIA AND CYCLODIA.

- R Bismuthi albi (subnit.) grs. i. (20. 85)
Magnes. carb. grs. i. (20. 85)
Acid. hydrocyanici dil. min. v.
Aque 3 ii.
Dose, 3 ij.

IN ATONY AND IRRITABILITY OF THE STOMACH

- R Bismuthi carb. grs. i. — ij.
Magnes. carb. grs. ij.
Tinct. hyoscyam. min. v.
Infus. rhei. 3 ii.
Dose, min. j.

IN PERTUSSIS, LARYNGISMUS STRIDULUS — CROUPY COUGH, ETC., FOR A CHILD FIVE YEARS OLD.

- R Acid. hydrocyanici dil. min. ij.
Tinct. hyoscyam. min. xx.
Syrup. aurant. 3 ss.
Mist. amygdalæ. 3 ii.
Ft. mistura. Dose, 3 ii.

IN SCARLATINA WHEN THERE IS SUPPRESSION OF URINE, HIGH FEVER AND DELIRIUM.

- R Vin. colchici. 3 iij.
Spir. ætheris nitrosi. 3 ij.
Pot. acetat. 3 ii.
Aquæ ad. 3 iv.
Dose, 3 j. every four hours.

IN SCARLATINAL DROPSY.

- R Tinct. digitalis. min. iij.
Tinct. hyoscyam. min. v.
Syr. aurantii. 3 ss.
Aq. camphoræ. 3 iv.

For a child five years old may be given every six hours.

IN HYDROCEPHALUS.

- R Pulv. digitalis. grs. vj.
Hydrarg. subchlorid. grs. xij.
P. sacch. alb. grs. xvij.
Misce et divid. in pulveres xii.
Sig. — One powder every six hours.

IN INFLAMMATION OF LUNGS AND HEART AND IN DROPSIES.

- R P. digitalis fol.
Potassæ nitrat. a a 3 ss.
P. sacch. alb. 3 ii. ss
Misce et divid. in chart. XL.

Sig. — One powder three daily. Suitable for children of fourteen or sixteen years.

IN HYPERTROPHY OF THE HEART WITH EXCESSIVE ACTION.

- R Infus. digitalis. 3 vij. ss
Potassæ nitrat. 3 ij.
Acid. hydrocyanici dil. min. xiv.
Syrup. aurantii. 3 ii.

Dose, 3 j. Every two hours for a child five years old.

MEDICAL NOTES AND NEWS.

How to Make a Stupid Intellect Logical.—M. Dulaunay has experimented upon himself while asleep, and finds that if, when he is having absurd and foolish dreams, heat or warmth is applied to his head his dreams become at once coherent and logical. It will then be no longer proper to say of a man who is peculiarly sound and rational in his conduct that he is a "cool-headed" man; but on the contrary it will be more philosophical to speak of him as a "hot-headed" man.

The Cortland Co. Medical Society, the Sullivan Co., the Cayuga Co., and the Onondago Medical Society, have formally disapproved of the action of the State Society. The Maine Medical Association has done the same.

M. Gustave Laquean states that in Prussia the Jews have the lowest rate of mortality; the Protestants are next and the Catholics show the highest rate.

M. Gillette has reported to the Societe de Chirurgie his observations of the effects of nerve stretching. In affections of the central nervous system, such as locomotor ataxy and epilepsy, no decisive effects were obtained; but in sciatica and other neuralgias it has proved useful.

Dr. Burch, the Director General of the medical department of the Russian navy, has been placed on trial for receiving bribes for promotions given to subordinates. Eighty-six surgeons testified that Dr. Burch had not for many years made a promotion without such a payment; in one instance the sum paid being 3,100 rubles. Those who are disposed to speak of the frauds practiced under a republican system of government, will remember that the government of the Czar is not exactly republican.

Three cases of poisoning by the use of solutions of boracic acid as an injection in cases of empyema have lately been reported. Similar results have often been reported from the use of carbolic acid; but the permanganates of potash is perfectly safe.

Sewer Gas in Houses.—Professor Kerr, in a late address before the British Civil and Mechanical Engineers' Society, expressed views on the sewer-gas question very similar to those urged by Drs. Hamilton and Doremus, of this city, in the discussion of the same question here last March. They knew, said Professor Kerr, that gas was generated by the decomposition of the decaying matter in sewage when deposited, in however slight a degree, upon any interior surface. What followed? They knew this gas had two qualities which were extremely obnoxious; one quality was that it ascended to the highest level by reason of deficient specific gravity; and the second quality was that when it reached the highest level it exercised a pressure, being an extremely elastic gas. He need scarcely point out the effect of these two considerations. When the sewer-gas (a most excellent name, without going into particulars as to whether it should be called gas or vapor; the name sewer gas carried an idea of offensiveness which was extremely convenient)—when the sewer gas had reached the highest level, it exercised a powerful elastic pressure to force its way out, and succeeded in forcing its way. It got into the house; and if there were no other grievance, there was this to complain of—that this pestiferous and poisonous gas forced its way from the sewers into our houses, and of course reached the vital organs of those who occupied it.

General Garfield's Wound.—The *Medical News* for June 24th contains a very clear, concise and conclusive article on the subject of the treatment of President Garfield's wound; in which reference is made to nearly all the surgical writers who have treated of gunshot wounds of a similar character, both native and foreign. The paper is from the pen of J. William White, M. D., Demonstrator of Surgery, and lecturer on operative

surgery in the University of Pennsylvania, Surgeon to the Philadelphia Hospital, etc.

At the close of his paper Dr. White writes as follows:—

"No undoubted instance of recovery after a compound comminuted or perforating gunshot fracture of the body of a vertebra has ever been recorded.

"The explanation of this fact is apparent to every one who carefully considers the nature of such an injury, the grave and manifold dangers which encompass it, and the almost infinitesimal chance which the patient has, if he escape one or two of them, of avoiding them all.

"In support of the foregoing statements, both as to the necessary fatality of the wound and as to the absolute correctness of the treatment in the President's case, it would be easy to adduce almost unlimited confirmatory evidence. The leading medical journals of the world have strongly and unequivocally upheld these views, and, indeed, it may be said that they have been maintained by every writer who has discussed the subject and who is entitled, by special study or experience, to speak with authority.

I shall confine myself now, however, to quoting the testimony of three eminent members of the profession in this country;

"Looking at the whole case, from beginning to end, I do not see that the treatment could have been altered in any way to the advantage of the illustrious patient; nothing was done that should have been omitted; and nothing was left undone that could possibly have been of benefit."*

"The President's surgeons did all that men could do: all that the present state of science would permit; and all that could have been done even if they had at first ascertained the course and direction of the ball. Our whole medical literature does not contain a single well-authenticated case of recovery from such a wound." "He had not the least chance of recovery under any circumstances or any treatment."†

"In reviewing the history of the case of President Garfield I can find no reason for adverse criticism of any part of the management."‡

"In conclusion it may be asserted that, after careful consideration and thorough search through the records of this and similar cases, and after the opportunity of deliberate comparison thus afforded, the following facts appear to be incontrovertible:

"1. It was never possible at any time or by any method to ascertain definitely and safely the precise character and extent of the President's wound.

"2. Any attempt in this direction further than was made by the attending surgeons would in all probability have resulted fatally at once, and their steadfast resistance to extraordinary influence in favor of operative interference entitles them to great credit.

"3. The treatment, which was directed to meeting the indications as they arose, was in every respect that which it would have been necessary to adopt had it been possible fully to determine the exact nature of his injuries.

"4. Life was prolonged for an unusually protracted period by the careful and skilful attention which the distinguished patient received.

"5. Death resulted from the secondary effects of

* Dr. John Ashhurst, Jr., in *North American Review*, December, 1881, p. 594.

† Dr. J. Marion Sims, *Ibid.*, p. 600.

‡ Dr. John T. Hodgen, *Ibid.*, p. 610.

the wound upon structures far beyond the reach of surgical interference.

"6. No undoubted instance of recovery from such a wound is to be found recorded in surgical literature."

Diphtheria.—It is probable that the contagium of diphtheria may retain its virulence for some time, and be carried a long distance in various substances and articles in which it may have found lodgment. Diphtheria contracted from germs carried several blocks in a sewer may perhaps be as fatal as when contracted by direct exposure to one sick with it. While it is not definitely proved that the germs of diphtheria are propagated in any substance outside the living human or animal body, it is possible that they may be found to be thus propagated."—*State Board of Health of Michigan, Dec., 1881.*

"The prevailing custom with physicians and nurses, if circumstances prevent the nursing of the infant, is to use cow's milk diluted with one, two or three parts of water, and with various other additions, but the orator held that with care in the selection, management, and feeding of the cow, we can modify the milk product and secure a food infinitely nearer human milk than any artificial mixture can be. And he stated that for thirteen years, when for any cause it had been necessary to resort to any other food than the mother's milk, he had used undiluted cow's milk, and failed only in three instances to raise the child."—*Address of Dr. Lynde before the Massachusetts Med. Soc., June, 1882.*

The following amendment to the by-laws of the Rhode Island Medical Society was made at its annual meeting, June 15, 1882: "Every candidate for fellowship in the Rhode Island Medical Society shall hereafter be required to pass a strict personal examination, before the Board of Censors, in those branches of medical science taught in recognized medical colleges; to give satisfactory evidence that he has adequate knowledge of the Latin language, and has received a good general English education; and that he does not profess, or intend to practice, any exclusive system of medicine. If such examination be satisfactory to a majority of the censors present, the Board of Censors, in compliance with the by-laws, shall recommend the candidate for fellowship."

"American Dyspepsia was presented by Dr. J. H. Robbins, of Hingham. The reader inclined to the opinion that the same delicacy of stomach prevails in Great Britain and on the European Continent as in this country, but he announced that in considering dyspepsia among our own people, he wished to emphasize the fact that, more than of anything else, it is the result of neurosal causes. American dyspepsia seems to be without a morbid anatomy. Some of the principal causes assigned for it are rapidity in eating; unsuitable or improperly prepared food; over-eating, a very common bugbear; the use of ice water; and the universal use of fine flour. One great principle in nature is apt to be overlooked by theorists, viz., the very remarkable power of the human system of adapting itself to all sorts of dietetic conditions and even enormities, and appearing to thrive upon them. Causes of a neurosal nature have a much more extended and

detrimental effect on digestion than those previously mentioned. The evil effect on the digestive processes of bad news, fear, worry, mental strain, is well known to every physician, while the pleasurable emotions, a contented mind, success, etc., contribute to eupepsia. These neurosal causes operate with especial power upon the present generation of the Anglo-Saxon race. Our parents and grandparents expended to a great degree their own vital powers amid the rapidly changing scenes of a new country, and have transmitted to their children delicate and neurotic constitutions.

"Among the causes which are acting upon large classes of our population are, 1st. The manner of rearing our children, who, weakly at the start, are forced into precocity by various means; 2d. School teaching; 3d. Lack of simplicity and honesty in living; 4th. Business strain, worry and apprehension; 5th. The present unsettling of religious beliefs; 6th. The state of the weather; 7th. Valetudinarianism.

"We may be powerless to stay or modify the influences of the present phase of our civilization upon the nerves and stomachs of the Anglo-Saxon race in this country, but by being aware of these influences we may find means outside the materia medica to benefit many a patient to whom drugs alone can bring but little help."—*Proceedings of Massachusetts Med. Soc., June 13 and 14, 1882. From Medical News, June 24.*

Phthisis Among Needle-Manufacturers.—In his recent report to the Stratford-on-Avon Combination of Sanitary Authorities, Mr. G. H. Fosbroke again comments upon the not uncommon prevalence of phthisis among needle-manufacturers. During 1880, no fewer than 45 deaths happened from this disease, 24 being registered in Alcester, which had then a population not exceeding 20,000; the remaining 21 deaths occurring in the Evesham and Stratford Districts, which contain together a population of not quite 26,000. Fourteen of the 24 deaths in Alcester took place in two subdistricts, both of which are needle-manufacturing centres. A somewhat similar mortality was registered during 1881, phthisis being held responsible for 24 deaths in the Stratford and Evesham Districts (population 24,597), whereas in Alcester, with a population of 17,387, there were 26 deaths. Mr. Fosbroke regrets that he is unable to give an explanation of this mortality, since the inspection of these needle-manufacturing factories does not come within his province. Whether it is in consequence of such trade employment, or that the workmen so generally keep their workshop too hot and "close," he is not in a position to say. This appearance of phthisis is, as Mr. Fosbroke observes, well worthy the consideration of factory inspectors; but it is also still more worthy the attention of the Medical Department of the Local Government Board, an inquiry by which, on the present state of the question as to the lung-diseasing conditions of various industries, is much to be desired. Such an inquiry was made on a large scale by the then Medical Department of the Privy Council in 1860-4, and Mr. Simon always recognized the importance of continuing the investigations on the subject. A series of fresh inquiries by various inspectors was indeed begun under his auspices in the year 1873, but the results were never published, and administrative changes put a stop to their further prosecution. The question is, however, one of no little hygienic as well as practical interest, and deserves exact and systematic study by a skilled investigator.—*Brit. Med. Jour.*

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THE PAY OF THE SURGEONS AND PHYSICIANS WHO HAD CHARGE OF PRESIDENT GARFIELD.

During the House debate of July 14th, on the subject of paying the doctors who were in attendance upon the late President, Mr. Blackburn, of Kentucky, who thinks the President's case was treated very badly, intimated that the committee had in its possession testimony to this effect. According to the *Herald* he is reported to have said:—

"There were two letters before the committee; one from Dr. Gross of Philadelphia, and one from Dr. Sayre of New York, which he would like to have read to the House as to the treatment of the case."

The Medical press of this country and of Europe has discussed this matter openly and fully, and the almost unanimous verdict has been that the treatment was judicious and skillful. So far as we are apprised, neither Dr. Gross nor Dr. Sayre have taken any part in this discussion, *openly*. If Mr. Blackburn is correct, the medical profession would be interested in knowing what they have said *privately*.

We have no information as to what any medical gentleman has said to the committee except in these intimations made by Mr. Blackburn, and in a special des-

patch to the New York *Commercial Advertiser* from its correspondent at Washington, under date of March 18, 1882, in which the public is informed that the committee had written to several leading surgeons as to the matter of compensation, most of whom had replied. To which the correspondent adds: "Dr. Sayre of New York wrote that the amount charged in difficult cases *where the surgeon saved the life of the patient*, depended entirely upon his financial condition, and his ability to pay liberally for the services rendered. In cases where the patient died, the charges would depend largely upon the practice of the surgeon, the time occupied *and muscular work performed*. Dr. Sayre's letter, on the whole, will be interesting reading if made public. Dr. Gross, of Philadelphia, wrote an exceedingly caustic letter, which irritated some of the committee."

We repeat, that we think it now due, no less to the medical profession than to Drs. Sayre and Gross, that their letters, and all the other letters from medical gentlemen to the committee, should be made public. Either the committee should have kept the purport of all these communications to itself, or it should have published them entire. Certainly it cannot justify itself in choosing for publication certain letters and rejecting others. The medical profession is interested in knowing whether some of the doctrines which are reported as being contained in one of these communications, are to be accepted; and, also, what is the opinion of the surgeons who communicated with the committee, and who have not already expressed their opinions publicly, upon the matter of treatment.

It may be worth while to mention in this connection, that a statement made in the House by one of its members, to the effect that Drs. Agnew and Hamilton were not in charge of Mr. Garfield for three weeks after the first consultation, is not exactly correct. We have authority for saying that, although they were not at that time requested to remain, they were requested to hold themselves in readiness to be summoned at any moment, and were informed that they would receive *daily* and *full* information as to the condition of the President by telegraph. This was done, and the consulting surgeons sent occasional replies, until, on the occurrence of a secondary abscess, they were again hastily summoned; after which, by request of Mrs. Garfield, one of them was in constant attendance, and a portion of the time both were unitedly in attendance.

As every medical man will understand, therefore, both of these gentlemen were practically on duty with Mr. Garfield from the day on which they were first called until he died.

THE REASON WHY.

In a letter before us a correspondent of the GAZETTE takes exception to a recent editorial commenting on the public and professional apathy which permits

men without education or culture to found medical colleges for what might be called speculative purposes.

He points out to us that these bogus colleges are fostered by the leading men in the profession; that it is therefore useless to denounce them, and that, moreover, there are other evils against which our editorial shafts may be hurled with the prospect of better results being obtained; such, for example, as the indorsement of quack nostrums by reputable members of the profession, etc., etc.

If our correspondent will refer to his file of the GAZETTE he will find that we have always denounced the evils he enumerates, and shall continue to do so until they are abolished.

As for the bogus colleges, we cannot agree with him that it is of no avail to expose them, and exclaim against the laxity of the laws which permit their existence. Doubtless some worthless institutions are fostered by eminent members of the profession; but this fact, instead of giving them protection from exposure, is a strong argument for holding them up to condemnation. The man who from his professional eminence, for pecuniary gain, seeks to bolster up such institutions, does not add so much to their standing as he detracts from his own, and it needs only the arrows of editorial comment, of public exposure, to pierce the mask of seeming solidity which these colleges assume, and exhibit in all its hollowness the skeleton beneath.

ORIGINAL ARTICLES.

THE CONTAGIOUSNESS OF PHTHISIS.

BY

FRANK H. HAMILTON, M. D.

In document No. 47, issued by the Michigan State Board of Health, Dec., 1881, and just received, giving general rules for the prevention and limitation of contagious diseases, such as scarlet fever, diphtheria, small-pox, &c., occurs the following passage in a foot note: "*Consumption is now believed to be a communicable disease, therefore many of these rules are applicable for its prevention and restriction.*"

If the Michigan State Board of Health means to say that this is its belief we have nothing to say in reply. The question is under discussion, and it does not surprise us that in view of certain recent experiments and observations some very intelligent medical men have concluded that consumption is contagious. If, however, it is intended to say, as it would seem to imply, that all, or a majority even, of medical men have arrived at the same conclusion, we think the statement is not justifiable.

The original observations of Villemin, followed by the experiments of Conheim, and especially by the more careful experiments of Robert Koch, have indeed awakened a widespread suspicion that tuberculosis is contagious; but in very few instances, we think, have they established in the minds of pathologists, and especially of thoughtful and observing medical men, a positive conviction. Not one of the experiments has remained unchallenged, even by pathologists. The existence of the tubercle bacillus as a specific germ has been denied; and the fact that tuberculous matter introduced into the circulation of pigs, cats and dogs develops sometimes a rapid and fatal phthisis, has lost much of its value as evidence of the contagious nature

of tuberculosis, when it is found that the introduction of cheese and other foreign substances in the same manner will produce the same result in an equal proportion of cases as if tubercular matter had been introduced.

There is certainly a wide difference between the contagiousness of tuberculosis and of scarlatina, diphtheria, small-pox, &c. Phthisis is undeniably hereditary, but these latter diseases are not. Upon exposure to the germs of small-pox, scarlatina, &c., the vast majority of persons who have never had the disease before become affected. On the other hand, if tuberculosis is ever contagious, it is certain that a vast majority of those exposed escape the infection.

When confronted with this established fact Koch replies, that successful contagion or inoculation demands a suitable soil. There is in this reply a small amount of speciousness, inasmuch as this is true of other well-known contagious diseases; but we repeat that of those exposed to small-pox not more than one in five hundred of the unvaccinated, or of those who have not already had the disease, escape the infection, while of those exposed to the supposed contagion of phthisis very few if any are infected.

With regard to the popular opinion of the contagiousness of phthisis, which has prevailed for a long time, more or less, in certain countries, and especially in Italy, it may be said that it probably has its foundation in the fact that in most parts of the world more people die from phthisis than from any other single disease, and the number of accidental coincidences would naturally lead to an occasional conviction that the disease had been conveyed by contagion; but on the other hand, the immense number of cases in which personal exposure leads to no such results has always been to most medical men a sufficient evidence that it is not contagious.

Physicians ought, we think, to be exceedingly careful how they speak to the public in matters of so great importance. It is no light matter to declare to a mother that her tuberculous child must be separated, not temporarily, as in small-pox, but permanently, from herself and family to ensure their safety. That for the same reason the husband and wife should be separated, as might properly be done in a case of malignant diphtheria. Nevertheless, if the doctrine of the contagiousness in regard to phthisis is established, the Michigan Board of Health is right in saying that "many of these rules," made to prevent the spread of small pox, should also be applied to these cases; but we affirm that it is not yet proven, nor indeed, in our opinion, rendered probable.

TWO CASES OF DISLOCATION OF THE FEMUR—REDUCTION.

BY

J. S. WIGHT, M. D.

Professor Operative and Clinical Surgery, at the Long Island College Hospital.

On the 24th of May, 1881, John H—, four and one-half years of age, fell heels over head from some back steps, about nine feet high, striking on his right leg; at the time of the injury there was so much swelling of the hip and thigh on the right side, that a diagnosis was not made. The patient was seen by me with Drs. Stuart and Hunt, on the 4th of June, 1881, when a diagnosis of dislocation of the head of the right femur into the sciatic notch was made.

After the administration by Dr. Stuart of chloro-

form, I flexed the right leg on the thigh, carried the thigh upward adducted, abducted the thigh, extending, lifting and out-rotating it, when the head of the femur went readily into the socket. The case subsequently did well.

On the 2d of May, 1882, Thomas T—, ten and one-half years of age, fell astride of a beam, as he was standing on the beam. His right lower limb was much flexed and somewhat abducted; the foot pointed nearly forward, and the hip was very sensitive and painful. When the right limb was abducted, it was shorter than the left limb, and when it was adducted, it was longer than the left limb by the usual measurements. When the two lower limbs were flexed to nearly a right angle with the body, the right thigh was notably further from the crest of the ilium than the left thigh, indicating that the head of the femur was lower down than normal. There was a dislocation of the head of the right femur into the thyroid foramen. Chloroform was given by Dr. Mordough, who was the attending physician.

(1.) In the first place, I carried the injured limb upward, and abducted it while doing so, and then tried to lift the head of the bone out of the thyroid foramen by in-rotating and lifting the femur forward and upward, and then extending and out-rotating, using considerable force, but did not succeed. This manipulation was repeated several times, but failed.

(2.) In the second place, I carried the injured limb upward, and adducted it while doing so, and then tried to lift the head of the bone out of the thyroid foramen by out-rotating and lifting the femur forward, inward and upward, and then extending the limb, but did not succeed. The force used during these manipulations was very considerable.

(3.) In the third place, I put a pillow against the perineum between the thighs, and then put my stockinged foot on the pillow, and then took hold of the foot and leg of the injured limb, making extension downward and a little outward, and making counter-extension by pressing on the pillows with my foot. The pillow pressed laterally tending to separate the thighs. The reduction was thus easily, quickly and safely accomplished, just as if it had been a dislocation at the shoulder.

SOME REMARKS UPON THE HYGIENE OF THE MALE GENERATIVE SYSTEM.

BY

JOHN I. LIGGET, M. D.,

Formerly Assistant Surgeon U. S. Navy.

As this subject has occupied more or less attention among mankind since the earliest ages of the world's history down to the present time, and according to the sagacious Locke, has produced more wry actions than all other sources of prejudice whatsoever, I need not offer any excuses for treating upon such a well worn theme. Innumerable methods and theories have been inculcated at various times, to act hygienically outside of the proper connubial condition. From the Turkish harem, and the polygamy of Brigham Young, to the use of monobrominated camphor and bromide of potassium, the ground has been well traveled over, and with a common object: the health of the male generative system. The social evil exists in response to a demand or a practical expression of an ascertained want on the part of the male population. This evil cannot at present be called a success in a hygienic point of view, however. Originating ostensibly as a

palliative measure for some of the ills which flesh is heir to, it has now in some degree become an engine of destruction, and often slays where it should cure. Since entering upon the study of medicine, and during a residence in some of our larger cities, my attention was unavoidably directed to the licentiousness existing in both sexes among certain classes, and this aroused a desire to investigate the natural laws which should properly govern the intercourse of the sexes. In the course of these investigations comparisons were instituted between the human family endowed with reason, and animals unendowed with reason, and such comparisons were found to be unfavorable to the human family. A writer has said:

"Once in a season beasts too taste of love,
Only the beast of reason is its slave,
And in that folly drudges all the year."

The questions presented themselves: Why is it that man alone becomes frenzied by passion in some instances; gratifies his lust by force, and adds the additional crime of murder sometimes to that of outrage? Where is the animal that will destroy the female of his own species, when his amorous advances are repulsed? Why is it that many of our best men destroy themselves by diseases generated through impure connections? They know the risks they run, but they rush on blindly to their destruction, impelled by a force they cannot resist. This irresistible force became a subject of inquiry. In following up the inquiry the conclusion was arrived at that man alone, of all the male creation, *kept his testes at a high temperature by his mode of dress.* Air was seldom allowed to penetrate freely to those organs. All other animals had their organs freely exposed, and kept at a low temperature. This appears to constitute the cause of the want of control in many males over their sexual impulses. The next inquiry was to find a remedy. The laws of decency require the male genitals to be hid from sight, of course, but they can still be ventilated. *The clothing immediately covering the male genitals should be of thin goods, or perforated so as to admit air. If drawers are worn, an opening could be left in them just below the testes.* Possibly the solution of the great question of male generative health lies in the word, *ventilation.* In the first part of this article mention was made of the "proper connubial condition." Whether the connubial condition as it exists at present is the proper one, is open to grave doubt. Aristotle cautions husbands "not to spend their stock too lavishly, as the fair lasts the whole year," but under proper circumstances of ventilation and male generative quietude, the accomplishment of conception would probably cause a suspension of the fair for a season at least. These views are contributed with the hope that they may aid somewhat in the solution of the very much vexed questions mentioned.

LECTURES.

CHRONIC INFLAMMATION OF THE STOMACH—SPLENITIS.

A CLINIC BY

WILLIAM PEPPER,

Professor of Clinical Medicine in the Medical Department of the Univ. of Pa.

CASE I.—*Chronic Inflammation of the Stomach.*—This woman is a German, and gives a history of five years of almost persistent vomiting, or rather she modifies this statement and says that up to a couple of months ago the vomiting was only occasional, but that within the past sixty days she has vomited every day,

and upon some of the days she has vomited all day. One day, in particular, she remembers, upon which she vomited steadily from seven o'clock in the morning until ten o'clock at night. She was not, of course, actually vomiting all this time, but merely going through the movements of vomiting. She says that vomiting is always excited by the presence of food in the stomach, as she has at times been utterly unable to eat anything, or at least, to retain it. In spite of all this famishing experience, however, the patient is still quite well nourished in appearance. She has considerable pain over the abdomen and this pain is worse at some times than at others, particularly is it worse when she is in the act of vomiting. Her heart's acting is perfectly regular and her tongue quite clean. She is still better nourished than the majority of women. These cases of vomiting are somehow or other, never as straightforward as in men. If a man should come to you for treatment with such a history as this woman brings you, you would not find him in any thing like as well nourished a condition as this patient shows. His actual condition would correspond much more closely with his history than is the case in this instance. This woman tells me that she has been fatter and that she has lost a good deal of flesh, but it is hardly possible to conceive that she has been two months without retaining any food to speak of and yet present as well fed an appearance as she does. This is always the difficulty in these cases, for women very frequently come to the physician with just such a story as this patient brings, and he finds the woman in good color and apparently well nourished. In such cases it is very hard to go against manifest appearances and believe the story told, hard to be obliged to allow that a woman can go without food for a long time and yet show none of the usual evidences of lack of food. In fact, you just have to take the case as you find it, and acknowledge the manifest difficulty in diagnosis and direct your attention at once to the treatment. Such cases rarely happen in men. There are three possible explanations of the conditions here, allowing of course, the history given is a true one: (1.) The existence of a chronic catarrh. (2.) An ulcer of the stomach, and (3.) that vomiting is due to no lesion of the stomach whatever, since none exists, but is dependent upon causes of which we can have no accurate knowledge, such as uterine displacements or disorders and insidious spinal irritability. I am inclined to believe that this case is one of chronic gastric catarrh, which assumed a low grade at first, but which latterly has been more acute, and the vomiting, therefore, more frequent. The woman's bowels are regular. This is unusual—ought not to be. In such cases the bowels are not commonly moved more than once in many days. She is very much troubled with flatulence. Since she has been sitting here, you have, no doubt, noticed how the wind regurgitates from her mouth. This latter symptom is more usually found attending cases of vomiting where there is no lesion, although it is sometimes associated with simple chronic gastritis. My final belief then is that this is a case of chronic gastritis attended with vomiting, pain and a certain amount of flatulence. The patient says that even milk will not lie quietly upon her stomach. There is no substantial reason why she should not be put upon a carefully regulated milk diet. With regard to treatment, therefore, I think that the woman should be at once put to bed and kept quiet in bed, and that her diet at first should consist solely of milk. This milk at first should be given in small quantities and quite frequently. She should take a teaspoonful every half hour out of a tumblerful of milk contain-

ing five drachms of the bichloride of sodium or lime-water. These tablespoonful doses should be kept up regularly through the day and be given at night when she is awake. Than this she must have no other food for a week at least. At the end of that time I would begin to add a little meat in the shape of beef or mutton cut very fine. This meat should be given only at the middle of the day. If the addition of the meat does not produce vomiting, or rather bring back the vomiting, you may go on with it and at the same time administer the milk more freely. If she cannot stand the meat you must return of course to the milk and so you must go on until the time comes when by degrees her stomach can be brought into such a condition as to bear the ordinary diet. I think that this is by far the best way of managing these obstinate cases. As I told you before, it is possible that the woman's story may have but few grains of truth in it, indeed I am always in such cases in such a state of mind that I do not know whether or not to believe such stories. Where this is so I usually try to treat both possibilities at once.

CASE II.—*Splenitis*.—This man has been sick for some time past with malarial fever. Six weeks ago he began to complain of severe pain in his left side. Two weeks after the fever set in he went into a hospital and remained there for three weeks. When he left the hospital the fever was very much better, but the pain in his side still remained. He still has a little fever at night and is occasionally troubled with colliquative sweats. It is very easy to settle upon the original cause of the fever, for the man lived at Manhattan, which is, as you know, a very miasmatic neighborhood. The patient's appetite is now quite good and his bowels tolerably regular. You have just heard the history. To make it more succinct let me summarize it for you; the man has been sick for two months with fever, two weeks after the fever set in he went into a hospital, where he remained three weeks. Just about the time that he went into the hospital he began to suffer from pain in his left side. When he left the hospital his general health was much improved, but the pain in his left middle abdomen still remained, together with some slight fever and sweat at night. These facts would lead us at once to suspect that the man has been suffering from that species of malarial poisoning known as remittent fever. The pain is undoubtedly due to enlargement of the spleen, a condition which almost always attends or follows remittent, or continuous fever. That I may examine the patient thoroughly, I tell him to strip off the clothes down to his waist and lie down here on his back. As he lies here you will all notice at once that the left side of the chest and abdomen is fuller than the right. The left side is painful too, at certain spots, and so I place my hand over the site of the swelling, I come upon the edge of a hard body, which can be very distinctly felt below the ribs. By careful percussion I am able to map out the limits of this hard mass very accurately in the front; to follow it round behind I am obliged to ask the man to stand up. The area included within these crayon lines corresponds exactly in shape and locality with the area covered by an enlarged spleen, so that the suspicion aroused in my mind before I examined the case physically is probably the correct one. But the appearances of this case are not those of simple enlargement of the spleen consequent upon malarial poisoning. In such cases it is not customary for the spleen to bulge out the lower part of the thoracic cavity. As a general thing in this disease the enlarging spleen finds plenty

of room for itself by sinking down into the abdomen, and so exerts no upward pressure whatsoever upon the ribs. Another point of distinction between this case and that ordinary splenic enlargement following malarial infection is shadowed forth in the color and texture of the skin over this man's spleen. The skin is thick and brawny and more adherent, on this account, than is natural. I cannot, on this account, succeed in identifying at all the intercostal spaces throughout this indurated portion of the integument. The skin looks like a surface which had gone through an extended period of blistering, and yet, when I come to question the patient I find that the only counter-irritant applied has been iodine, and this substance can in no instance give rise to such deep seated induration. Indeed further examination convinces me that this change in the texture of the epidermis extends into the periosteum, which is itself thickened. The tumefied mass is dull upon percussion, and in addition to this, as I have already told you, there is pretty well marked tenderness over its site. The questions that now arise are; (1) what is the nature of the tumor, and, (2) what does the inflammatory condition of the skin point to. The answer to the first question has already been given, but how is it with regard to the second? Abscess of the spleen is such an exceedingly uncommon condition that we can with propriety put it entirely out of the question. If the skin over the liver were indurated as much as is the case here I should say at once that it was a case of hepatic abscess, but splenic abscess is very rare. There is, however, a condition of the spleen which does not occur quite often, and that is inflammation of its capsule. As a usual thing this capsular inflammation only produces thickening. In more acute cases, however, it goes on to the formation of pus. This is quite possibly the true condition of affairs here. I should, then, proceed to pronounce the case to be one of malarial enlargement of the spleen, followed by inflammation of its capsule and the final formation of pus upon the external surface of the spleen and between it and the abdominal and thoracic walls. The formation of pus thus virtually makes the case one partaking of the nature of an abscess, inasmuch as the inflammatory and induratory processes which always attack the tissues in the neighborhood of an abscess have made themselves apparent here in the walls of the thorax and abdomen and in the skin covering the area of dulness. This thickening process explains very satisfactorily the impossibility which I experience of mapping out the intercostal spaces. The abscess, understand me, is over the site of the enlarged spleen and between it and the walls of the thoracic and abdominal cavities. This abscess is very thin and cannot possibly contain much pus. The prognosis in this case, is very good. The improvement which has thus far taken place has been steady and will, no doubt, so continue. The pus will probably either open its way out through the thoracic wall between two ribs, or, and this is the much more likely of the two propositions, will dry down and become metamorphosed into a thin layer of dry cheesy matter. The treatment shall in future consist in the administration of quinia and arsenic. The quinia must be persevered in until all the phenomena of fever have disappeared. The arsenic is one of the best alteratives known. As regards counter irritation we will entirely dispense with it for the present.

CATARRHAL INFLAMMATION OF THE RECTUM IN THE FEMALE.

A CLINICAL LECTURE DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK,

BY

PAUL F. MUNDE, M. D.

History.—Female; æt. 16, single; has been unwell for three years; regularly every four weeks; duration, 4-5 days. Discharge rather profuse. Was last unwell two weeks ago. Suffers no pain in menstruation. Appetite good; micturition frequent. No vaginal discharge. Defecation difficult and very painful.

This patient, gentlemen, gives us a peculiar history. For two years she has had great pain in the rectum at every movement of the bowels, she has also been losing her hair, and I find that she has enlarged glands in the groin, together with a sore throat.

In order to determine the reason of the painful defecation, I had to make an examination of the rectum. This is more difficult in the male sex, but in females we can easily explore the rectum by means of the vagina. Formerly, a cylindrical speculum would have been taken, and crowded into the rectum, or we might separate the rectum by two Sims' specula. A bivalve speculum could also be used for this purpose. This would chiefly be useful for inspection of the upper part of the rectum, 4 inches up would be about as far as the speculum would reach. In examining the rectum far up, we must remember the anatomy of the part. The rectum goes first backward, then forwards; above the promontory of the sacrum it gets out of reach of the eye and finger. I probably could not have made a diagnosis in this case as rapidly as I have done, were I not aware of the peculiar method of examining the rectum first recommended some 20 years ago, by Dr. Horatio R. Storer, of Boston. This consists in putting the patient on the side, placing one or two fingers in the vagina, and rolling out the mucous membrane of the anterior wall of the rectum through the anal opening. I found, on putting the patient on her back, and examining her, a perfect hymen, which is to a certain extent a rare occurrence. I found the skin around the anus considerably reddened and eroded, which showed me that there must be some irritation there—such as a discharge which would produce a certain amount of hyperæmia of the skin. I therefore supposed there must be something in the rectum which gave rise to this discharge. Putting one finger into the vagina, I found I could very easily evert the mucous membrane, which was exceedingly congested. It ought to be bright red, a little darker than that of the vagina perhaps; but here it was of an intensely scarlet almost purple color. This showed me at once that we had a catarrhal inflammation of the mucous membrane of the rectum—a proctitis, as it is called. This condition is more common in married women who are subject to more or less irritation in these parts. A girl with a perfect hymen ought not to have such a rectum as this. This patient is very constipated, and that may account for the congestion. The pressure of the fæces irritating the lower part of the rectum, might produce this catarrhal inflammation and discharge. But still this is rather uncommon.

It is not at all impossible that, while this girl may be a virgin, so far as her vagina is concerned, yet her rectum may have taken the place of the vagina for copulation.

You see how easily I can roll out the anterior wall of the rectum, which is the usual seat of disease. I should

not be at all surprised if this rectum had been stretched already in another way, which would account for the redness of the skin around the sphincter, and for the erosion of the mucous membrane. It might account also for the constitutional symptoms which are here present. She may have been infected *per rectum*, and the chancre have healed long ago, leaving the constitutional taint, and the catarrhal proctitis.

Treatment.—You will meet this condition much more frequently in the female than in the male sex, owing to reasons already given, and it is much more easy of treatment. We will apply astringents, caustics, and gradually toughen the mucous membrane of the rectum, and in the course of a few weeks or months we will cure the patient. I have very little doubt that the catarrhal inflammation in this case extends some distance up, some 5 or 6 inches, to the upper third of the rectum near the third sphincter, which is $4\frac{1}{2}$ " up. I think the best thing to do is to put in a cylindrical speculum with the patient on the side under ether, and pour in a solution of nitrate of silver 30 grs. to the ounce, and then with a long stick of hard rubber with cotton wrapped around the end, swab out the whole rectum until the part is thoroughly touched. I have no doubt that the larger portion of the rectum will be thoroughly whitened by this solution, showing that the epithelium is abraded. It is only where the epithelium is destroyed, and there is superficial excoriation or erosion that the white albuminate of silver will be formed.

The result of this treatment will not be permanent. The patient will have to be kept under morphine hypodermically to prevent the tenesmus which almost invariably follows such an application; after a half dozen applications of this kind the mucous membrane will have become paler in color. Then begin to use mild astringents, solution of sulphate of zinc 10 or 15 grains to the pint of tepid water thrown into rectum with a syringe, or if there is much irritation inject a poppy head infusion or sweet oil or melted vaseline with a glass syringe. After a few weeks more you will probably cure the patient permanently. If there are deep ulcerations this mild treatment will not suffice and you will need a strong caustic. Pure fuming nitric acid should be applied by mean of a stick.

In married women you will find that the cause of this catarrhal inflammation of the rectum is different from that in young girls for it will often be due to uterine retroversion in consequence of which the rectum becomes congested and the mucous membrane of the rectum softened. The epithelium is then shed more rapidly than if the mucous membrane were in the normal condition. If this catarrhal inflammation of the rectum is associated with hemorrhoids and fistula, or with disease of the uterus, you must cure the uterine trouble and treat the hemorrhoids at the same time before you can cure the catarrh.

CARDIAC DISEASE WITH PHTHISIS AND CHRONIC DIFFUSE NEPHRITIS.

A CLINICAL LECTURE.

BY

ALONZO CLARK, M. D.,

Prof. Practice of Medicine College Physicians and Surgeons New York, Visiting Physician Bellevue Hospital, Consulting Physician St. Lukes and St. Mary's Hospital etc., etc.

CASE I.—Male, has had trouble with stomach for about five months back. Has a cough. Cannot walk up stairs. Gets out of breath. Gives no rheumatic history. Has pain in the chest. Has a tendency to vomit ordinary articles of food but has never vomited

blood. Four months ago legs were swollen up to umbilicus.

The pain in the chest may arise from disease of the lungs and heart, and pleurisy with effusion. The question arises as to the cause of the pain in this case. On examination we find a slight sinking under the clavicle on the right side. There is a little fullness in the region of the heart. As I listen over the top of the right lung I find the inspiration is natural. The expiration appears to be nearly as long as the inspiration, but not as loud. There is less resonance on the right side than on the left and a little constrained movement. I notice that both subclavian arteries are beating so that they impress themselves upon my attention before I can fix my mind upon what I am searching for. They are full. The beat is not very strong, but louder than natural. The heart is beating in the epigastrium. It beats with sufficient strength to depress the liver a little, which pushes the structures out into the epigastrium. There is a very modest murmur at the aortic opening, and, while it is soft in tone, it is pretty well prolonged. The heart's action is not as quick and sharp as usual, and this murmur continues through all its systole. It does not seem to be a murmur near the apex. The apex does not strike distinctly at any one point in particular. We cannot therefore be guided by its position to determine the size of the heart and this must be ascertained by percussion. There is dullness on the left side outside of the heart. As I listen behind to the voice, I lose its volume below the scapula. As I percussed outside of the heart I found that the resonance was not natural and the thought occurred to me that there might be pleuritic effusion.

There is then, here, hypertrophy of the heart, aortic murmur, and pleuritic effusion. There is also dullness and effusion on the right side of the back. What is the cause of this double pleuritic effusion? The patient has no mitral regurgitation which would be capable of producing a passive effusion. The answer was given me as I came in at the door by the examining physician. There was found a trace of albumen in the urine.

We have here then a complication of things. Here we have a case in which phthisis has made some little progress and in which there has been heart disease for a considerable time. He has double pleuritic effusion without mitral regurgitation, a condition which suggests to my mind always that there is renal disease present.

As regards the stomach, we have no evidence of any disease beyond a common form of dyspepsia. It is not safe to make the diagnosis of ulcer here. As to carcinoma, I do not think there is any evidence of its existing here, but the three forms of disease that we have made out are probably connected one with the other. The cardiac disease has by length of time produced congestion of the kidneys, and that in turn has caused the effusion into the pleura.

Treatment.—The treatment for such a case is to a considerable extent diaphoretic. The accumulation of fluid suggests that the increased action of the kidneys should be solicited. The patient also complains of piles. These ought to be treated by injecting a stream of cold water after the bowels are emptied. The form of diaphoretic that is commonly most serviceable in these cases is the steam bath. It can be rigged up at home at a very small expense. A tin cover can be made to fit a kitchen kettle that will hold a gallon or more. Cover the patient with a blanket and let a tin pipe conveying steam from the kettle be introduced under the blanket. After the perspiration is established, the patient should throw off the blanket in

front and wrap himself in the blanket behind, and get into bed. The next morning the body should be well rubbed with dry flannel, or something that will stimulate the circulation and make the surface a little red. The room of the patient should be kept constantly at 77°. For the effusion a saline diuretic and digitalis do not exercise an unfavorable influence over a kidney in this condition. I have known one cure effected by the bicarbonate of soda acting as a diuretic at the same time. My favorite among the diuretics is the carbonate of potash, twenty grains to a tablespoonful of water mixed with a tablespoonful of fresh lemon juice every two hours. Of the infusion of digitalis give a dessert spoonful three times a day. The steam bath, however, is the best thing for this patient. It will probably relieve the kidneys and carry off the fluid in the pleuritic cavity.

ABOUT BOOKS.

The Diagnosis of Diseases of the Spinal Cord. By W. R. Gowers, M. D., F. R. C. P., Assistant Professor of Clinical Medicine in University College. Second Edition. J. & A. Churchill: London, 1881.

This book is well known to students of neurology, and is as well highly prized by not a few general practitioners, under whose care the baffling cases of disease of the spinal cord have come for treatment.

It is a very efficient aid to a clear comprehension of the medical anatomy of the spinal cord, its physiology, and to anatomical and pathological diagnosis. More than this, it is a clear scientific explanation of those indications by which the nature of this class of diseases is recognized. The revision of the second edition is especially noticeable in the portion devoted to a description of the tendon reflexes. The illustrations are few and simple, and add little to the attractiveness of the book.

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK.

SINUS OF THIGH—COMPOUND DEPRESSED FRACTURE OF SKULL.

SERVICE OF

GEO. A. PETERS, M. D.

CASE I.—M. F., Ireland, æt. 42; single; laborer. Admitted to the Hospital Sept. 13th, 1880.

About one year ago patient struck himself with a club on the right thigh. A large hæmatoma resulted; this was treated at house of relief, but subsequently broke down into an abscess. This was opened and pus evacuated. He enters now for cure of sinus left after the abscess.

On Admission.—On outer side, middle $\frac{1}{3}$ rd right thigh a sinus presents; probe passes upward 3 inches, and downward 2 inches, inward $\frac{1}{2}$ inch. No dead bone detected.

Treatment.—Zinc injection.

Sept. 15th.—Deep abscess on external side of thigh opened, and 3 ii pus evacuated.

Sept. 22d.—Tissues about sinus reddened and inflamed. Ordered Lot. Plumb. et opii.

Sept. 25th.—Redness gone. Injected with bal. peru.

Oct. 15th.—Discharged cured.

CASE II.—M. A., German, æt. 37. Single. Laborer.

Admitted Sept. 14th, 1880. This p. m., patient was struck on head by unknown person.

Admission.—Lacerated wound of scalp at vertex, transverse $1\frac{1}{2}$ inches long. On introducing finger a groove, like that which an axe might cause, is felt just below and parallel with the lacerated wound. At its left extremity a few small pieces of bone chipped off are felt loose in the wound. No symptoms.

Treatment.—Attending surgeon notified; carbolic dressing; four loose pieces of bone removed. Examined by attending surgeon and operation postponed as no symptoms of compression are present.

Sept. 15th.—Doing nicely. No symptoms.

Sept. 28th.—Wound healing from bottom; allowed to get up.

Oct. 15th.—From above date to present there has been a purulent discharge from wound, which leads to belief that slight necrosis will follow. As patient desires to leave is discharged cured.

SELECTIONS FROM JOURNALS.

CODEIA IN THE TREATMENT OF DIABETES.

By R. SHINGLETON SMITH, M. D., B. SC. LOND., M. R. C. P.

In alluding to the subject of diabetes, one cannot forget what has been done by experimental physiology to place the disease on a true scientific basis; the discovery of glycogen by Bernard, and the demonstration of the connection of glycosuria with vaso-motor paralysis of the liver and with irritation of the vaso-motor centre in the medulla oblongata, are the foundations for a scientific treatment of the disease. The nervous system having been shown to be the agent by which diabetes could be most readily induced, physicians had not long to observe before they found that nature's experiments gave exactly the same results as those on the medulla of the lower animals; and cases of glycosuria associated with disease in the cervical region of the spinal cord are now known to be far from uncommon.

Glycosuria having been shown to depend primarily on disease of the nerve-centres, it is not a little interesting to observe that the drug which most controls it is one which affects nerve-tissues more especially. Opium has, indeed, been used empirically in the treatment of diabetes ever since the time of Aetius. Lecorché observes that since the time of Willis opium has become, so to speak, the panacea of diabetes. Few will agree in the remark of Niemeyer (French edition, vol. ii, p. 761), that "up to the present time, we possess accurate observations on the alkaline carbonates alone which show a positively favorable influence on the course of the disease." The cure at Karlsbad is advocated by Niemeyer as the prescription which merits the greatest confidence in this disease; and he mentions no other treatment. He considers it useless to insist on prescriptions based on purely theoretical ideas; and he argues that opium has been given in this way on the theory that it would diminish the irritability of the kidneys. The experience of our ancestors, who administered opium in the form of Theriaca Mithridatis; the advice given by Willis, Prout, Darwin, Christison, Ormerod, and many other authors; and the more recent, and perhaps more accurate, observations given by Pavy and Thompson, show that the practice is the result of well established experience, and not the result of any temporary fashion or fancy.

Dr. Lauder Brunton says that under the influence of

opium the thirst diminishes, the excretion of urine becomes correspondingly less, and the proportion of sugar present in it falls. He might have added that the weight of the patient ceases to diminish, and generally improves. Recent observers have not been content to rest with this knowledge, but have endeavored to ascertain to which of the alkaloids contained in opium the beneficial effect is due. Morphia has been found to act in a way similar to that of opium; and there appears to be little or no difference of opinion that the one drug, morphia, is equally useful as the other, the watery extract or some other preparation of opium. Codeia was first recommended by Pavy, and was preferred by him, inasmuch as it might be given in large doses without producing drowsiness.

The narcotic action of codeia has been established by various observations on the lower animals; the minor poisonous effects, as noted in human beings, are semi-coma instead of sleep, nausea, vomiting, severe pain in the stomach, sometimes tinnitus aurium, slight salivation, feeling of pressure in the temples, weakness of sight, and a somewhat remarkable retardation of the pulse (Phillips' *Materia Medica*). The potency of codeia as a soporific would appear to have been much exaggerated; the highest dose employed by Krebel was about one grain, and he recommended only one-fifteenth or one-sixteenth of a grain for sensitive subjects. Of late, it has been much employed, as recommended by Dr. Saundby, in the treatment of the cough of phthisis, where one grain dissolved in a drachm of syrup gives very great relief to the cough, and has also an appreciable soporific effect. But it is more particularly in the treatment of diabetes that codeia has proved to be of the greatest service, as the cases to be detailed will tend to prove.

This question of dose is an important one, and is at the root of the use of codeia in diabetes. Some authors recommend small doses; but Dr. Brunton states that "diabetics bear large and sometimes enormous doses of opium and codeia; and, in administering these remedies, it is well to push the dose until the sugar either disappears from the urine, or until increasing drowsiness obliges us to discontinue it." Dr. Brunton (*Practitioner*, vol. xii.), says: "The two remedies which are most serviceable in lessening the excitability of the nervous centres in diabetes are opium and its alkaloid, codeia. The latter may be given in doses of a quarter to half a grain three times a day at first."

Dr. Pavy (*Guy's Hospital Reports*, vol. xv.) gives a remarkable series of cases, in which daily records of the composition of the urine were made, in which careful analysis of the urine showed that the sugar disappeared entirely under the influence of opium, morphia, or codeia, with the aid of restriction in diet. The drugs were given in gradually increasing doses: opium in doses of one grain up to nine grains thrice daily, morphia up to three grains, and codeia up to ten grains three times a day. The great advantage of codeia over opium and morphia was found to be that, whilst equally efficacious in controlling the disease, it does not exert the same narcotic effect. When given in a small dose to begin with, and increased gradually, nothing may be perceived beyond its effect upon the disease.

Dr. Cavafy, in the *St. George's Hospital Reports*, has subsequently reported a case in which he gave fifteen grains thrice daily with a good result.

Dr. Ord has also reported the case of a woman aged 33, with diabetes of four months' standing, who gained seven pounds in one week with one grain of sulphate

of codeia twice a day, after diet alone had failed to produce any good effect.

It is remarkable that so experienced a physician as Trousseau should not allude to the use of opium and its alkaloids in the treatment of diabetes. He says that alkalies are unquestionably beneficial; and that other medicines, tonic remedies, such as rhubarb, may be associated with them; and yet he does not mention the fact that opium has ever been given, and he does not discuss its utility. (*Clinical Medicine*, vol. iv.)

It is equally remarkable that Dr. Heineman of New York, in the American edition of Zeimssen's *Cyclopædia*, omits all mention of codeia and of opium in diabetes. He gives details as regards dietary, and states that preparations of ammonia are destined to take an important rank in the treatment of this disease.

On the other hand, Budde states that his observations show that alkalies have no special influence in diminishing the excretion of sugar.

Dr. Kratschmer gives results of a series of observations with a view of testing the value of carbonate and sulphate of soda, and of morphia, upon the excretion of sugar. He finds that neither the carbonate nor the sulphate appeared to exert any influence on the amount of sugar excreted, but he has satisfied himself that in morphia we possess an agent that is not only capable of materially reducing the excretion of sugar, but also of diminishing to a remarkable extent the general tissue-metamorphosis of the body (*Practitioner*, vol. xii.).

Carbolic acid and the salicylates have also been much lauded, as also more recently boracic acid. Numerous observations have shown no good result from these drugs; and I submit that time should not be wasted in therapeutical experiments on patients, and that such drugs should only be given when codeia has been found to be either useless or injurious.

Although I cannot claim such satisfactory results as those given by Dr. Pavy, yet the cases to be reported show that the drug employed has a remarkable power of checking the elimination of sugar, and that a corresponding improvement in the health of the patient results. It would appear that alkalies, and all other methods of treatment, are far inferior to the treatment by codeia, which may be considered to have almost a specific action on the disease. The facts before us seem to justify decided language with regard to the use of codeia, which should not be permissive, but imperative, in all cases of advanced diabetes mellitus: whatever else may be given, codeia should first be given, and in fairly large doses, until some physiological effect is produced. Even dieting appears to sink into insignificance by the side of codeia; in one case given by Dr. Pavy, the codeia alone was sufficient, without any restriction of diet, the patient being on a mixed diet the whole time.

It has been supposed that codeia is a dangerous drug. Barnay (*London Medical Record*, October, 1877), says: "The tendency of codeine to produce convulsions is so great, that it should be excluded from therapeutics." It has been stated, as a result of Bernard's experiments on the opium alkaloids, that whilst narceine is the most soporific element, codeine is that which most tends to convulsions. The literature of codeia does not bear out this statement, and I have never observed anything to support it.

I have now endeavored to show that the utility of codeia is by no means universally recognized, but that it is fully deserving of confidence—nay, more, is imperatively demanded—in the treatment of diabetes, where treatment other than dietetic is required.

CASE I.—Robert C., aged 27, clerk, had been feeling

weak and losing weight for four months, as much as 14 lbs. in three weeks. He was admitted October 3rd, 1879, with symptoms of diabetes. The urine was 230 ounces daily, of specific gravity 1032, containing 2 per cent. of sugar, and a trace of albumen. His weight was 7 st. 13 lbs.

Date.	Ounces.	Spec. Grav.	Date.	Ounces.	Spec. Grav.
Oct. 5 ..	Urine 360 ..	1030	Nov. 8 ..	Urine 134 ..	1032 <i>g</i>
" 6 ..	" 250 ..	1031	" 12 ..	" 116 ..	1031
" 7 ..	" 370 ..	1030 <i>a</i>	" 16 ..	" 116 ..	1033 <i>h</i>
" 8 ..	" 255 ..	1031	" 20 ..	" 100 ..	1033 <i>i</i>
" 9 ..	" 274 ..	1030	" 24 ..	" 94 ..	1030
" 10 ..	" 300 ..	1031	" 28 ..	" 86 ..	1028
" 11 ..	" 274 ..	1031	Dec. 3 ..	" 78 ..	1041 <i>k</i>
" 12 ..	" 292 ..	1029 <i>b</i>	" 8 ..	" 120 ..	1040 <i>l</i>
" 13 ..	" 140 ..	1030	" 10 ..	" 86 ..	1037
" 14 ..	" 140 ..	1026 <i>c</i>	" 11 ..	" 70 ..	1039
" 15 ..	" 150 ..	1027	" 23 ..	" 78 ..	1040 <i>m</i>
" 16 ..	" 128 ..	1031	1880.		
" 17 ..	" 170 ..	1031	Jan. 27 ..	" 180 ..	1030
" 18 ..	" 144 ..	1029	" 30 ..	" 180 ..	1031 <i>n</i>
" 19 ..	" 180 ..	1031	Feb. 2 ..	" 120 ..	1041 <i>o</i>
" 20 ..	" 250 ..	1033 <i>d</i>	" 4 ..	" 90 ..	1032
" 21 ..	" 104 ..	1030	" 8 ..	" 80 ..	1035 <i>p</i>
" 22 ..	" 170 ..	1030	" 10 ..	" 90 ..	1035
" 23 ..	" 160 ..	1033	" 12 ..	" 84 ..	1037
" 24 ..	" 150 ..	1036	" 13 ..	" 110 ..	1035 <i>q</i>
" 28 ..	" 110 ..	1030 <i>e</i>	" 14 ..	" 80 ..	1037
" 30 ..	" 124 ..	1031	" 16 ..	" 60 ..	1035
Nov. 1 ..	" 110 ..	1030 <i>f</i>	" 18 ..	" 52 ..	1036 <i>r</i>
" 4 ..	" 140 ..	1033	" 27 ..	" 68 ..	— <i>s</i>

a Ordered gluten bread. *b* Codeia, one grain three times a day. *c* Weight, 7 st. 12 lbs. *d* Codeia, three grains three times a day. *e* Weight, 8 st. 3 lbs. *f* Morphia, one-sixth of a grain thrice daily. *g* Morphia, half a grain thrice daily. *h* Morphia, two-thirds of a grain three times a day. *i* Morphia, one grain three times a day. *k* Morphia was discontinued. *l* Cordeia, two grains thrice daily. *m* Weight, 8 st. 4 lbs.; codeia was discontinued. *n* Codeia, two grains thrice daily. *o* Weight, 8 st. 5 lbs. *p* Codeia, three grains thrice daily. *q* Codeia, four grains thrice daily. *r* Weight, 8 st. 7 lbs. *s* Weight, 8 st. 11 lbs.

He was now made an out-patient.

CASE II.—Albert B., aged 23, clerk, had rheumatic fever four years ago. Before that he had a cough, and was supposed to have disease in the upper lobe of the left lung. His father died of phthisis.

Five months ago he began to notice that he was languid and thirsty; then he found he was losing flesh, and that he passed more urine than usual. Four weeks ago he was hit on the nose with a cricket-ball, and since then symptoms had been worse. He had always had a slight cough, especially in winter; and had a little expectoration and occasional hæmoptysis.

On admission, July 12th, 1880, he was a thin, delicate looking youth, weighing only 7 st. 6 lbs., although of average height. The evening temperature was 98°; pulse 108, small. The skin was dry, the tongue slightly furred. At the left apex some obscure *râles* were heard, but there was no dulness. The heart sounds were normal. The urine was abundant, clear, acid, of specific gravity 1035, containing no albumen, but six to seven per cent. of sugar.

From the 12th to the 19th he was on a diabetic diet with bran-bread, and he took codeia in doses of two grains thrice daily. The fall in the quantity of urine passed was considerable, from 206 ounces on the 12th to 150 on the 19th. Gluten-bread was then given instead of bran-bread, but milk to a pint was continued. On the 21st the codeia was increased to three grains per dose, and on the 24th the urine had fallen to 80 ounces. The milk was then discontinued, and the urine fell still further to 64 ounces on the 26th, and 66 on the 26th. On August 3rd the patient had gained three pounds in weight; the urine amounted to 64 ounces, of specific gravity 1036. One pint of milk

was re-ordered, and also cod-liver oil in drachm doses, three times a day. Four days later the patient had lost two pounds in weight, and the urine had risen to 85 ounces, of specific gravity 1040; the milk was therefore left off on the 7th, and the codeia and cod-liver oil continued as before. Two days later the patient took some white bread surreptitiously, as was discovered by the fact that the urine amounted to 100 ounces; but, in spite of this drawback, the urine fell to 64 ounces on the 12th. On the 14th, the weight being now stationary, the codeia was increased to four grains in each dose, and in seven days the weight had increased by three pounds, and the urine on the 21st was 74 ounces, of specific gravity 1037. On the 27th the patient was very drowsy, could sleep at any time, and seemed apathetic from a state of semi-narcotism, the urine being 69 ounces at 1035, the weight being 7 st. 10 lbs. At this stage the codeia was discontinued, and twenty minims of liquor ferri perchloridi, three times a day, ordered instead. One week later, September 4th, the patient had lost two pounds, but passed not more than 68 ounces, of specific gravity 1040. He then left the infirmary, and was lost sight of for two months. At first, after leaving, he spent two weeks at Weston-super-mare, and improved whilst there. On returning home he had an attack of vomiting, and began to be troubled with cough and expectoration. He grew rapidly weaker, and the vomiting recurred occasionally.

On November 6th he was re-admitted to the infirmary, having lost eleven pounds in weight during two months. He now passed 153 ounces of urine of specific gravity 1032, clear, acid, containing a trace of albumen. The tongue was furred; he complained of pain after food and constipation, but his appetite continued good. The sputum was purulent and nummular; there were clicking sounds to be heard at both apices, but no dulness. He was now put on a modified but not rigid diet, brown bread being allowed; and on November 9th, codeia was ordered, with the result that the urine fell from 181 ounces on the 8th to 96 on the 12th. On the 16th, cod-liver oil was ordered, and the codeia was gradually increased from one up to five grains three times a day. On December 14th, the weight had increased to 6st. 12 lbs. (one pound), and the urine was 96 ounces, of specific gravity 1035; at this time the albumen had disappeared. On December 28th, there was a loss of three pounds in weight, and the urine was generally about 100 ounces of average gravity 1035. A trace of albumen had reappeared. The expectoration was now profuse, and there was abundant evidence of breaking down at the left apex; but the temperature was always subnormal, ranging from 96° to 97°; the lowest reading was 95.6° on January 1st. On the following day the temperature rose to 98.8° in the evening; and on the 2d, it was 100.2° at 8 p. m. This pyrexia was associated with evidences of consolidation at the base of the left lung of inflammatory character, and death took place on January 6th, about ten months after the commencement of his illness. A *post mortem* examination was not permitted.

REMARKS.—The lung-symptoms gave a special double indication for the use of codeia, inasmuch as it was of great benefit in checking the cough, as well as in diminishing the production of sugar.

CASE III.—Henry B., aged 29, married six years, with three children, a farm laborer, of good family history, had never heard of diabetes in his family. His father, mother, three brothers, and one sister were all living. Two years ago he fell with a sack of flour on his back, but was not laid up, and did not appear to have injured

himself. For the last twelve months he had passed a large quantity of urine, and complained of insatiable thirst. During this period he had been unable to do any work in consequence of weakness. His weight was formerly twelve stone. There was no history of syphilis, of alcoholic habits, or of any previous disease.

On admission, March 21st, 1881, he was found to be rather thin; his weight was 10 stone; he was of average height, and fair complexion. The skin was dry and rough; the pulse 60, regular, and full; temperature 98.4°; tongue white. He had a tendency to constipation. There was no cough. The sounds of the heart and lungs were normal. His sight was good, but the edges of the optic discs were rather ill defined. His urine was abundant, 205 ounces, of specific gravity 1038, acid; it contained no albumen, but much sugar. He was ordered a mixed diet, including meat, eggs, milk, and brown bread, without potatoes or sugar; and treatment by codeia was at once commenced.

On April 11th, after nearly three weeks' treatment, the quantity of urine had come down from over 200 ounces in the twenty-four hours to 170 ounces; the specific gravity remained as before; and the quantity of sugar amounted to about ten ounces daily. Gluten-bread was then ordered, four ounces daily; and the bran-bread was discontinued. The milk was still allowed, two pints each day.

On April 18th, the milk was discontinued; and from this date all saccharine and starchy food was rigidly excluded.

The codeia, at first given in doses of a grain three times daily, had been increased to two grains on March 28th, to three grains on April 2d, to four grains on April 9th, five grains on April 18th, and six grains on May 7th, when the urine had come down to 144 ounces, of specific gravity 1044. From May 9th to 17th, the pills were omitted, and a saline mixture substituted. The omission of the pills made no apparent difference in the patient's condition; there was no difference in his mental state, no difference in pupils or in pulse; and the quantity of urine ranged from 140 ounces on the 12th to 152 on the 17th. The codeia was then resumed, three grains being given three times in the day on the 17th, and six grains three times in the day on the 18th. On the 20th, six grains were taken four times; and on the 23d the quantity was increased to nine grains three times daily. The quantity of urine then fell to 80 ounces, of specific gravity 1054, on the 27th; and 70 ounces, of specific gravity 1056, on the 29th. The highest gravity observed was on May 31st, when the quantity was 96 ounces, and the specific gravity 1063. On May 6th the codeia was discontinued, as the patient complained of drowsiness, and his pulse was 66, small and weak. This was immediately followed by a considerable increase in the quantity of urine, which rose to 130 ounces on the 13th and 20th. The codeia was resumed on the 21st, in doses of four grains and a half, and on the 30th was increased to nine grains daily, with the same result as before—an immediate fall in the urine from 130 to 90 ounces.

On July 5th, morphia (half a grain three times a day) was substituted for the codeia, and a few days later in grain doses, whereupon he was made an out-patient, and ordered to continue the morphia and cod-liver oil steadily for a month.

These three cases all exhibited marked improvement whilst taking codeia, which improvement ceased when the codeia was withheld, and was renewed on its repetition. Morphia had a good effect in two of the cases; but the improvement was much less marked with it than with the other alkaloids.—*Brit. Med. Jour.*

NOTE ON UTERINE HÆMOSTATICS. By J. BRAXTON HICKS, M. D., F. R. S., ETC.

As a small contribution to the practical portion of the subject of uterine hæmostatics, I venture to make a few remarks on the mechanical kinds, which we know by the name of plugs or tents. In doing so I must be understood to refer only to those cases where the cavity of the uterus is not sufficiently large to contain blood in quantity, the loss of which from the circulation is likely to produce anything of serious detriment.

If we go back to former practice and to text-books, we find it recommended that, in case of threatened abortion with much hemorrhage, a vaginal plug should be used.

The vaginal plugs recommended are the tampon, cotton or wool, silk or cambric handkerchief, rags, or sponges, passed in till the vagina is filled up. An India-rubber ball also has been suggested, covered with felt or such like material. Now, even with the best management, there is much of distress in the patient in the use of the vaginal plug; and with regard to its hæmostatic effect very much of uncertainty, and generally partial failure; and in the hands of the unskilful and careless there is positively no restraint of bleeding worth the mention. If at any time any good results be produced, it is rather by the reflex irritation that it causes, whereby the uterus expels its contents. It is not so very rare an occurrence that one finds, on removal of the plug, the ovum on the uppermost part of it.

But besides its palpable inefficiency, a vaginal plug, being of a porous texture, absorbs a large quantity of blood and thus conceals it from our sight; it also favors decomposition, and this, as is well known, occurs within a few hours; and thus we have a new element of danger.

Again, in many cases, when called to such a case, we have no speculum at hand; and although we may extemporize one out of card-board, book-covers, or such like material, yet, before we have thoroughly and firmly filled the vagina, we must have given the patient considerable pain and distress, besides having occasion to put such pressure on the urethra as may necessitate subsequent catheterism. For these reasons, namely, the imperfection of action, pain in introduction, and danger if left in long—in other words, its general crudity, it seems to me that as a general rule the vaginal plug should, in the cases I have supposed, be discarded.

And as a substitute I would urge the employment of the cervical plug as being more precise in action, as well as being capable, if we use a dilating kind, of expanding the canal for the purpose of exploration, or for the expulsion or removal of its contents.

If, then, in any case of uterine hemorrhage, where we have the conditions above alluded to, we desire, besides immediately checking the bleeding, to dilate, we can use the compressed sponge-tent; the best form of which I have found to be those made, after Sir James Simpson's plan, by Duncan, Flockhart & Co., of Edinburgh. These can be introduced by a long pair of forceps, and retained *in situ* by placing a piece of sponge, with tape attached, in the upper vagina. Of course, even these materials retain some secretions, etc., and tend to facilitate decomposition; but their removal and cleansing can be effected much more readily than the vaginal plug, because it requires but a small portion. The sea-tangle tent, by reason of its slipperiness, is unreliable as a plug in hemorrhage. If we desire, however, only to plug the cervix, we can very

easily extemporize a plug from materials to be found in every house.

For instance: take a stick (say a flower stick) about a foot long, and taper it at one end to about the size of an uterine sound, or rather larger; wind round this end, for about three inches down, strips of cambric rag, lint, or sponge to the required thickness, judging from the size of the os. Strips of sponge can be readily obtained from cup-shaped sponges of compact texture, and they can be tied on by thread, layer after layer, till the requisite conical form is obtained. The strips of the other materials can be laid on similarly. After the covered end has been well greased, it is passed into the canal, and the stick retained *in situ*, after the manner in which we tie in a catheter; an elastic tape, if obtainable, is to be preferred.

A catheter or bougie, or the end of the long injection-tube, can be treated in the same way. If we require great precision of application, then it is best that the hand should hold the external end till the hemorrhage has ceased. If the catheter and stilet be used, then I have found it convenient to bend the external portion backwards, between the buttocks, tying the tape round the ring of the stilet—the ends of the tape being carried, as usual, to back and front of the waistband.

These more homely adaptations I have recommended, rather than the especially made kinds, because they are often wanted at times when we cannot send home for a more showy sort. In any case, a cervical plug, expanding or not, is more precise, less crude and painful in application, than the vaginal, and, in my experience, nearly always successful. In all cases of abortion, where a plug is necessary, I would lay it down as a rule, that the expanding tent should be employed. In cases of flexion with abortion (and it is this complication which so frequently increases the hemorrhage) it will be found that the covered stick or stemmed plug, above described, is very useful; for, if the fundus be elevated during its introduction, the uterine cavity is straightened, and evacuation of the contents thereby facilitated.—*Brit. Med. Jour.*

FORMULARY AND POINTS IN PRACTICE.

COLIC IN INFANTS.

A warm bath, fomentations to the stomach and a mixture of aromatic spirit of ammonia, dill water and some alkali—perhaps lime water is best—form suitable treatment. Dr. Condie recommends as especially valuable to prevent recurrence of colic the following:

- ℞ Ext. hyoscyam.....grs. iv-vj.
Magnes. calcin.....grs. xxiv-xlvij.
Pulv. ipecac.....grs. ij-iiij.
Fl. pulv. xii, et sig. One every three hours.

INFANTILE ENTERITIS.

The treatment is similar to that of gastritis; restricted diet, poppy stupes, cool drinks, a warm bath. Calomel and acetate of lead combined with ipecacuanhæ and henbane are recommended by Condie. The dose of calomel should be small.

- ℞ Calomel.
P. ipecac.....a grs. ij.
Ext. hyoscyam.....grs. iv-vj.
Acetat. plumb.....grs. viij-xij.
Fl. pulv. xii, et sig. One every 3 or 4 hours.

STOMATITIS.

Dr. Dewees especially recommends the following:

- ℞ Cupri. sulph.....grs. x.
Pulv. cinchon. opt.....3 ii.
Pulv. gum arab.....3 i.
Mel. commun.....3 ii.
Aq. fontan.....3 iii.

Ft. applicatio. The ulcerations to be touched twice a day with it.

FOR ROUND WORMS.

- ℞ Pulv. spigeliæ.....grs. x.
Pulv. stanni.....3 ii.
Syr. zingiberis.....3 i.
Mellis q. s.

Neligan.

This makes a paste or bolus which may be taken at bed-time, and followed in the morning by a purge.

INCONTINENCE OF URINE IN CHILDREN.

- ℞ Liquor strychniæ.....mm. j.
Tinct. belladonnæ.....mm. ij-x.
Infus. cascarillæ.....3 ii.
Ft. mist.

Sig.—This may be given three times a day to a child three years old. Abstinence from or great moderation in fluids towards night is of course necessary.

MEDICAL NOTES AND NEWS.

It is related of the poet Heine that on leaving Hamburg a friend gave him a large sausage, begging him to take it to Paris as an offering to a homœopathic doctor, a friend of his. In the railway carriage Heine tasted a bit of it, and liked it so much that, before he reached Paris, there was only a morsel left. This he inclosed in an envelope and dispatched it with the following letter: "Dear Doctor.—According to the precepts of homœopathy, the thousandth part is more efficacious than the whole. I send you, therefore, that portion of the inclosed sausage in the hope that the pleasure you derive from it will be a thousand times greater than if you had received it all."

Pasteur and his Germ Theory.—M. Pasteur's laboratory, in which he remains about sixteen hours out of every twenty-four, is in the Rue d'Ulm. He is at present suffering from ill-health; in fact, as he said to a gentleman who called upon him the other morning, "I may say that one half of my body is paralyzed. I ruined my health in trying to attain my aim in giving back life and activity to the silk industry, which is one of the glories of our country and one of the chief sources of its commercial importance. For the last six years I have spent a great part of my time in experiments with regard to silks, and I have felt my health ebbing slowly away. Some fifteen years ago, when it was first made public that I had the idea of making observations on the liquids extracted from the chrysalis, and discerning by these means the good from the bad grain of silk worms, everybody shrugged his shoulders. What a dream it is, they said, to put microscopes, scientific and delicate instruments, into the hands of peasants on a farm! It is not practicable. But the experiments silenced all these criticisms and objections. The microscope has now become a common instrument in the silk industry, and is handled with

especial aptitude by the women operatives. As I have already said, in the preface of my book on silk worms, the role of the infinitely little appears to me infinitely great, both as causing divers contagious maladies and as contributing to the decomposition and return into the atmosphere of that which has existed.

"It is by means of this system that I found out the causes of the maladies of wines and beers, the real theory of the formation of vinegar, and as a consequence of this I have known the means of preserving with absolute certainty organic matters, and transporting them without any risk of decomposition. Before my time the production of these 'infinitely little,' variously called bacteria, microbes, etc., was little understood. The part which they play in the economy of nature was unknown and was carried to the account of spontaneous generation. Nevertheless, this production is the cause, if not of all, certainly of a great number of contagious diseases. These beings, invisible to the naked eye, constitute a virus which is extremely dangerous. It even causes death, as the great malady of *charbon* has proved. I have discovered that it is possible to render these microscopic beings inoffensive. I have also found that virus reduced may become an actual preservative, a veritable vaccine to be opposed to the development of virus which is in its nature mortal. It was in this way that I came to invent the vaccination with *charbon* of domesticated animals. I hope," he added, as if the labor to accomplish were almost too great to contemplate with calmness, "I hope at least to find a means of vaccination for preventing the yellow fever, plague, hydrophobia, etc."

The visitor descended into the basement in company with M. Pasteur, with certain uncomfortable sensations in the calves of his legs, fearing a possible encounter with some one of the inoculated dogs; and he found himself in a vast cellar into which air and light were poured through great tunnels. Immense cages were ranged round the sides of this subterranean apartment, and in each of these cages was a dog. Over each cage was a placard indicating the day of the inoculation of the animal. "Up to this time," said M. Pasteur, "I have been able to discover but little; still, I consider it a first step. Before I began my experiments it was believed that hydrophobia could be communicated only by the saliva, and people were frequently astonished at seeing dogs that had been bitten by mad dogs remain, sometimes all their lives, without manifesting any symptoms of the dreadful malady. I have discovered the virus of hydrophobia in the brain of the dog, in the spinal marrow and in the whole of the nervous system generally. One drop of this virus, preserved from contact with the microbes of the atmosphere and introduced into the brain of a healthy dog, invariably gives him hydrophobia, and he dies of it within fifteen days.

"Look," said M. Pasteur, "here is an animal inoculated with the virus about ten days ago. Just put your foot up to his cage." The visitor did so, but with fear and trembling. "You see he licks your foot with every manifestation of affection. In two days he will be dead. He is now in that period of affectionate manifestation which generally precedes by two or three days the period of violence, in which he will bite anything that comes near him. Here is another one. Just give a kick at his cage. See how he springs at you! He will die to-morrow.

"There are cases on record of men who have not died after being bitten by mad dogs. That was because the saliva had been subjected to the influence of the atmosphere, and that a kind of struggle was going

on between the microbes of the virus and the microbes of the circumambient air. These latter appear sometimes to neutralize or modify the effect of the virus; but with the virus in the pure state, as I extract it from the brain of one of my dogs here, death in a fixed period is certain, and up to this time we have found no remedy for this pitiless affliction.

"Now I hope, if my life is spared, that after many comparisons and experiments I shall finally get a remedy; but before getting to the end of my researches I must exactly establish the organic constitution of the microbes of this virus, for these invisible beings differ from each other as a man differs from a horse, and a horse from an elephant. They are also subject to divers influences, and that which diminishes the power of some augments the capacity of others. This accounts for the manner in which I treated the *charbon* which was slaying thousands of sheep every day before the invention of my vaccine matter, which is nothing less than the virus itself reduced. By exposing the virus to an atmosphere of forty degrees during a certain time, the microbes become so feeble that when they were in the body of an animal they only communicated the very lightest *charbon*, and thus forever guaranteed the animals against the epidemic.

"The vaccine matter which I have obtained against *charbon* presents an entirely different guarantee from that of Dr. Jenner against the smallpox. This latter vaccine matter is taken from the heifer—that is to say, it is an animal disease which man is inoculated with. Now suppose the cowpox should suddenly disappear; how would you preserve men from smallpox? This supposition was what caused my great dispute with Dr. Jules Guérin, who, in the very midst of a session of the Academy, challenged me to a duel because I said to him that he did not know what he was talking about.

"Here," continued M. Pasteur, "you may see cocks, hens, guinea pigs, hares, mice and monkeys, to whom I have communicated all the grave maladies which might prove epidemic, so that I may study these diseases in two or three phases, and find antidotes, or at least derivatives, to use against them. In this little cabinet near by you will see about a thousand small vials. They contain all the germs or the virus of terrible maladies. Here (said the great man with a smile) is enough to slay all Paris, and to bring into being the most murderous epidemics. I have to keep up a regular Turkish bath temperature here, to preserve all these germs in good condition." The visitor peeped into the cabinet with his handkerchief carefully pressed to his nose, but the odor was so strong that he was not sorry to get out of the door into the green little garden close to the laboratory.—*Boston Journal*.

Dr. Hubert Airy of England, has been at some pains to prove that diphtheria may be propagated through the air, being carried from place to place by aerial currents. A proposition which seems hardly to require proof.

James Spencer, M. D., F. R. S., F. R. C., Professor of Surgery in the University of Edinburgh, died in that city June 6, 1882. He was 70 years old, having occupied his position as Professor of Surgery about 18 years. He published in 1871 two volumes entitled "Lectures on Surgery."

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HIP JOINT DISEASE,

A CLINICAL LECTURE

BY

JOSEPH D. BRYANT, M. D.,

Professor of Anatomy, Bellevue Hospital Medical College, Surgeon to Bellevue Hospital, Etc.

Gentlemen:—My topic for to-day is Hip Joint Disease. The first thing I purpose to teach you in connection with this disease is its division into stages. There are three stages. First, the stage of congestion, usually spoken of as characterized by more or less pain, or stiffness. Patients get up in the morning, draw the leg after them, walk with a limp, and complain of more or less tenderness. In the afternoon it will wear away. This is the stage of congestion. Secondly, we have the stage of effusion. Thirdly, the stage of dislocation or destruction of tissues surrounding the joint.

One of the first symptoms in hip joint disease is pain or stiffness, or both. You may have pain at the location of the joint; at the knee-joint, or at the ankle-joint. The obturator and obturator accessory nerves are the seat of the pain. Running down to the thigh we have the anterior crural nerve and the greater and lesser

sciatic. When a nerve causes pain it must be due to irritation, which may be referred to any portion of its course or to its origin; there may be some pressure on the nerve in its course, or the pain may be due to reflex action. Suppose we describe the anterior-crural. It comes from the lumbar plexus, third and fourth lumbar nerves, dips downwards, goes out the pelvis through the obturator foramen; divides into two branches, one of which sends a branch to the hip-joint, and the other passes downwards and forwards to supply the abductors of the thigh and the obturator externus muscle.

The law is, that the nerve that supplies the structure of a joint itself also supplies the muscles that move the joint, and hence the obturator nerve goes with the hip-joint, supplies the ligamentum teres and then the obturator externus and the abductors. If you have inflammation of the capsule of the hip-joint in the congestive stage you may have, as the disease begins in the ligamentum teres, a reflex action from the branch that passes to supply the structures of the hip-joint downwards and backwards to the muscles which are supplied by the third portion of the lumbar nerve. Hence they contract. This explains the theory of contraction in joint-disease; pain or irritation of the nerves which supply the structure of the joint reflected to the spinal cord, then back to the muscles they supply, and then the muscles contract and pull on the firmly-fixed joint.

To locate the seat of the disease is to find, first, where the pain is located; then find the nerve and its origin.

CASE I.—Illustrating the First Stage of Hip-joint Disease. Charles G., æt. seven years; fell on the left hip six weeks before admission to the hospital. Soon after he began to walk with a limp and complained of great pain. There is rigidity of the true flexors and limitation of movement of the left hip joint. Inguinal glands on the left side are enlarged.

In the first place, a history of injury always precedes disease of the hip-joint. Secondly, as the result of this injury we have local pain and tenderness. Thirdly, as soon as placed in a quiet position the joint is fixed. Therefore the prognosis is perfectly good if you can keep the patient perfectly quiet during the first stage.

Suppose this boy had pain in his knee, what would be the cause of it? There are three distinct situations where pain occurs in connection with the knee:—In the joint itself; on the inner surface of the joint, and around the patella. If it occur in the knee-joint itself, the obturator or anterior crural is implicated. When the pain occurs around the patella then it is very largely due to the anterior crural, which does not send any branches to the hip-joint, and we cannot say that it reflects irritation from the hip-joint itself. The small sciatic may give us pain. It runs down the posterior surface of the thigh to the ankle-joint, and supplies the integument of the posterior surface of the thigh.

This boy gives a history of pain. He locates the

pain on the outer side of the hip. The point of location is posterior to the trochanter major.

Treatment.—A man can do no better than to test treatment in hip-joint disease on the theory of symptomatology. He has pain on movement of the joint, and he has pain due to muscular contraction. The indications are very clear. First, relieve the patient of his pain. If the pain be due to muscular contraction the indication is to control the action of the muscles. If the pain be due to pressure of the joint surfaces, it should be relieved by traction brought to bear upon the joint. If movement causes pain we have got to do two things: We must keep the patient quiet, and we must keep the joint quiet. How much weight shall we apply? There is no stereotyped rule. Apply a weight of sufficient amount to relieve the patient. Two pounds are usually sufficient. By drawing on the bone you overcome the degree of irritation caused by the muscles due to reflex action. This prevents the drawing together of the surfaces and will relieve the patient, not only of continuous, but also of reflex pain. It is difficult to separate the articular surfaces. They are held in position by atmospheric pressure and by the cotyloid ligament, and also in every case of hip-joint disease by the contraction of the muscles themselves which draw together the lower portion of the articular head of the femur against the inner portion of the acetabulum. If you draw the foot in the axis of the femur the adductors are pulling in the median line. Extension steadies muscular power. It prevents contraction. It relieves pressure upon the bony surfaces.

The prognosis relates to the life of the patient. 2d, to saving the limb. 3d, to the use of the limb.

The causes of immobility of the pelvis are muscular contraction; ankylosis, fibrous or bony; and the deposition of inflammatory products around the joint. As a symptom of the first stage of hip-joint disease we have contraction. Attached to the bone we have the abductors, flexors, extensors and adductors. The muscles implicated in almost all cases of hip-joint disease are the flexors and adductors. The flexors are the psoas and iliacus. If you have contraction of the pectineus supplied by the obturator, or of the adductor longus, &c., they bind the pelvis to the thigh, and as soon as you attempt to extend the thigh the pelvis must come forward.

CASE II.—Illustrating the second stage of hip-joint disease. This boy was kept on crutches; he had a greater degree of movement with his leg flexed and rotated outwards. The leg is apparently shortened. In the first stage we have little or no deformity. In the second stage we have effusion into the capsule of the hip-joint, or else around the tissues which exist in connection with the capsule. The capsule begins at the anterior superior spinous process of the ilium, runs downwards, forwards, and inwards, to be attached around the anatomical neck of the femur. If we distend the capsule the first effect is flexion and rotation outward. Do you always have version depending upon unwinding of the capsular ligament? No. Version may depend upon contraction of the muscles inserted into the trochanter major or unwinding of the capsule due to effusion, or it may be due to both.

In the second stage of hip-joint disease you may have inversion, eversion, apparent lengthening or apparent shortening. When you have effusion into the capsule of the hip-joint, followed by flexion of the abdomen, and rotation outwards is accompanied by pain you will find that with the pain you have effusion; but you may have effusion into the capsule of the hip-joint without any rotation outwards, provided no pain occurs. The

degree of pain influences the amount of flexion and rotation outwards.

In the third stage of hip-joint disease you have permanent shortening depending upon dislocation, caries, necrosis of acetabulum, loss of bone, destruction of ligaments, etc.

The leg is everted or inverted in sudden dislocation. An abscess has formed here in the anterior and outer surface of the thigh and extended over the brim of the pelvis in the direction of the acetabulum. If this be a case of perforation of the acetabulum it teaches us never to despair. If it be a case of iliac abscess corresponding to the iliacus muscle it necessarily lessens the gravity of the case.

Treatment.—The treatment consists in keeping the leg perfectly quiet and fixing the joint.

Diagnosis of Hip Joint Disease.—Hip joint disease is liable to be confounded with a good many affections.

In the first place you may mistake it for a congenital dislocation. To settle this point measure the trochanter major down to the internal malleolus and see if it corresponds with the other side. It may be mistaken for acute articular rheumatism, neuralgia, sacro-iliac disease, hysteria, worms, teething, pain referable to destruction of the anterior crural or obturator nerve. You put the child on its back, press upon the popliteal space and up comes the vertebra showing Pott's disease or vertebral caries. Psoas abscess is another affection, which is confounded with hip-joint disease; also inflammation of the bursa about the hip-joint.

The diagnosis must be made by careful examination and from the history of the case and symptoms.

If you have disease of the sacro-iliac synchondrosis you will in the first place have absence of local symptoms. There will be no pain or tenderness over the hip. You will have no effusion, but you may have rigidity, especially if the nerves of the abdomen are irritated, but on the other hand in hip-joint disease you have pain and tenderness on pressure, pain on pressing the surfaces together. Then you have the history of the case, the difference in deformity, etc. Suppose it be a case of hysteria, you may determine this by ether. The moment the patient begins to come out from under ether with hip-joint disease, and you move the joint, muscles will contract again. On the other hand before perfect consciousness has occurred she will move the joint and then contract the muscles again on recovering consciousness. The one contracts in semi-consciousness and the other does not. If it be psoas abscess you have the absence of local symptoms, but you have pain oftentimes of the knee because the obturator and anterior crural nerves are involved. Chronic rheumatic arthritis may be mistaken so that you must examine minutely into the character of the pains, their action and the causes that give rise to them.

THE RADICAL TREATMENT OF FIBROID TUMORS OF THE WOMB.

BY WM. GOODELL,

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Very fortunately fibroid tumors of the womb invade the womb usually at a time of life so near the menopause, as to give the woman a chance of tiding over the perils of the few intervening years of ovarian activity. The climacteric once reached, these growths generally grow smaller and may even disappear. More frequently they simply do not increase in size. When, however, these growths begin at an early period of menstrual life—as they occasionally do in white women, and very

frequently in colored women—their treatment often becomes one of the most perplexing problems of gynecology. There is no question of the occasional benefit derived from the persistent use of ergot, which, by contracting the uterine walls, cuts off the blood supply of the fibroid. But, while I have repeatedly seen the tumor grow much smaller under its use, I have also seen the remedy do more harm than good. Ergot is best administered hypodermically, and preferably in the sub-umbilical region of the abdomen, where it gives least pain, and where its skin stains are best concealed. Bonjean's purified extract of ergot, in the proportion of fifty grains, dissolved in three hundred minims of distilled water, is for this purpose a very trustworthy preparation. One or two hypodermic syringefuls is the dose, which should for several weeks or even months, be deeply injected once every day. One of my most successful cases from the use of ergot, was, however, one in which the remedy was given by the month. Yet, on the other hand, ergot, however administered, will occasionally do no good, but it will greatly increase the hemorrhage, especially when the tumor lies under the mucous coat of the womb, and projects into its cavity. Then, again, there are peculiar idiosyncrasies which cannot bear ergot in any form or in any dose. Such persons are either greatly nauseated by its use, or they complain of intolerable headache, and the remedy must be withheld. Further, the use of ergot is not wholly without danger. Through the squeezings which the womb gets from the ergotic contractions of the uterine walls, necrosis may take place, and this, while curative, is liable to cause blood poisonings through absorption of putrilage. Headache, severe uterine tormina, and occasionally, a spurious hectic fever, often attend the persistent use of this drug. Twice have I met with a metro-peritonitis, set up by the violent contractions of a womb made vulnerable by the presence of a growth in its wall. In one of these cases, that of a multiple fibroid, the issue was fatal. Despite these drawbacks, however, ergot, especially when combined with ammonium chloride, is so efficient an agent in at least mitigating the more exacting symptoms arising from a uterine fibroid, that its use should always precede every other treatment. But supposing that ergot, together with its firm ally, ammonium chloride, have been tried and found wanting, can we remove the tumor in any other way? This question brings me to the consideration of the radical, or surgical treatment of these growths, to which my lecture has especial reference, and of which I wish to give my personal experience. Whenever the growth so projects into the uterine cavity as to be seizable, its enucleation by avulsion should always be first tried. Having now performed this operation fourteen times, I can speak in positive terms of its value. In every case the operation was by no means easy, and in two cases very tedious, the tumor being removed piece-meal. In each case the tumor was wholly taken away, and all recovered but one, a patient of Dr. T. J. Yarrow's. The lady in this case being greatly weakened by her previous hemorrhages, died suddenly on the sixteenth day, from heart-clot. An autopsy revealed the cause of death, and also, that the tumor had been wholly removed. Since my own method of performing this operation is a development growing out of considerable experience, I shall not apologize for giving it; First, seize the tumor with a strong fenestrated polypus forceps, or with a volsella forceps whenever the growth is too smooth and too glib to be securely held by the former instrument. I prefer the fenestrated forceps, because, being without teeth, it is

not only safer than the volsella, but it does not have to be opened so widely and, therefore, needs less room. The tumor being held, firmly, the loop of a wire-écraseur is slipped over the handle of the forceps, and then bent backwards toward the operator, so that the beak of the écraseur shall first enter the uterine cavity. When the beak touches the fundus of the womb, the wire is coaxed up beyond the claws of the forceps, and as much higher up as possible. The slack of the wire is next drawn in, and its free end secured to one of the cross-bars of the écraseur. The mucous coat alone is now cut through as flush with the uterine walls as possible. The fibroid is then wrenched from its bed, by traction and by a twisting movement made both with the écraseur and the forceps, while firm suprapubic pressure is kept up by the hands of an assistant. Sometimes the seized portion will break off. Then the portion left behind must be caught, noosed and treated in precisely the same manner. Twice have I been fooled in trying to remove the whole tumor in this way. In these cases the projecting portion of the fibroid was shaved off flush with the wall of the womb. But the portion left behind was in a few days so pushed out or enucleated, by the uterine contractions as to enable me to remove it by a second operation. In one of these cases I was so completely deceived that I will narrate it as a lesson to others: A lady, aged 34, and the mother of two children, had for the past four years lost much blood at her monthlies. For this she was ineffectually treated by a number of empirics. Finally she called in Dr. R. Armstrong, of Loch Haven, who at once discovered a fibroid tumor of the womb, and last month brought her to me. The cervix was not only not effaced but was unusually long, yet its canal was open enough to admit the finger. A tumor, the lower portion of which could be circumscribed, filled up the uterine cavity. Crowding a large fagot of sponge and lamenaria tents into the canal, we proceeded on the next day, April 29th, to remove it. With the additional help of Dr. W. L. Taylor, the growth was seized by a polypus forceps; and with much difficulty noosed by the loop of the wire écraseur. When the wire was screwed home, it was found that only a portion of the tumor had been cut off. The supposed remaining piece having in the same manner been seized and removed, a cup-shaped cavity was left in the uterine wall which I mistook for the bed of the tumor. The abdominal wall was so laden with fat that the womb could not be well defined. Six days later uterine pains setting in, I made an examination, and found the womb spontaneously enucleating into its cavity a fragment, which from being interstitial and therefore embedded, had been overlooked. Being wrenched out of its bed by traction and twisting, it was found to be so large that I had to slit the cervix before it could be withdrawn from the uterine cavity. It proved to be much the larger portion of the tumor, the other two fragments being, so to speak merely its sprout. These three fragments weighed nine ounces. The lady's convalescence was somewhat retarded by an inflammatory deposit in the broad ligament, but she is now doing well, and left for home day before yesterday. In interstitial fibroid, or in very large sub-mucous ones, which merely bulge into the uterine cavity, and do not project enough to be seized, the rule should be to dislodge them from their bed by enucleation and remove them, if possible, at one sitting. To accomplish this difficult operation, two conditions are indispensable; (a) The tumor must be within operative reach; (b) The os uteri must be sufficiently dilated for the needful manipulation. In illustration of this mode of

dealing with this class of fibroid tumors I shall give the following examples: Case I.—Multipara, æt. 40, been losing blood for four years. Examination revealed fibroid occupying whole of posterior wall, fundus, and most of anterior wall. Operation by enucleation. Rapid recovery. Case II.—Multipara, same age. Excessive monthly flow for past twelve years. Hemorrhages had reduced her to a mere shadow. Nourished by rectal injections. Fibroid of posterior wall, operation by enucleation. Recovery slow but sure. Case III.—Unmarried, 39 years old. Frequent and long continued hemorrhages for past seven years; operation by enucleation. Death on next evening from heart-clot, the result of excessive weakness. The above three cases occurred in women so desperately low and anæmic from repeated losses of blood, that it is a wonder to me that any of them recovered. Yet from the successful issue in two cases, I feel that the third case would have recovered, had she come to me when she was stronger and better able to stand the shock and loss of blood. Such formidable operations as these should not be undertaken directly before the monthly period, as the womb is then in a congested condition, and more likely to bleed. Nor should they be performed just after a severe hemorrhage, but when the woman has rallied from its effect. The hemorrhage during the operation is quite free, and may become alarmingly so. I have, however, succeeded by injections of vinegar in checking it sufficiently to go on with the operation. Vinegar, although not so potent a hæmostatic as a solution of the iron subsulphate, is preferable, because it does not make firm clots, and does not incommodiously constrict the parts; should oozing follow the enucleation, injections of vinegar ought first to be tried. If they fail, the bed in which the tumor lies should be swabbed out with a strong solution of the iron salt. It may, indeed, be needful to stuff the wound with iron-cotton, but, whenever practicable, it will always be best to fill up the uterine cavity with sponges, to which withdrawing-strings have been fastened. The opposing raw surfaces of the wound will then be forced into firm contact, and the healing will be speedier. There is yet another class of fibroid tumors, like the third preceding case, which cannot be treated by immediate enucleation. They hardly project into the uterine cavity, or they are situated so high up as not to be accessible. In these cases the capsule of the most prominent portion of the tumor should be incised. The finger is then passed into the wound and the capsule stripped off from the tumor as far as it can be reached. Ergot is now given, and the extrusion of the tumor left to the expulsive efforts of the womb. Although it is best to make the incision as long as possible, it is astonishing through what a small opening a large fibroid will deliver itself. I have seen large tumors work their way through an incision barely large enough to admit my index finger. Of course the opening becomes much larger by stretching and by ulceration. This process of slow extrusion may last for weeks, and, as the tumor descends, should be aided by traction, and by breaking up the capsular attachments as they come within reach. But, on several occasions I have had the tumor wholly enucleated and unexpectedly thrown off, without any manual help on my part; the expulsive efforts of the womb being in those cases equal in violence to the throes of labor. Sometimes, in this method of slow extrusion, necrosis of the tumor takes place, and it comes away in fragments and putrilage. The risk of blood-poisoning being great in such cases, the utmost care should be taken, by detergent intra-uterine injections, to keep the

sloughing growth as sweet as possible. To complete this lecture some reference must be made to a class of fibroid, which being sub-peritoneal, are not amenable to any radical treatment *per vaginam*. If pedunculated, they can be treated like ovarian tumors, by laparotomy. Sometimes they are removable by enucleation through an abdominal incision, as in a successful case sent me by Dr. A. H. Sheaffer, of Lewistown, in which the tumor weighed seven pounds. In one case I obtained perfect success by removing the ovaries, and thus artificially bringing on the change of life.

MITRAL REGURGITATION.—AORTIC REGURGITATION.

A CLINICAL LECTURE

BY

ALONZO CLARK, M. D.

Professor Practice of Medicine College of Physicians and Surgeons; Visiting Physician to Bellevue Hospital; Consulting Physician St. Luke's and St. Mary's Hospitals, etc., etc.

CASE I.—Male, æt. 12.—Has had a dry hacking cough for a month past. Has palpitation of the heart. Three years ago had scarlet fever. Some time after had pain in the joints. Has been sick with rheumatism three years in succession about the same time each year, in the spring.

There is a sort of rheumatism that follows scarlet fever almost immediately, but it has not the character of this kind of rheumatism. It is a fact in regard to articular rheumatism that in young children it is apt to be recurrent. If it occurs in the spring it may recur in the fall. There is no definite period from one attack to the other. It may recur in the following spring. The advantage of knowing this fact is, that by prescribing the bicarbonate of soda just before it is expected we can prevent its recurrence. The bicarbonate of soda will act as a preventive. This, however, is not the case in adults. They may have rheumatism at any time. Those who have once had rheumatism are more liable to have it again than others.

The administration of the bicarbonate of soda as a preventive of rheumatism should be attended with the daily examination of the urine, so as to reduce the acidity to just that point required to slightly redden the litmus paper. If the urine becomes alkaline it is better to give less of the soda; if the acidity is not diminished give more.

We have no means of determining which attack of rheumatism in this boy was followed by pericarditis, or endocarditis, but it is evident from the symptoms that one of the attacks were. Perhaps there may have been a recurrence of cardiac inflammation with each attack. The presumption in case of a child is, if he has rheumatism, that he will have cardiac inflammation of some sort. The majority of rheumatic cases in younger children is attended with inflammation of the pericardium and endocardium. It is the exception when one escapes.

A heart weighing 57 ounces was taken from a person who had rheumatism at six years of age.

Even through the clothes you can perceive some degree of swelling upon the left side. The cardiac enlargement is generally much more marked in children and young persons than in adults, because the ribs are

not very firm, and the cartilages are not long and will yield.

As I place my ear to the apex, I hear a murmur connected with the first sound of the heart. This means mitral regurgitation. I shall probably hear it behind, at the inferior angle of the scapula. It sounds just as loud behind as in front. There does not seem to be a second murmur. The apex is now under my finger. It is not tilted up, but rather disposed forward. The width of the heart is about $3\frac{1}{2}$ ". This is all right for a man and all wrong for a boy. His heart should measure $2\frac{1}{2}$ ". The beat is pretty strong. At present it is beating pretty frequently. There is no particular swelling of the veins in the neck, and no apparent turgescence of the arteries as there is very likely to be if there were regurgitation about the aortic opening. He looks like a healthy boy.

There seems then to be an endocarditis that has affected particularly the mitral valve, and rendered it incompetent to hold the blood in the ventricle when contracting. It goes out through the ventricle, and is liable to congest the lungs at any time, and the danger of kidney trouble is of course to be taken into account.

Treatment.—The treatment of this case is chiefly by advice. He must avoid anything that makes his heart beat with unusual force.

As to medicine I do not know of anything that it is worth while to administer. Many doctors would think of digitalis. He is, however, under excitement now. He cannot take exercise as much as another person could. As to running, it is entirely out of the question. He has good appetite, and there is no evidence of his suffering after taking his meals. That is a good feature in the case.

CASE II.—Male æt. 32; has pain in the back, arms and shoulders. Face congested. No cough. Cannot stoop forward and pick up a pin. Has complained for about eight months. Thinks he is growing worse. Has palpitation of the heart.

In aneurism the pain is apt to be in both shoulders. A good many persons with aneurism have their face flushed by bending forwards.

I do not discover any beating at the top of the sternum. The doctor who first examined him outside, suspected there was aneurism. Therefore I look for that. There is a very fine pulsation there, but it seems to be in the lower rather than in the upper part. There is a single murmur which is more distinct on the level of the third rib than above. The murmur with the first sound can be heard distinctly at the apex; but I think it is conducted there from above.

With reference to the chance of aneurism, I listen where aneurism is most likely to occur and get no murmur.

A good many years ago, I was called to see a gentleman who was supposed by some of the physicians who examined him to have an aneurism of the arch. I wanted to know the natural extent of dullness in the upper third of the sternum made by the great vessel. I noted $1\frac{1}{2}$ " in his case and the next day at the hospital I selected some men not suspected of any disease of the heart or arteries and I found that the region of dullness in them was just the same as in the gentleman suspected of aneurism.

The dullness in this case percussing from without inward is nearly $1\frac{1}{2}$ " outside of the inner end of the clavicle. On the other side it extends exactly to the inner end of the clavicle. The dullness on the right side is two inches. It may be due to a general enlargement of the vessel or there may be a small aneurism which may grow larger hereafter. But the absence of

any murmur and of any signs of pulsation perceptible by the hand or ear is rather opposed to the idea of aneurism.

I get the apex beat by percussion $5\frac{1}{2}$ " to the left of the median line. This is a considerable enlargement. Here you see how perfectly quiet the heart acts despite the great hypertrophy. In the boy it was labored. Here both in time and in force of pulsation it is as quiet as in a healthy person. It has been said sometimes, that the hearing of a murmur a little below the inferior angle of the scapula on the left side was evidence of mitral regurgitation. But this is not true. Any loud murmur can be heard in almost any part of the chest. This murmur can be heard at the point indicated as evidence of mitral murmur. It is single and is an aortic obstructive murmur.

CASE III.—Male æt. 26; troubled about twelve years with heart. Had five or six attacks of rheumatism; first attack at 14. Never had more than one attack of rheumatism a year. Rheumatic attacks lasted from four weeks to two months. The only symptom now present is beating of the heart on over-exercise.

Any body can hear his own heart beat when he gives attention to it. The most convenient time is when he goes to bed. Put the hand under the ear and you can take your pulse as exactly as by the wrist.

This does not seem to be as aggravated a case as either of the others. There is hardly any lack of symmetry in the two sides. There is a little more fullness on the left side than on the right. I can hear the apex beat in this case very clearly and I can detect the murmur with my finger. There is a jar under my finger that I am sure will be developed into a murmur when I put my ear there. At the point, however where I felt that fine jar I can hardly hear a murmur at all. It is simply conducted there. There is a double murmur at the aortic opening; the second or diastolic murmur is more distinct than the obstructive murmur. The regurgitation of blood at the aortic opening makes a very decidedly louder noise than the blood going out of it. I do not hear the murmur in the back.

ORIGINAL ARTICLES.

REPLACING AND HEALING OF PIECES SEPARATED FROM THE HUMAN BODY.

BY

G. HALSTED BOYLAND, M. D., M. A.

The experiment of replacing in position portions of the human body hacked from it either in duel, battle, or by accident, is of comparatively recent date. The results have been so far satisfactory as to demonstrate conclusively that such parts, when replaced, do heal, and not only heal rapidly, but bind themselves to the main body with surprising strength and compactness, provided always that two cardinal points be strictly observed: 1st, the piece separated must be kept warm to the normal temperature of the body; 2d, it must be replaced, whether with adhesive plaster or the suture, or both, directly the flow of blood ceases. The following cases are such as frequently come under the observation of medical men abroad.

In the first case, in a duel with schlagers (a weapon something like a rapier, but with a flatter blade, of about the same length and blunt at the end), the left

ala with a part of the point of the nose was cut off one of the principals by a sweep of his antagonist's sword—this piece containing skin, muscles, cartilage and mucous membrane was cut in a clean wound, square off; it was at once put back into position, sewed on with fine sutures; over the sutures strips of adhesive plaster were applied, extending over the whole point and side of the nose on to the cheeks; in order to prevent evaporation and drying as much as possible a patch of oiled silk, and upon this cotton batting were placed, the nose being tamponed also with it at the same time. On the third day the sutures were taken out and the piece found to be quite black; the whole epidermis sloughed off as a black crust, but under it the normal rete malphigii appeared, and one small portion of the epidermis remained. After a time a layer of horny epithelium put out. At this juncture the patient, being sufficiently recovered to leave the clinic, was in consequence lost sight of for nine months. The profession are thus unfortunately deprived of some interesting facts regarding the successive stages of healing. At the expiration of nine months then, the wounded man reappears upon the scene with the left nasal ala slightly flattened and of normal color, the surface of the portion that had been cut off made one with the whole side of the nose, no distinct line marking a cicatrix; on some parts of it the epithelium was a little thicker than on others, making a few very small rough places. It is worthy of attention that on the third day already, when the sutures were removed and the epidermis had sloughed off, the part was firm in its natural position. The sloughing of the epidermis is easily accounted for by the fact that the capillaries became contracted and, so to speak, dead, on account of their extreme fineness, during even the very short time that the piece was separated from the body. We would recommend in such an emergency a process carried out in another case that came under our own observation, viz.: that the separated portion be held in the mouth, if warm water cannot be procured, until the suture and all is ready—thereby the animal heat would be retained and the chances of sloughing of the epidermis materially diminished.

The next case, also the recipient of a wound, was a student who had fought a duel also with schlagers, out of whose nose a polygon-like piece was hacked, just above and including the tip of the nose, thereby exposing in extenso both nares. This piece was only found after long search, having been thrown by the force of the blow some distance; after the bleeding had ceased it was at length placed in position. Likewise in this case the greater portion of the epidermis came off in the shape of a black crust. The piece, when healed on, was bordered on all sides by a sharp-edged scar, its color being red and the part itself slightly tumefied. The wound left on the nose at the time was clean and even-bordered, as regards the skin, while the cartilage and mucous membrane were separated irregular and zig-zag. The same treatment with reference to detail of placing in position, sutures, adhesive plaster, etc., was carried out in these cases, although the large scar and red color, accompanied by tumefaction, would indicate a less successful result than in the first case mentioned. The length of time that elapsed before the separated piece could be found comes also into consideration, although adhesion takes place more readily after the bleeding ceases; nevertheless, if the parts are left disunited too long, the inclination to adhesion is lost entirely, as it begins to diminish as soon as the main wound commences to dry, the surfaces of wounds of medium size of this character being for

some little time moist with a gelatinous substance composed of blood and serum.

As regards the healing itself it is a *prima intentio*, although the sutures in these cases were only removed on the third day. In treating wounds per *primam*, in which pieces are not separated from the human body, v. Bruns removes them in twenty-four hours.

As for the pathological anatomy, or, more properly speaking, the process of healing itself, such cases undoubtedly illustrate that the vessels of the piece, after being placed in position, received in the lumen of each the blood from the severed vessels of the borders of the wound on the nose. In unfavorable cases, a hemorrhagic infiltration of the separated piece, after it is placed in position, which may be followed by mummification, is liable to result. In the more successful ones the epithelial covering is everywhere thrown off. In those again where the surgeon is especially fortunate, the circulation in the *whole of the* portion separated or in parts of the same, may re-establish itself without any disturbance as to nutrition. Of importance in the healing of wounds upon which transplantation of skin grafting may be carried out, is the proof here deduced, that in transplantation there is a direct flow of blood out of the granulation vessels of the main wound into those of the transplanted piece. In this operation, which is known as Reverdin's transplantation, sloughing of the epidermis is a general rule, which, nevertheless, like all others has its exceptions; but they are very few and very far between. Technically, where portions of the flesh are severed from the human body, the above procedure is the best to follow, practically, it is the most successful.

In a recent number of the *Boston Medical and Surgical Journal* is recorded a case in which the hand almost entirely severed at the wrist hung to the forearm by a thread of skin only. Instead of amputation the hand was replaced on the above principles and kept firmly in position for a long time, finally it *re-united completely*, and the patient had considerable use of it, being able to move the fingers. As long as the merest thread connects the divided part to the main limb, so long the circulation may go on in a part of it, gradually re-establish itself throughout and thus save the limb or member, and often the life of the patient.

These cases coming within the writer's individual experience belong to a branch of surgery quite modern, which was made the subject of an article by him some years ago in the Cincinnati *Lancet and Clinic*.

Although having a special bearing, they are, nevertheless, not without interest to the general practitioner, who will find, in what seem to be a few isolated cases, a large field for thought and practical surgical application.

29 North avenue,
Baltimore, July 12th, 1882.

ABOUT BOOKS.

A Practical Treatise on Diseases of the Skin. By Louis A. Duhring, M. D. Professor of Diseases of the Skin in the Hospital of the University of Pennsylvania; Dermatologist to the Philadelphia Hospital; Author of "Atlas of Skin Diseases," etc. Third Edition. Revised and Enlarged. Published by J. B. Lippincott & Co. Philadelphia: 1882. Price \$6.

The publication of a third, so soon after a second, edition of this most excellent work, speaks volumes for the popular appreciation it has met with. An appreciation which it fully merits. In no treatise on

this subject have we seen combined such accurate descriptions of skin affections, and so many practical suggestions regarding their therapeutical and hygienic management.

This subject has been so entangled by many authors, and the difficulties of diagnosis and treatment so magnified, that the task, so ably performed by Dr. Duhring, of presenting so intelligible a description of this most important class of diseases must be hailed with especial satisfaction by the profession. Beyond the revision of those portions of the book which relate to microscopy, and the addition of illustrative cases, we notice little change in this latest edition. The form and substance being materially the same.

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK.

GENU VALGUM.—McEWEN'S OPERATION.

SERVICE OF

ROBERT F. WEIR, M. D.

E. D., æt. 10, U. S. Admitted Feb. 17th, 1881. Child first walked at seventeen months, but could not walk well until two years old. When four years old, the mother first noticed the large size of the knee-joints, and that they began to strike against each other in walking. This deformity has increased, the child being very apt to stumble and fall while running; when he stoops over suddenly the left leg turns out.

Admission.—Child well nourished and healthy. Shows well-marked knock-knee, the left foot being turned inward. The left ankle shows by measurement a deviation of $1\frac{7}{8}$ inches from the median line of body, and 1 inch from line of axis of the femur; the right, $1\frac{3}{4}$ and $\frac{3}{4}$ inches deviation from same lines, the inner malleolus being taken as the point of measurement. When the knees are brought into contact the inner malleoli are $2\frac{3}{4}$ inches apart.

Treatment.—Ether. Dorsal decubitus. Esmarch's bandage applied to right leg. Lister's precautions. Leg semiflexed and laid on the outer side of a sand-bag. At a point on inner aspect of thigh, one finger's breadth above the edge of internal condyle of the femur, and just anterior to the tendon of the adductor magnus, a scalpel was introduced down to the bone, the direction of the incision being in the long axis of the femur and about $\frac{3}{4}$ inch long. Osteotome introduced into the cut by the side of knife, which was then withdrawn, and chisel then turned round so that its edge was transverse to the long axis of the bone. Chisel driven into the bone with a mallet, cutting anterior, posterior and inner walls in succession, the instrument being worked back and forth to prevent impaction of edge. Chisel removed several times, a carbolyzed sponge held over the wound and attempts made to fracture the limb by actual force. This failing, the instrument was again introduced and the cut in the bone made more extensive. At the third trial the bone gave way, and the deformity was easily corrected. Wound covered with carbolyzed sponge and bandage, and same operation done on other leg. Small pieces of adipose tissue protruding from the wound were cut off, and Lister dressing, covered by plaster splints, passing from ankles to upper $\frac{1}{2}$ of thigh, were applied, the legs being held straight. The legs were then bandaged together at the ankles, a pad being placed between the thighs above the point of fracture

and the calves of legs being supported on pillow to obtain some tilting at front of fracture.

April 2d.—Splints and dressing removed. Union firm, position excellent.

20th.—Walks well without crutches. Discharged cured.

SELECTIONS FROM JOURNALS.

INOCULATION OF LEPROSY.

A recent number of Virchow's *Archiv.* (vol. lxxxviii, 1882) contains an account by Professor Kobner, of Berlin, of attempts to inoculate leprosy on animals. Although the results were negative, the experiments are of considerable interest. Professor Kobner confirms fully the observations of Hansen, Neisser, and others, in reference to the bacillus of leprosy. He not only found the organism in fresh juice from the tubercles, but found it in preparations which had been many years in alcohol, and still more easily in dried portions of leprosy-tissue which had been kept folded in paper for an equally long time; so much so, that he recommends travelers in countries in which leprosy is common to preserve the tissues in a dried state, in so far as they wish to keep them for subsequent examination in reference to the bacillus. A tubercle was excised from the thigh of a patient, a German, of healthy family, who had contracted the disease during an eleven years' residence in Pernambuco. Inoculations with the juice and with small portions of the excised tissue were made on a monkey, two guinea-pigs, two young rats, a white mouse, two rabbits, a pigeon, three eels, a mud fish, and a frog. The monkey died 126 days afterwards of tuberculosis, but no leprosy-tissue was found, any more than in any other of the inoculated animals. One of the rabbits died on the fifty-sixth day, the other was killed after five months and a half. The inoculations in the case of those animals had been made by inserting small pieces of leprosy-tissue into the anterior chamber of the eye. Those portions of tissue remained visible, and gave rise to no inflammatory symptoms. After being 56 days immersed in aqueous humor, the leprosy bacilli were well preserved and easily demonstrated, but they had not grown into the tissues of the iris or cornea. In preparations of dried blood, prepared by Ehrlich's method, Professor Kobner demonstrated that the bacilli are present in the circulating fluid. So far from considering the results of his negative experiments as conclusive, Professor Kobner refers to the time that elapsed before tuberculosis, recurrent fever, and septicæmia were successfully inoculated on animals. Further experiments of the kind are certainly desirable, and the attention of medical men practising in countries in which leprosy is common, may be advantageously directed to this question.—*Brit. Med. Jour.*

INTERNAL ADMINISTRATION OF CHRYSOPHANIC ACID.

The external use of chrysophanic acid is now well known. Its internal use is, however, a novelty, but one which appears to promise good results. At the meeting of the Glasgow Medico-Chirurgical Society, on April 7th, Dr. Napier showed two cases of psoriasis which had been treated by the internal administration of chrysophanic acid. The initial dose was one-eighth of a grain of the acid rubbed up with sugar of milk, and was gradually increased. The result in

both cases was very good, and he believed that this was the first time that this acid had been used in this way. The advantage of this method was, that the remedy might be employed internally where it was too irritating to be applied externally. In the discussion which ensued, Dr. Charteris said that Dr. Napier's cases were a further proof of the fact that chrysophanic acid acted as much by being absorbed as by any local effect which it had on the affected skin. Dr. Stevens thought that, where it could be tolerated by the skin, the acid was as likely to do good by external as by internal use, because then it would act generally by absorption, and locally by directly influencing the affected area. The cases are fully described in a paper by Dr. Napier, published in the *Glasgow Medical Journal* for June. Dr. Napier thinks that he has shown for the first time that, in certain cases, psoriasis may be cured by the use of chrysophanic acid internally; that the belief that the drug has a general as well as a local action is well founded; and that the acid is capable of being absorbed when taken internally, and of exercising a special influence on the skin after absorption.

GUITEAUMANIA.

"Was there ever," asked Dr. William A. Hammond when recently addressing the New York Medico-Legal Society on the case of Guiteau, "was there ever a man whose whole career, from childhood to the present day, has afforded a more striking example of that form of mental derangement called reasoning mania?" and seeing that what Dr. Hammond calls reasoning mania is synonymous with what he might as correctly call arrant roguery, the answer which he anticipates and desires may be given to his question. That Guiteau has been an arrant rogue, or, according to this new self-contradictory euphemism, a reasoning maniac, from his youth up until now, will scarcely be denied by anyone who has glanced at the reports of his trial; and we fail, therefore, to perceive the necessity for the elaborate proof which Dr. Hammond adduces in support of this self-evident proposition. It may be well to examine Dr. Hammond's position, and inquire what justification he had for applying the term lunatic to the assassin of President Garfield.

We do not enter upon the general question whether it is expedient to divide lunatics into two classes, one of which shall be amenable to penal discipline, and the other only to medical treatment, further than to say that to do so would be to run counter to all advances hitherto made in the medical jurisprudence of insanity, and to create difficulties greater than have yet been experienced in the administration of the law. Efforts have heretofore been directed to reconcile the legal definition of insanity with the scientific description of it; and the attempt to force these two asunder, to limit the former to a small group of idiots and raving madmen, and to extend the latter so that it shall include half the human race, can only end in inextricable confusion. Putting aside, however, general considerations, let us see what grounds Dr. Hammond has for applying the term lunatic in this particular instance, and for urging that Guiteau, although worthy of death, is still the victim of a disorder of the mind and a diseased brain. What, then, are the evidences of Guiteau's insanity which Dr. Hammond, after much probing of his life, and ransacking the records of his trial, is able to bring forward? They are as follows:

"That he had several insane relatives; that while at college he abandoned his studies, and entered the Oneida community; that he left it, and subsequently

returned; that he again left it, and went to New York to establish a newspaper devoted to the dissemination of peculiar religious ideas; that he abandoned this project; that he studied law, and was admitted to the Bar; that he was married, and then divorced through his own procurement; that he became interested in religion, and delivered lectures on the subject; that, whilst thus engaged, he attempted to strike his sister with an axe; that though a physician could find neither illusion, nor hallucination, nor delusion, he pronounced him insane, 'because of exaltation of the motives, and explosions of emotional feeling, also excessive egotism, and that he was the subject of pseudo-religious feeling,' and advised his confinement in a lunatic asylum; that he soon afterwards gave up lecturing; that he associated himself with the National Republican Committee, and prepared a speech, which, however, he only delivered once; that, after the election of General Garfield, he asked, by letter, for the appointment of Minister to Austria; that he went to Washington to urge his claims; that, not getting the position, he applied for that of Consul at Paris; that he earnestly and persistently followed up his application by verbal and written requests, having no special claims for this place except his own idea of the value of his services, and having the recommendation of but one person; that he unwarrantably inferred from a remark of the Secretary of State that he might be appointed; that, in spite of rebuffs from the officials in authority, he continued to expect the appointment; that he made inquiries about a pistol, which he subsequently purchased, borrowing money to pay for it; that he practiced with it by shooting at a mark; that he followed the President on two occasions for the purpose of killing him, but was deterred once because his wife, who was sick, was with him; that, finally, he lay in wait for him at the railway station, and shot at him twice, intending to kill him, and inflicting a mortal wound. That, after the shooting, he attempted to get to the jail, for protection; that he was arrested, and that a letter to General Sherman, asking for troops to protect him, was found on his person; that, in two letters written several days before the shooting, he declares the President's nomination was an act of God, his removal an act of God; that, in another document, addressed to the American people, and dated as early as June 16th, he used this language: "I conceived the idea of removing the President four weeks ago; I conceived the idea myself, and kept it to myself," and other words of like character. That he subsequently claimed that he was inspired by the Deity to kill the President, and that he had had previous inspirations; that, for years before the shooting, he had procured a precarious living, not paying his board bills, borrowing money, evading the payment of his railroad fares, retaining money collected by him as a lawyer, and being several times in prison on charges of fraud; and that, on the stand, he stated that he felt remorse for his deed so far as his personal feelings were concerned; but that his duty to the Lord and the American people was paramount."

Now, what does all this amount to but the description of the career of an unscrupulous and sanctimonious adventurer? Are there not thousands of men in the United States and every civilized country whose lives, if carefully reviewed, would present as many mad points as that of Guiteau—mad points which make a specious show when brought together, but which are really of no account when scattered over long tracts of commonplace rational conduct? An English psychological journal argued recently that the late Thomas Carlyle was a lunatic; and the proofs of that thesis

which it adduced, such as his depression, hypochondriasis, irritability, and misanthropy, were quite as good in their way as Dr. Hammond's proofs of Guiteau's insanity. Taking these proofs individually, there is not one of them that bears the stamp of madness; and, taking them collectively, they are incompatible with any theory of mental aberration. Insanity is often regarded as a lawless condition, of which anything and nothing may be equally predicated; for it seems to those who look upon it carelessly from afar to be a wild storm of thought, blowing where it listeth, and without centre or limitations. To those, however, who have studied it more closely and discerningly, there are revealed order in its ravages, and system in its cycles; and to them it becomes possible to say, in many instances, what course it will pursue, what features are characteristic of it, and what conjunctions are never witnessed in it. And skilled students of mental meteorology of this kind, who are free from personal bias and the thralldom of premature judgments in print, will certainly say that Guiteau's case, as described by Dr. Hammond, is not classifiable under any variety of insanity with which they are acquainted. Dr. Hammond has evidently ranged through the medico-psychological literature of many lands in order to obtain precedents and opinions with which to fortify his position; and we may assume, therefore, that his quotations afford the nearest approaches to descriptions of Guiteau's supposed malady that are to be found. Accepting these quotations, for the sake of argument, as fairly depicting genuine and recognized types of insanity—which might well be questioned—to which of them, we would ask, does Dr. Hammond's version of Guiteau's case correspond? To none of them, must be the reply. Were there in Guiteau those blind impulses to the perpetration of acts of violence, or even of sanguinary fury, which Pinel makes the prominent symptom in mania without delirium? Certainly not. Was there in Guiteau that sudden transition from propriety of conduct and goodness of nature to licentiousness and moral degradation which Esquirol makes characteristic of his "reasoning monomania"? It cannot be pretended that there was. Did Guiteau exhibit the delusions of persecution which Morel enumerates amongst the active principles of mania of character? There is no evidence that he did. Was there in Guiteau that blind submission to sexual desires, jealousy, ambition, vengeance, which Dagonet insists on as making out reasoning mania? His history does not sanction such an idea. There is just one description of a form of insanity given by Dr. Hammond to which Guiteau's case bears a striking resemblance; and that is his own description of reasoning mania, not quoted from his published writings, but prepared for the occasion; and to pronounce Guiteau insane because this description fits him would be very much as if, having seen Arthur Orton, and drawn a portrait of him, and called it Tichborne, we should swear that Orton was Tichborne because he resembled the portrait.

But Dr. Hammond's description of reasoning mania is not in conformity with medico-psychological experience on this side of the Atlantic. Such lunatics are not to be met with in asylums. They are a new discovery in the fauna of insanity in the United States; and we would suggest to Dr. Hammond that, as Guiteau is the most striking specimen of this kind of lunatic that has yet been discovered, he should substitute for the cumbersome and inconsistent name that he has adopted, the unmistakable designation of "Guiteaumania." We should then, with greater facil-

ity, be able to discuss with him the symptoms and medico-legal relations of this unique variety of mental alienation, as he would call it, or of moral turpitude, as we should prefer to designate it.

We have said that Guiteaumania is not recognized in Europe as a form of mental disease either involving irresponsibility or calling for curtailment of liberty or medical treatment. It may be admitted at once that Guiteau had an ill-balanced and depraved mind; but to this admission it must be added that he was not, in these respects, a whit worse off than three-fourths of the inmates of our convict prisons, who are notably infirm of purpose and inconsequential in thought, but who are nevertheless treated like accountable beings. The shrewdness and perspicacity which Guiteau displayed in his running accompaniment of interruptions throughout his trial, render it impossible to argue that his intellect is in any degree enfeebled. His power of apprehension and of foreseeing the drift of any questions asked, was incontestably proved on innumerable occasions to be unusually acute; his memory was repeatedly shown to be tenacious and serviceable; and his judgment, when applied to the actions and motives of others, was often exhibited in a favorable light as regards its clearness and penetration. The anxiety which Guiteau displayed about his personal safety, and the precautions he took to secure it, are sufficient evidence that he is amenable to ordinary human motives; and the self-restraint which he more than once exercised when it suited his purpose to do so, betokened the possession of ample volitional power at his command. His crime was not a reckless and motiveless one, nor can it be said that it was prompted by any delusive belief. Of course, but few crimes have one sufficient motive; most are the resultants of several convergent mental forces; and so in Guiteau's case it may be impossible to put one's finger on any single spring of action, and say this impelled the fatal bullet; but still it may be safely averred that, in his itch for notoriety, his disappointments, his miscalculations, there is enough to account for his guilty performance without resorting to any theory of insanity in explanation of it.

The bodily or physical symptoms or accompaniments of insanity are obviously of the highest diagnostic value in doubtful cases, for they cannot be assumed at pleasure, and often supply the key to intricate and obscure mental phenomena. Dr. Hammond does not assert that there has been observed in Guiteau any bodily indication of disease of the brain or nervous system; but he quotes from Campagne's *Traite de la Manie Raisonnante* a list of the peculiarities of cranial configuration which are supposed to be characteristic of this disorder; and he leaves it to be inferred that Guiteau conforms in these as in other respects to his delineation of reasoning mania. The cranial peculiarities which Campagne enumerates, and which are set forth with affected precision, amount in substance to this: that reasoning maniacs have heads smaller than those of sane persons and other kinds of lunatics, larger than those of idiots, about the same size with those of imbeciles, and presenting an antero-posterior curve less than that of sane persons, lunatics and imbeciles, and even idiots. They labor, we are dogmatically informed, under congenital atrophy of the posterior lobes of the brain, the skull having been diminished in size, to the detriment of the occipital region. But could anyone we would ask, stand up with gravity in the presence of men scientifically acquainted with cranial morphology—men like Professors Flower and Turner, and Mr. Parker—and allege that there is anything distinct-

tive in the cranial characteristics of moral maniacs which are thus put forward? Before attaching the slightest value to Campagne's statements, we should require to have full and authentic histories of the cases in which his measurements were made, a detailed description of his methods of observation, and all his tables of figures. And even on finding, after these conditions had been fulfilled, that his conclusions were justified, we should tell him that all he had succeeded in proving is that wicked and weak-minded people have, on the average, smaller heads than those who are more virtuous and intelligent, a generalization which could be of no service in any particular case. It would not be difficult to submit to Dr. Hammond scores of persons whose heads present all the peculiarities which he claims for the heads of reasoning maniacs, and who have never manifested a trait of mental abnormality; and scores of persons corresponding with his description of reasoning maniacs whose heads present none of the peculiarities which he enumerates as characteristic of that condition. To found on such cranial measurements as those to which he refers, the statement that there is atrophy of the occipital lobes, betrays a want of sufficient acquaintance with recent advances in cerebral anatomy and physiology.—*Editorial in Brit. Med. Jour.*

EXCISION OF THE PYLORUS.

The *Wiener Medizinische Blätter* of May 18th contains an account of a discussion, at a recent sitting of Congress fur Innere Medizin, on the Diagnosis of Carcinoma of the Stomach, and on the operation of resection for that disease. Dr. Henck of Heidelberg read the case of excision of the pylorus for carcinoma performed ten months ago by Professor Czerny, which was briefly described by the latter surgeon at the International Medical Congress, and is recorded in its Transactions; and it is satisfactory to learn that the patient, who gained eleven pounds weight at the end of the sixth week of the operation, was at the beginning of last month, ten months after the operation, quite well, with no symptoms of recurrence of the disease. Dr. Henck tabulated the clinical history of twelve resections of the stomach. One, which recovered, was performed in a case of stricture of the pylorus following perforating ulcer. The remaining eleven were for the removal of cancerous growths; four of these recovered from the operation; out of the recoveries, three patients are still alive and free from any recurrence; the fourth is known to have died four months after the excision, from a return of the disease. In the discussion which followed the reading of Dr. Henck's paper, Professor Lichtheim observed that mobility of an abdominal growth detected by palpation in the region of the pylorus was no proof that, if the growth were pyloric, there were no adhesions. In a case under his care, the swelling could be freely moved about under the abdominal wall when the patient was narcotized; yet, on opening the abdominal cavity, the pylorus was so strongly adherent to neighboring parts, that its removal was impracticable. Professor Kuhle stated that the rapid implication of the chain of lymphatic glands in front of the bodies of the vertebræ behind the stomach, in cancer of that organ, renders many cases unsuitable for surgical treatment. Dr. Henck remarked that the same objection stands in the way of operation in cancer of any other organ. As early diagnosis is so important, Dr. Ewald asked if the members of the Congress could confirm the theory of Van der Velden, that free hydrochloric acid was ab-

sent in the gastric juice in cancer of the stomach; but no researches had been made towards the confirmation of this theory by those present who had some experience of operations for the radical cure of malignant gastric disease.—*Brit. Med. Jour.*

THE EFFECT OF BLEEDING ON INFLAMMATION.

The effect of local abstraction of blood in relieving local inflammation is one of the ancient doctrines of therapeutics which is still unrefuted and still unexplained. It was formerly held that the result was produced by a perfectly simple *modus operandi*. By the removal of blood from the surface the vessels of the deeper inflamed parts were partly emptied; but it was later recognized that this explanation is incompatible with the known conditions of the circulation. The local removal of blood never produces a lasting effect on the circulation in the part. At the present time it is generally assumed that the effect of local depletion is to remove the inflammatory stasis, although such an effect has never been demonstrated experimentally; and, moreover, the idea of a derivatory action still haunts the theory of the subject, while the effect is sometimes ascribed to the influence of the depletion on the whole mass of blood. The question has been lately subjected to experimental investigation by Genzmer and Nikolas, of Halle, and the results obtained have been described by the former in the *Centralblatt fur Med. Wiss.* In the web of the foot of curarized frogs foci of inflammation were excited by punctiform cauterization, either by nitrate of silver or a red-hot needle; and the process was watched with the microscope. When well known phenomena of inflammation made their appearance, the aggregation and exit of the white corpuscles, retardation of the blood current, and, finally, the formation of stasis, a leech was applied to the leg. As soon as the leech began to suck, a striking change occurred in the inflammatory process in the foot; the blood current became quickened, and carried on the corpuscles which were adherent to the wall. The stasis passed away, and in a few minutes the inflamed capillaries were cleared, and presented to the end of the experiment a normal and even accelerated circulation. Whether the corpuscles which had already wandered out of the vessels were influenced by the abstraction of blood could not be with certainty determined. In some experiments scarification was employed after the focus of inflammation had been excited. The effect was less conspicuous, since the loss of blood did not occur with the same vehemence as with a leech, although the amount of blood abstracted was nearly the same. The effect of abstraction of blood from the general circulation, by opening an abdominal vein, was still slighter, although the amount of blood taken was considerable. The conclusion drawn from these experiments is that the antiphlogistic action of local abstraction of blood is produced by a purely mechanical agency. A temporary augmentation of the circulation occurs, by which the capillaries are cleared; and the stasis, which is the first step in a local necrosis, is removed. Not only is no local anæmia produced, but there is actually an arterial hyperæmia; there is an increased supply of arterial blood to the focus of inflammation, which, besides its effect on the blood vessels, may reasonably be supposed to improve the nutrition of the tissues, and so to counteract the tendencies of inflammation. The antiphlogistic action is clearly proportioned to both the amount of blood withdrawn and to the rapidity of

its withdrawal, and its action is notably greater when blood can be withdrawn from the circulation between the region of the inflammation and the right side of the heart.—*Lancet*.

FORMULARY AND POINTS IN PRACTICE.

AN ANODYNE FOR A YOUNG INFANT.

- ℞ Tinct. hyoscyam.....min. v.
Syrup papav.....min. v.
Aquæ anethi..... 3 j.

FOR INCONTINENCE OF URINE.

- ℞ Ext. belladonnæ.....grs. ij.
Tinct. hyoscyam.....m. xx.
Syr. simp..... 3 ss.
Aquæ ad..... 3 iiss.
Dose 3 ii. for a child five years old.

IN BRONCHO-PNEUMONIA, PAROTITIS AND THE EARLY STAGES OF ACUTE INFLAMMATION GENERALLY.

- ℞ Tinct. aconiti (Ph. B.).....min. $\frac{1}{4}$ — $\frac{1}{2}$ -i.
Syrup croci.....min. x.
Aquæ camph..... 3 ii.
To be given every hour.

IN ACUTE RHEUMATISM AT 14 OR 15 YEARS OF AGE.

- ℞ Tinct. aconiti (Dub.).....min. iij.
Mist. camph..... 3 ss.
Ft. haust. Sig. Every four hours.

IN OBSTINATE DIARRHŒA.

- ℞ Argent. nit.....grs. $\frac{1}{8}$ to $\frac{1}{2}$
Aquæ destillatæ..... 3 ii.
Syr. simpl..... 3 v.
Ft. mist. Sig. One or two teaspoonfuls every four hours.—*Trousseau*.

IN CHOREA.

- ℞ Zinci valerianat.....grs. $\frac{1}{4}$ — $\frac{1}{2}$
Syr. hemidesmi..... 3 ss.
Aq. flor. aurant..... 3 ii—iv.
Sig. Three or four times a day.

IN CHRONIC DYSENTERY.

- ℞ Tinct. lupuli.....min. x.—xx.
Acid. nit. dil.....min. ii.—v.
Inf. cascariæ..... 3 ii.—iv.

IN CHRONIC DIARRHŒA.

- ℞ Tinc. opii.....min. i.
Acid. nitric. dil.....min. iv.
Inf. simarubæ..... 3 i.
Dose 3 i. in milk or barley water, every three or four hours.

IN FLATULENT INDIGESTION.

- ℞ Tinct. cardam. co.....min. v.
Syr. aurantii..... 3 ss.
Inf. cuspariæ..... 3 ii.

IN VOMITING FROM WEAK AND IRRITABLE STOMACH.

- ℞ Acid. sulph. dil.....min. xvj.
Tinct. aurant..... 3 i.
Syrupi..... 3 i.
Inf. aurantii..... 3 i.
Aq. cinnamomi..... 3 ii.
M. Sig. 3 i. three times a day for a child one year old.

MEDICAL NOTES AND NEWS.

Small-pox and measles are very prevalent in Ireland, and are making fearful ravages among the population. The infection was, it is believed, brought from Europe.

The Legislature of the State of New York has passed a very stringent law to prevent the establishment of "opium dens," some of which already exist in this city after the model of similar dens in China.

The honorary degree D. C. L. has been conferred by the University of Oxford on Sir William Muir, K.C.S.I., Member of the Council of the Secretary of State for India; and Dr. Allen Thompson, F.R.S., formerly Professor of Anatomy in the University of Glasgow.

The President of the Royal Academy of Belgium has been invited by M. J. B. Dumas, Perpetual Secretary to the French Academy of Sciences, to join in the subscription organized by the members of various French learned bodies for a medal to be presented to M. Pasteur for his scientific discoveries.

Much sickness and mortality prevail among the laborers employed on the works of the Panama Canal. During the greater part of the year the heat is very intense; but the total absence of any proper sanitary arrangements is said to be a far greater factor in the production of disease than the unhealthiness of the climate. The French have, however, commenced the erection of hospitals.

The eminent chemist, Cavendish, was remarkably reticent and shy. When about to die he rang his bell, and said to the valet who answered the summons: "I feel very ill and am going to die. Come again in half an hour." The servant, with pardonable anxiety, returned before the time appointed. Cavendish, who was still alive and sensible, observed with some severity: "You have disturbed my last moments. You will please return at the time I ordered." The man returned and found Cavendish dead.

Omnivorous Eccentricities.—We were last week favored by Mr. Benthall of Derby, with the report of a case treated at the Derby Infirmary. It was that of a man who swallowed some coins in an attempt to secrete them in his pharynx. We were then unable to state the result of the case. It may now interest some of our readers to know that the patient went to the infirmary on the morning of the 6th of June, and produced four pennies and a half-penny, which he stated he had passed in one motion the day before. The coins were much blackened by their sojourn of three weeks in the alimentary canal.—*Brit. Med. Jour.*

The Council of the Society of Arts have awarded the Albert Medal of the Society for the present year, to M. Pasteur, Member of the Institute of France, for "his researches in connection with fermentation, the preservation of wines, and the propagation of zymotic diseases in silkworms and domestic animals, whereby the art of wine making, silk production, and agriculture, have been greatly benefited."

Resection of the Pylorus in Italy.—This operation has just been performed for the first time in Italy by Professor Caselli, of the University of Genoa. The patient was a female, who had been admitted to the hospital with symptoms which pointed to closure of the pyloric orifice of the stomach by a neoplasm presumably of a carcinomatous nature. In the operation itself there was no feature of particular interest, except the severe shock from which the patient suffered almost from the first incision. The time occupied was two hours and a half. To secure the stomach to the duodenum, and to sew up the organ itself, about fifty sutures were employed. The portion excised was elliptical in form, and measured four inches and a half in length by three and three-quarters in breadth. The operation itself, in all its details, was successfully completed, but the patient unfortunately sank from shock a few hours after her removal to the wards. The necropsy confirmed in every respect the correctness of the diagnosis, and showed, moreover, that all the other viscera were perfectly free from cancerous infiltrations. The operation, therefore, was a thoroughly legitimate one. Moreover, from the excellent position in which the stomach and duodenum were found after death, there is little doubt that, had the patient's vital powers held out, the result would have been a most brilliant one.

Dr. Joseph A. Andrews, writing from Hong Kong to the *Medical Record*, under date of May 9, 1882, says: "The healthiness of the foreign population of Canton is certainly in a great measure owing to the absence of water-closets in the dwelling-houses, which at home (the United States), are a fruitful source of disease. Sulphuretted and carburetted hydrogen gases are evidently not so injurious to health when given off in the open air as when escaping from sewers. Canton, like the whole country, is a city of bad smells, and yet the people do not seem to suffer from them, but, on the contrary, rather like them. The removal of excreta, and the disposal of sewer water is the sanitary problem of the day at home and abroad. Our sewers allow the transference of gases and organic molecules from house to house and from place to place. Occasionally, by bursting, leakage, or absorption, the ground is contaminated, and the water supply is in danger of being contaminated and poisoned; and all these dangers are greater from being concealed. In China, there is at least freedom from one of these dangers. *It would certainly seem advisable that our water-closets should be in a projection from the building, with a tube passing to the outer air.*"

The *Italics* are the writer's, and indicate that Dr. Andrews, like some of the medical men of New York city, is beginning to appreciate the danger of conveying sewer gases into our houses and sleeping apartments.

Children of the Fourth Generation.—Probably there is not another person living in the United Kingdom who can boast of children of the fourth generation as the old lady at Wheeler End, West Wycombe, Bucks, whose hundredth birthday was celebrated there

on Wednesday, April 12th. Mrs. Harris, the person in question, lives with a relative in the neighboring town of High Wycombe, and was driven up to Wheeler End in a fly. Some 200 of her descendants had assembled from all parts, and on arrival at the entrance to the village they took the horses from the vehicle and drew their ancestors in triumph through the place. Near the village inn a triumphal arch of flowers and evergreens was erected, under which the procession passed. Some 220 relatives and friends took tea together in the club-room of the village, and subsequently a meeting was held at a chapel, when congratulatory speeches were delivered. Mrs. Harris was born on the 12th of April, 1782. She was married at 18 years of age, and had sixteen children, ten of whom were present at the celebration, the youngest being 49 years old. The eldest died last year at the age of 81. She has 77 grandchildren, 150 great-grandchildren, and 4 great-great-grandchildren. Her age is authenticated by a register of her baptism at Great Marlow on the 6th October, 1782. She retains the full use of her faculties and limbs.—*Medical Press.*

Professor Billroth.—Professor Billroth, who is a native of Rugen, has lately received an invitation to take the place of his teacher, Professor Langenbeck, in Berlin, but preferred to remain in connection with the University of Vienna, in which he has held a distinguished position for the last fifteen years. The students thereupon resolved to thank the great surgeon for determining to stay with them. In the morning of June 22nd, an address was presented to him in the hall of the Academy of Sciences, where most of the professors of the University and many men of science had assembled, while the body of the hall was filled with students in their academic costume. The address was signed by a large number of Billroth's pupils, the name of Duke Karl Theodor of Bavaria heading the list. Dr. Billroth, who was received with great applause, said he considered himself as belonging to Austria and the University of Vienna. In the evening, a great torchlight serenade was held in his honor. Some thousands of students, with torches and colored lamps, marched with the old University flag and a band of music to the street where the professor lives. The German students' song, "*Gaudeamus igitur*," was sung by thousands before the professor's house; and afterwards a hymn, especially composed for the occasion. Dr. Billroth thanked the gathering in a few warm words; and, after some more singing and cheering, the students dispersed.

The Homœopathic Medical Society of Lancaster, Pa., Refuses to give us Similia for Similibus.—*Resolved*, "That it is the sense of this meeting, that since the practice of homœopathy has established for itself an honorable position in the estimation of the community, against all the opposing forces that the old school could bring to bear against it, there is no advantage or prestige to be derived by homœopathic physicians in consulting with *allopaths*, and therefore the recent action of the *Allopathic Medical Society* of the State of New York in resolving in future to consult with us was entirely gratuitous."

You see, gentlemen, "the sense of this meeting." The homœopaths understood you to have done this for your and their mutual good, and not at all for the good of your patients or of medical science; but as they are unable to see how it is to benefit themselves, they reject the offer. "Pretty, pretty maiden, will you, will you marry me?" "No, kind sir, etc."

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Gentlemen who receive this number of the MEDICAL GAZETTE, and who are not subscribers, will please understand that it is sent to them for examination, with a view to inducing them to add their names to our list. The price of the GAZETTE is placed so low (\$1.50 for 52 numbers), that we cannot afford to give club-rates, or any discount to the trade or agencies, and all subscriptions must be paid invariably in advance, and direct to the publishers.

SPECIAL NOTICE.

With the present number the price of the GAZETTE is advanced from \$1.00 to \$1.50 per year. The only explanation that we have to offer is that the margin of profit at the former price was insufficient. Gentlemen who consider the GAZETTE worth the advanced price will of course continue, and to those who do not we shall have to say *adieu*. The GAZETTE now contains 12 pages of reading matter weekly, being 4 pages more than when the price was first fixed at \$1.00. We shall shortly further augment the amount of reading matter by two additional pages. We have no promises for the future. For the policy and character of the GAZETTE we point to its issues for the past seven years, and have only to say further that we shall do our best to make its weekly visits more and more welcome. Present subscribers will receive the journal for the full time for which they have subscribed.

THE TREATMENT OF STRICTURES OF THE URETHRA OF LARGE CALIBRE*.

BY

FREDERICK A. LYONS, A. M., M. D.,

Surgeon to the French Hospital, and to Bellevue Hospital Outdoor Department; Fellow of the New York Academy of Medicine, &c.

The subject of stricture is a very wide one, and in discussing it we might wander over a very extensive field, unless we limit ourselves to a particular part of it. We propose then to narrow the points at issue to the treatment, and still further to the treatment of strictures of what is called large calibre. Not many years ago a surgeon was satisfied if he could pass a No. 14 E., (25 F.) into the bladder, and would send the patient away informing him that he had no stricture. But I think that at the present time it is admitted by all without exception, that the average size of the urethra in a penis measuring three inches in circumference in the flaccid state, is at least 30 F. or 18 E. In a healthy urethra, a bulbous sound No. 30 F. should find the canal of an even calibre all the way down, except at the meatus, where it is smaller, and at the bulbous portion, where it is a little larger, or at least more distensible. It should pass down smoothly and be withdrawn without hitch or jerk. If this does not occur then there is an encroachment on the normal calibre of the canal, and whether this encroachment be due to a swelling of the mucous membrane at that point, to an ulcerated and tumefied surface, to a deposit of cicatricial tissue, or to a subsequent contraction of the same, it constitutes a stricture. It infringes on the calibre of the canal and forms a greater or less impediment to the stream of urine.

It is these slight strictures that we wish to discuss, slight as far as the actual decrease in size of the stream of urine and ability to void it is concerned, but important and grave as regards numerous other things, such as continued gleet discharge, varied and important reflex troubles and liability to progressive contraction and finally small or close stricture. These strictures are now fully recognized, owing to the valuable discoveries and contributions to the subject made by Dr. Otis. We must admit that strictures of large calibre, detectable by means of bulbous sounds, exist. Sir Henry Thompson, who was the most determined enemy of this theory now acknowledges it completely.

Assuming their existence then, how shall they be treated? Shall they be cured by the old method of dilatation or by Otis's method of internal division. The result of my own experience leads me to incline to internal urethrotomy in the majority of cases. In cases where the stricture is detected by a 20 F. sound, I believe that internal urethrotomy is always the best

* Remarks made in opening the discussion on the subject before the East River Medical Association, June 13th, 1882.

means of cure, so that there is no question in my mind of the fitness of the operation in such cases. But let us call those of a size above 20 F. strictures of large calibre. Should we dilate them gradually to 30 F. or above, as the case may be, or restore the urethra to its natural calibre by means of an operation at once? Surgeons differ in opinion about the value or necessity of operative interference and it is a very debatable point. I have tried both the method by dilatation and by division in quite a large number of cases but will simply relate a few of each from my case-book. As I do not feel capable of settling this important question satisfactorily to myself or to you in this short discussion, I simply relate the history of a few cases of each method, not the most striking that I have, in order to compare the two, while limiting the field of discussion.

CASE I.—S. B., æt. 27. Single. Dry goods buyer. Perfectly regular in habits and rectal for 2½ years. Came under observation Dec. 14th, 1880. Two and a half years ago contracted first gonorrhœa. Discharge was quite profuse for four months, then in addition noticed marked increased frequency of micturition, which continued with greater or less severity for two years, that is, up to six months ago. Was obliged to void his urine ten or twelve times during the day and had to get up for the same purpose six or eight times during the night. Consulted a surgeon who diagnosticated stricture, incised the meatus, and and passed sounds twice a week and then once a week. After about three months' of treatment the irritability of the bladder ceased, but the discharge continued despite passage of sounds and the use of injections. Condition Dec. 14th, 1880, circumference of penis 3 inches. Meatus admits 27 F. 21 F. detects stricture lower border of which is 2½ inches down and upper 2 inches, band therefore half inch long. Patient refused to submit to operation, preferring dilatation by sound. After three months' dilatation was enabled to pass 27 F., at which time enlarged meatus to 32 F. and in two months more reached 29 F. solid sound. At this time 28 F. bulb detected stricture at same place. There was still a gleet discharge. After five months' treatment by me, in which time, though the stricture had been dilated from 21 to 28 F., the symptom for which he came to be relieved, the discharge, had not abated. He left my hands at that time.

The man had had twelve months' treatment by dilatation and certainly was not cured.

CASE II.—O. H., U. S., 34. Married. Traveling salesman. Of good constitution and regular in habits. A very moderate drinker. Came under observation May 30th, 1880. At the age of 19 had gonorrhœa which lasted about three months. Then had the disease three or four times until he got married, which was in 1876. About a year after marriage noticed slight gleet discharge which would disappear and come back again, but did not think much of it. For the last two years it has been more persistent and especially noticeable after drinking a few glasses of beer or wine. This is what annoys him and for which he seeks relief. Condition May 30th, 1880. Circumference of penis 3½ inches. Meatus admits 28 F. 24 F. detects band about ¼ inch long 3¾ inch down, and 26 F. detects stricture ¼ inch long, two (2) inches down. Cut meatus to 34 F. but lower strictures not incised.

After three months' dilatation 28 F. passes, and at end of six months 30 F. Had a straight solid steel sound 31 F. made, which passes through strictures, but tightly, and which patient passes regularly himself. After two years of persistent dilatation the dis-

charge does not annoy him so much, but comes on with very little provocation and is ameliorated by injection and 31 F., detects two very firm bands of stricture at the points above indicated. The strictures, though they allow bulbs of respectively 7 and 5 m. m. increase to pass through them, are yet very perceptible and firm, and feel almost of cartilaginous hardness.

CASE III.—J. W. R., U. S. 29. Single. Actor. Of good constitution and, though an actor, temperate in his habits, and since his present difficulty almost a teetotaler. Came under observation August 27, 1880. Five years ago had first gonorrhœa, which lasted two months and then disappeared completely. Three years ago had another attack which lasted about four months. Eighteen months ago had a third attack which lasted about four months and left him with a stricture which has remained more or less constant ever since. Condition August 27, '80. Circumference of penis 3½ in. Meatus admits 33 F. 26 F. detects stricture 3 in. down about ⅓ in. long. Patient objected to operation, so commenced to dilate twice a week. At the end of four months 32 F. passed, and as patient was obliged to leave town had a straight steel sound constructed 33 m. m. in circumference. This he passed regularly once a week, and continued at the same time to take sulphocarbonate of zinc injections 2 gr. to 5 i. The discharge would stop for a time but relief was never permanent.

In February, '81, came under treatment for hard chancre which was followed by the usual secondary symptoms.

In February of this year, though he has kept the stricture dilated by the sound, No. 31 F. bulb detects firm band 3 in. down. There is thus 5 m. m. difference, but he is annoyed by discharge and is waiting for a favorable period to be operated on. He has had no syphilitic symptoms for six months and is keeping up steady treatment.

CASE IV.—F. B., U. S. 24. Single. Clerk. Of good constitution but dissipated habits. Came under observation August 21, 1877. About three years ago had an attack of gonorrhœa which lasted about two months and got well. Fourteen months ago, had a fresh attack with considerable chordee. This attack lasted rather badly for about three months and then degenerated into a chronic gleet. He was treated by injections and internal remedies with transient benefit. About a week previous to consulting me was on a drinking debauch and the discharge increased considerably. He felt pain in the groin and then in the testicle on the right side, which commenced to swell. The swelling increased and the pain became very severe when I was sent for. Found epididymitis on the right side with a swelling as large as two fists. Under rest in bed, hot poultices and occasional hypodermatic injections of morphine the inflammation decreased, and in ten days straps of belladonna plaster were applied. About the end of September there was nothing left but a slight induration of the epididymis. The discharge from the urethra, however, was quite abundant, and injections of zinc sulphat, and plumbi acetat. were given. November 3d, was examined with a view to ascertain the presence of stricture. Circumference of penis 3½ in., meatus admits 30 F. Stricture 4½ in. down admitting 24 F., another band at 2½ in. admitting 26 F. Passage of sound followed by bleeding.

The administration of injections was kept up.

December 11, 1877.—Patient took 10 grs. of quinine in morning and in afternoon was operated on in my office without ether. Meatus was first incised to 35 F. and normal calibre of urethra found to be 33 F. Otis's

dilating urethrotome was introduced and turned up to 36 F. and the lower stricture divided, then the upper one. 33 F. solid sound slipped into bladder of its own weight. The hemorrhage was not at all troublesome. 33 F. sound was passed every day for three days, but with some pain. Then every third day for three weeks. At the end of that time there was not a particle of discharge and patient considered himself cured.

Nov. 30th, 1878.—Patient returned with a sore on penis of mixed character, which was followed by suppurating bubo and later by manifestations of constitutional syphilis. I took this opportunity of sounding the urethra and 33 F. bulbous sound passed in and out without a hitch anywhere.

October 15th, 1879.—Patient returned with a fresh attack of gonorrhœa. This was treated with injections and internal remedies and left him entirely well in a month. In December he was re-examined and 33 F. bulb passed in and out without detecting stricture.

In *March, 1882*, patient came to consult me for a sore throat which he thought might be due to syphilis, but which was an ordinary pharyngitis. I took this opportunity of re-examining him, $4\frac{1}{4}$ years after the operation. He had never had any discharge except the short attack of gonorrhœa mentioned, and there was not the slightest physical evidence of the return of stricture. The cure at all events is now of over four years duration, without the occasional passage of sounds.

CASE V.—H. V. W., U. S. Single, 26, in fair circumstances of life; with no occupation; occasioned by his having had spinal meningitis in his youth which left him with the upper extremities contracted and atrophied.

Came under observation July 13th, 1876. About nine years ago had an acute attack of gonorrhœa which lasted about two months. Treated by injections and internal remedies. About two years after the first he had another attack, which lasted about four months, and was treated in the same way. For the last seven years has had a more or less persistent gleet. This would get better for a short time, but after an excess in drinking would be much exacerbated. For the last eight months has had steel sounds passed by a surgeon, but does not know the size. On showing him a set, picked out 17 Eng., 29 F., as the size used.

Present condition as follows: circumference of penis 4 in., which it will be noted is unusually large.

Meatus admits 32 F. No. 29 F. detects bands of stricture from $2\frac{1}{4}$ in. down, up to meatus, tightest at $1\frac{1}{4}$ in.

July 20th, 1876.—Patient operated on at his home without ether. Otis's urethrotome introduced, turned up to 34 F. and strictures divided. Hemorrhage slight. 34 F. sound passed for three days and then twice a week for three weeks. The discharge however continued and patient did not consider himself any better.

Dr. Otis was seen in consultation and judging from size of penis, 4 in. in circumference, considered that the strictures had not been divided sufficiently and advised another operation, the meatus to be enlarged at the same time.

Accordingly October, 1st in office, without ether meatus was divided to 38 F. and size of urethra determined to be at least 36 F. The urethrotome was introduced, turned up to 38 F. and strictures thoroughly divided, 36 F. solid sound, which I had made expressly, slipped in of its own weight to the bladder. The patient was advised to go home and remain quiet, but instead of doing so, went out walking. In the evening

he went to a club to meet some friends and while sitting talking felt something warm running down his leg; on looking, he found he was bleeding quite profusely, and being frightened drove home in a carriage and sent for me. By the time I arrived however, the bleeding had stopped and he had no further trouble from that source. 36 F. sound was passed every day for three days causing some slight hemorrhage and subsequently twice a week for a month. At the end of that time the discharge had entirely ceased and patient considered himself well. During an interval of nearly six years which has now elapsed the patient has not had a return of his former trouble, though he had not been free from discharge two months at a time during the previous seven years. I have examined him at intervals during this period when he has consulted me for dyspeptic troubles, the last time about six months ago, and have not found the slightest trace of the return of stricture. The patient does not restrict himself in the use of alcohol or in the number of his debauches with women, but fortunately has not contracted any fresh attacks of disease.

CASE VI.—F. L. J. Single, 25, whiskey drummer. Good constitution but of rather irregular habits. First came under treatment November 7th, 1876, for syphilitic enlargement of the submaxillary glands, the result of a chancre acquired two years previously in Boston. At that time had an occasional gleet discharge which would disappear after a few days' use of injections. He did not care to be treated for it as he was satisfied with the way in which he managed it himself. In September, 1879, he had been free from syphilitic symptoms for a couple of years, but was still annoyed by his gleet and wished to see what could be done for it. His condition at that time was as follows: Circumference of penis $3\frac{1}{4}$ in., meatus admitted 25 F., and 23 F. detected a stricture $3\frac{1}{2}$ in. down. How many more points of stricture above that size were present was not determined. He decided to be operated on, and fixed a day for the purpose. On the day set, the patient wavered in his intention and finally would not have the operation done. His gleet continued up to the autumn of last year, when he became engaged to be married, and then, conscience stricken, was determined to try to be cured. He kept putting the day off, however, until last March, but did not expect to get married till the coming autumn. On March 4th, 1882, the patient was etherized. Meatus 25 F.; 21 F. found stricture $3\frac{1}{4}$ in. down, and 25 F. two other bands higher up. The meatus was first incised to 35 F. Otis's urethrotome was then introduced, turned up to 36 F. and the strictures thoroughly divided. The hemorrhage was very slight. No. 33 F. solid sound passed with ease, of its own weight, into the bladder. Patient would not have the sound passed on the subsequent days without some anæsthetic, so a few whiffs of chloroform were administered, and the sound passed easily for three days in succession. It was then passed twice a week until March 19th. The discharge was slightly increased for a few days but then commenced to decrease, and by the date last mentioned was completely gone, that is, three weeks after the operation. The patient then left for the West, and for several weeks put himself under conditions of unusual sexual excitement and indulged freely in alcoholic drinks. Being anxious to assure himself that the canal should remain perfectly free, he consulted a surgeon in a Western city in order to have a sound passed. The passage of the sound was followed by the commencement of a slight degree of epididymitis, but it was passed a second time

while this condition existed. The patient returned, and notwithstanding his condition, got married. On May 6th, 1882, I was sent for a slight distance out of town, and found the patient with a swelling of the right epididymis about the volume of a pigeon's egg, not, however, very painful. Two days afterward he was seen in consultation by Dr. Otis. Rest for a week in bed, with poultices and strapping, reduced the swelling, and in two weeks there was nothing left but a scarcely perceptible induration. There was and has been, however, not the slightest return of the gleet discharge, and for the last three weeks, the patient informs me, he has been performing marital duty without any discomfort whatever. The bulbous sound 33 F., passed a few days ago, does not detect the slightest evidence of stricture.

The epididymitis was no doubt caused by the passage of the sounds and the unusual sexual excitement, beside the free use of alcoholic beverages. At all events it was purely accidental, and I believe entirely unconnected with the operation as a cause. The sound was passed again while a slight epididymitis already existed.

Of course the time elapsed since the operation in this case is insufficient to determine the permanency of the cure, but, under the most unfavorable circumstances in which he could be placed, the patient has been much better than he has been in many years.

I might cite a number of cases, of which the foregoing are illustrations, especially cases of close stricture, in which operation by division has been performed, whose results were gratifying and all that could be expected. I will not, however, take up the time of the society, as those related are sufficient for the purpose of comparing the two methods of treatment.

It is my belief that Otis's method with the dilating urethrotome is the preferable means of cure in the vast majority of cases. It is true that I have succeeded in some cases, where the stricture was very recent, in curing them by dilatation alone, but only in recent cases, and then by a treatment covering a period of five or six months or longer.

What are the principal objections to the operation by internal division?

1st. The risk of hemorrhage. This is not considerable. In my own experience I have never seen a case in which it was at all alarming. The cold water rubber coil, or the rubber tube passed into the urethra, or Hunter's instrument for urethral hemorrhages, are sufficient safeguards, though I have not seen a case urgent enough myself to have recourse to these methods. No case that I am aware of has been reported of serious illness or death from this cause.

2d. The danger of severe inflammation, or urethral fever and septicæmia. According to Dr. Otis, who has had the largest experience, this is exceedingly rare when the stricture is not close and is situated anterior to the membranous portion. He claims never to have had a death from this cause. I have had one case in which, after the division of a very close stricture in the membranous portion, a stricture only admitting a filiform, septicæmia followed, and for several days I was afraid of losing the patient, but he finally made a complete recovery. The danger of this complication is not sufficient to warrant much timidity in performing the operation.

3d. It is urged *theoretically* that the operation does not give the permanency of cure claimed for it. It is advanced that the very act of cutting causes the formation of cicatricial material that will subsequently contract and reform the stricture. This *theoretical* objec-

tion does not, however, hold, for if the stricture be cut two or three millimetres beyond the calibre of the urethra and then be kept open a short time, it allows the formation of a splice between the cut ends and also allows room for slight contraction. Moreover, the cicatrix is a linear one, and contraction, if it did occur, would take place in a direction parallel with the axis of the urethra, which consequently would not encroach on the calibre of the canal. Still further it is reasonable to suppose that the original stricture being released, the infiltrated material of which it was composed would be absorbed. However, the objection is only theoretical and not actual, for experience has proven now beyond a doubt that the cure of the stricture is permanent. Dr. Otis has had cases in which he has demonstrated in the presence of well-known members of the profession that the stricture has not recurred in ten and twelve years. Two of the cases I have related, one of four and the other of six years standing, certainly tend to strengthen, even if they do not confirm, the conclusion.

On the other hand the operation has advantages over the method of dilatation from several facts:

1st. It is not so tedious. To dilate a stricture from 21 F. to 30, or above, requires at least six months' steady treatment, and in the majority of cases a far longer time. In fact, in most cases the patient will have to pass instruments for years, and then, perhaps, longer still to preserve the point of dilatation reached. By means of the operation the treatment will not extend over a period of more than three to six weeks.

2d. The treatment by operation is surer, as you attain immediately the full calibre of the urethra, and it is only necessary to keep it at that point till healed.

3d. The operation gives better permanent results, and even if, after cutting the stricture, the patient should have to have instruments passed at intervals, it is no more than he would have to do if he had been cured by means of dilatation.

4th. The patient is saved by operation a great deal of suffering, for in the treatment by dilatation, every time a sound of larger size is passed, the patient must renew the pains of the former stretching.

If I have succeeded in a slight degree by this brief résumé, in adding to the popularity of an operation that Dr. Otis has devoted so much energy to place before the profession, I shall feel very well contented.

TWO CASES OF PERINEAL SECTION FOR CLOSE URETHRAL STRICTURE.

BY

FESSENDEN N. OTIS, M. D.,

Professor of Diseases of the Genito-Urinary System, College of Physicians and Surgeons, New York; Attending Physician Charity Hospital; Consulting Surgeon St. Elizabeth's Hospital, Etc.; Etc.

CASE I.—W. R. P., æt. 33. First gonorrhœa at 19; severe and lasting about a month: has had return, of the discharge, without pain, from time to time, sometimes after connection and sometimes after other indiscretions. At times thought he was well, when it would again recur, and this was the history up to 1868, when he had a retention of urine. In 1869 had several attacks from indiscretions. Since 1870 habits have been better; married. Since then, however, he has had retentions from cold or other slight cause, sometimes relieved by catheter, and at other times no instrument of any kind could be inserted; when, on taking chloroform, the urine was passed spontaneously. This was

in 1875. Since then, up to 1877, when he has had retention he has been relieved by catheter about 10 or 12 French. For last two years has not had any instrument passed, repeated efforts having failed; but by passing instrument through anterior stricture the urine would flow. For the last two years habits have been perfectly correct and no retention has occurred, but urine has been passed with difficulty, a partial erection taking place and requiring straining to effect an emptying of the bladder; if left to dribble it takes fifteen minutes; some dribbling after the act. Has come today from Bridgeport, by train, and has not urinated for five hours, and still the desire is not urgent. At other times he will have to go frequently, rarely at night; if he emptied the bladder before going to bed he never requires to get up.

Examination.—Penis $3\frac{3}{4}$ in. circ., meatus 22. Anterior to bulb 20, and this for an inch, then down to 15 with dilatation to 25; just behind the meatus 18; beyond the stricture becomes filiform, goes to $6\frac{1}{2}$ inches, and is then arrested and hugged, although when hugged the patient passes a small fine stream; has been much manipulated, and probably has false passages. Advise perineal section.

April 23rd.—Operation.—Patient put under ether by Dr. Abernethy. Careful efforts to enter the bladder for 30 minutes. Finest whalebone bougie was introduced $6\frac{1}{2}$ inches and was deeply and tightly held and could not be pushed further. Perineal section was then done without a guide. Fine stricture for fully an inch back of the incision admitting only the smallest probe. Passed fine probe knife posteriorly and divided sufficiently to introduce a catheter, drew off urine, enlarged the opening and passed 38, then divided anterior strictures and passed 38 through all into bladder. Bleeding slight; whole time 65 minutes; perineal section 35 minutes. Left patient in good condition at 5:50 and arrived home at 7:45.

May 15th.—Doing well; 36 by urethrometer from bulb to orifice; passes most of his urine through penis; advised to use sound every two days.

Report by Dr. Abernethy, of complete recovery, and two years subsequent to the operation the patient was in every respect apparently well.

CASE II.—*April 21st, 1877.*—Operated on Mr. Smith at the St. Elizabeth's Hospital for close stricture complicated with perineal abscess; ether administered by Dr. Swasey; could not get into the bladder. Passed a grooved sound down about $4\frac{1}{2}$ inches and incised the perineum deeply, giving vent to an ounce or two of tolerably laudable pus. Taking the arch of the pubis as the guide, the dissection was carefully carried on with a finger in the rectum. A small bougie passed down was supposed to be in the bladder, but subsequently it appeared to have curled up in the cavity of the abscess. Finally after perhaps half an hour, the urethra was found, and the bladder entered by a small grooved director; the passage was then enlarged, the meatus urinarius also divided to 30 (penis $2\frac{3}{4}$ inches in circumference) and No. 30 sound passed easily into the bladder. Instead of introducing a needle in the ordinary way to catch the urethral mucus lining in order by the thread carried in upon it to separate the urethral opening in the wound, the fine adjustor of Tiemann & Co. was used, at the suggestion of Dr. Bangs, and answered an admirable purpose, going deeply into the wound and easily transfixing the free urethral margin; it was then detached and the thread, which had previously been attached, was available for separating the opening.

Present and assisting Dr. L. B. Bangs, Dr. Payne,

Med. Sup. of Hospital, Dr. H. G. Piffard, Dr. Swasey and Dr. Spencer; time of operation one hour.

Subsequent treatment was simply by keeping the wound well cleansed with a mild solution of carbolic acid, and the introduction of a 30 steel sound every other day through the urethra into the bladder. Healing was complete and the patient was discharged cured on the 14th day after the operation.

LECTURES.

CHRONIC PERITONITIS.

A CLINICAL LECTURE

BY

J. M. DA COSTA, M. D.,

Professor of the Practice of Medicine in Jefferson Medical College.

This patient is a Swede by birth, about 30 years of age, and was at the time her illness began employed as an attendant at the department for the insane of this hospital. She appears to have no hereditary tendency to disease of any kind. Her mother died from the effects of a miscarriage, but her father is still living and, although advanced in life, is in good health. Of her brothers and sisters, two died in infancy; another at the age of 15 of what would seem to have been acute Bright's disease, and a fourth of consumption, of which, she assures us, there has not been another instance in her family. She herself had a perfectly healthy infancy and childhood, interrupted only by an attack of measles, from which she made a good recovery. At the age of nineteen she menstruated for the first time, but this function seems to have been in the main healthily performed afterwards up to the time of her marriage, seven years ago. Her only child was born about a year after, and is consequently now six years of age. He, it is said, is perfectly healthy, and so she assures us is her husband. In the summer of 1876, while in charge of a violent patient, she was thrown with some force against an iron bedstead, striking the lower part of her abdomen. This injury was followed by a good deal of pain and tenderness in this region, and by menorrhagia, which continued up to the time of her admission, and has occasionally been present since. She attributes a good deal of importance to this injury, and says that she has never felt perfectly well since. It appears, however, that it interfered with her duties as attendant for a short time only, as she continued in the employ of the hospital, often losing sleep and rest, until a short time before her admission here. When she first came under our observation, it is said that pain and tenderness over the abdomen, at first more marked on the right side, below the position of the liver, were the most prominent symptoms; together with this, there was an occasional hemorrhage from the womb, shortly afterwards a gradual enlargement of the abdomen was detected, which, upon examination, was found to be due to an effusion into the peritoneal cavity. At the time, percussion showed that the hepatic dulness was diminished in extent. The urine was passed in small quantities, sometimes not more than a pint a day being obtained from her, but it contained neither albumen nor sugar, and appears to have been healthy in every respect. The symptoms do not seem to have presented any variety at first; the pain and tenderness persisted, and the abdominal effusion increased gradually in amount, until it was thought better on the 24th of last June to remove it by operation, when nine quarts of a clear yellow liquid

were drawn off. Since this time there has been, I am told, no evidence of a re-accumulation, and at the present time I feel sure that there is no liquid in the abdominal cavity. There was also at one time a slight effusion into the right pleural cavity, but this must have been long ago absorbed, as there is no evidence of its existence now. Moreover, a careful examination of the chest shows that there is no disease either of the lungs or of the heart. One of my colleagues some time ago recognized the presence of endo-cervico metritis, and this still exists, though in a less degree. These then were the prominent symptoms presented by the case when I first took charge of it about six weeks ago. Since that time I have studied it closely, but I am willing to admit that I am still puzzled by it. In order that I might examine her more thoroughly, I placed her under the influence of ether, but could not even then discover any condition which I could regard as positively the cause of the previous effusion. In the right iliac region there was a feeling of greater resistance to the fingers than upon the left side, and when I made a vaginal examination I thought I could feel an indurated mass on the right side, between the fingers in the vagina and the hand on the abdomen; and the other physicians who made this examination with me confirmed me in this impression. To recapitulate the prominent symptoms presented by the case, we have in a strictly temperate woman, following an injury of some severity, menorrhagia, pain and tenderness over the whole abdomen, and a gradually increasing ascites, which, however, after having been removed by tapping never reappeared. With these there are at the present time obstinate constipation, requiring the constant exhibition of cathartics to overcome it; diminished dulness in the hepatic region, especially marked in the right mammary lobe, but not so much so in the infra-axillary region; and the signs of slight enlargement of the spleen. The stools are, however, of good color, in other words, there is no reason for believing that there is diminished secretion of bile. The patient voids, rather a scanty amount of urine; but its reaction to every test is healthy. While there have been at times symptoms indicative of gastric disturbance, these have not been marked, and at the present time may be said to be absent. Such is, in brief, the history of our patient. Can we explain the symptoms which she has presented since her admission into our wards, and especially the occurrence of ascites? I need hardly say to you that the most frequent cause of abdominal effusion, especially when unaccompanied by dropsy elsewhere, is disease of the liver, particularly that form of it which is known as cirrhosis. This disease, as you are aware, marked by contraction of the liver, and, in consequence of obstruction of the hepatic vessels, by great congestion of the portal circulation. This congestion must, of course, relieve itself in some way, and this is generally by effusion of serum into the peritoneal cavity. There are certainly some of the symptoms of this condition present—for instance, there is diminished hepatic dulness, and there are also the signs of splenic enlargement; the latter is, however, not decided, since it is only discoverable by careful percussion. I am therefore disposed to attach very little importance to it as a sign in this case. If there existed decided congestion of the portal circulation, the spleen would unquestionably be much more enlarged than it is. There is also no distension of the superficial abdominal veins, such as is found in this condition, and which we should expect to see in a case in which some relief to the congestion of the portal circulation had oc-

curred, as indicated by the failure of the effusion to reaccumulate. Moreover, the patient is a strictly temperate woman, and in making this statement I do not wholly rely upon her assertion to that effect, as it is corroborated by those who knew her in the other departments of this institution. Now, while I will not go so far as to say that cirrhosis is never met with in a temperate person, I unhesitatingly maintain that its occurrence is rare. Many of the other symptoms of this disease are also present. I have called attention to the fact that there are no evidences of disturbed digestion other than the obstinate constipation. There is also none of that peculiar pallor of the surface so often seen in cases of cirrhosis (especially in those which have run so prolonged a course as this has), which to an experienced eye is often alone sufficient to indicate its presence. It is rare, too, to find patients complaining of so much pain and tenderness upon pressure as has been persistently present in this case, since I assumed charge of it; I certainly have never met with them in the many cases I have seen here and elsewhere. Occasionally, after tapping, a little suffering is caused by an examination of the abdomen; but this usually ceases in the course of a day or two. Jaundice has also never been present even in the slight degree in which it is occasionally seen in cirrhosis. Finally, cases in advanced cirrhosis of the liver must be very infrequent. They have certainly never come under my observation, and I do not find them reported as occurring by writers on diseases of the liver. Even an arrest in the course of the disease is rare when it has gone so far as to produce ascites. Indeed, it appears to me inconceivable that there can be contraction of the liver in this case in the absence of dropsy, of serious diarrhoea, and of an increased secretion of urine. The diminished dulness in the hepatic region is certainly difficult to explain, I admit, on any other hypothesis; but it alone does not amount to the disease of cirrhosis. It may possibly be due to a slight alteration in the position of the liver, brought about in this way I shall here explain. There is a condition which is known as peri-hepatitis, which also gives rise to abdominal effusion. In this disease the obstruction in the portal circle occurs as the result of inflammation, not in the interior of the liver, as in cirrhosis, but at the point of entrance into it of the portal vein. But this disease is characterized by a rapid accumulation of fluid, so that it is often necessary to remove it as often as ten times in the course of the year. Now, in my wards ago I brought before you the history of a patient who had died of this disease. You will recollect that I then told you how frequently it had been necessary to have recourse to the operation of tapping, and that I alluded to another case which had been under my care with precisely the same history. I should tell you that in the former case there was distension of the superficial abdominal veins, and decided enlargement of the spleen, both clearly indicating the existence of portal obstruction, and rendering the diagnosis comparatively easy. I will not dwell further upon this disease, because much that I said while discussing cirrhosis is equally applicable to it. I mention, simply for the purpose of dismissing it from further consideration, cystic diseases of the ovaries as a possible cause of the dropsy in this case, because there never seems to have been any doubt in the minds of my colleagues that the fluid was in the peritoneal cavity, and the recognition of this fact is generally sufficiently easy. Moreover, it is certainly rare for an ovarian dropsy to disappear after a single tapping. We have, therefore, to find some other cause for the ascites. In viewing

the history of the case, it seems to me more probable that this was due to chronic peritonitis rather than to any other cause. It was formerly doubted whether chronic inflammation of the peritonæum could exist independently of tubercles, but at the present time the majority of good observers agree that it does occasionally occur. Indeed, Dr. Hilton Fagge goes so far as to say, in the twentieth volume of Guy's Hospital Reports, that for every two cases of cirrhosis of the liver treated in the wards of that hospital, there is one of chronic peritonitis, causing ascites. This, judging from my own experience, is a statement which few hospital physicians would corroborate, still it shows that the disease is met with occasionally, and justifies us in attempting to explain the symptoms in the present case by referring them to it as a cause. We have had here, you will remember, an injury to the abdomen, which gave rise to menorrhagia, and probably also to inflammation of the womb. At the present time there is only endo-cervico metritis discoverable; but an examination made shortly after the blow might possibly have revealed the existence of a more extensive lesion. Now, this metritis perhaps in consequence of overwork, probably set up an inflammatory process in the adjacent peritonæum, which may have gradually extended until it had involved a large portion of the membrane. I look upon the presence of the indurated mass in the right iliac region as confirming the view. Indeed there is nothing in the case which can be regarded as opposed to it, except the diminished hepatic dullness, which is probably due to a slight alteration in the position of the liver, brought about, possibly, by the results of inflammation in its neighborhood. Chronic peritonitis is often attended by but little effusion, but that this is not invariably the case is shown by the fact that many cases are reported in which it has been necessary to have recourse to tapping. In most of these cases also, but one operation was required. The inflammation subsiding leaves the membrane spoiled, as Sir Thomas Watson expresses it, for the purposes of absorption, but with no tendency to pour out any more liquid. The pain and tenderness which have been such prominent symptoms, I need not tell you are common enough in chronic peritonitis, and so is constipation. The disease as it is, does not necessarily cause obstruction to the portal circulation—need not give rise to distention of the superficial abdominal veins. The fact, too, that the patient is slowly improving is in favor of the view I am now taking of the case. There is no fever and no excitement of the pulse; indeed, no active symptom of any kind. The discomfort which she undoubtedly suffers is therefore probably due to the presence of adhesions which interfere with the functions of the bowels. The disease is in all likelihood not due to the presence of tubercles in the membrane, because there are no evidences of the existence of consumption, and, moreover, the patient is not hereditarily predisposed to this disease. In regard to the prognosis of this case, the improvement which has taken place since it has been in the hospital, and indeed during the last few months, leads me to hope that the patient will eventually recover, if not perfect health, at least strength enough to enable her to gain her livelihood. The treatment in this case, if my view of its nature is correct, must be confined to sustaining the patient's strength and relieving her of the constipation and pain, both of which are the cause of a good deal of suffering. For these purposes she has taken various tonics and purgatives, as well as anodynes, since her admission into our wards. At the present time she is taking a pill containing one grain each of

extract of aloes and extract of hyoscyamus, with one-tenth of a grain of nux vomica, a prescription which was original, I believe, with Dr. T. G. Thomas, of New York, and which, so far, has answered the purpose for which it was prescribed. As the uterine has been of late rather scanty, she has been taking acetate of potassium and compound spirits of juniper. The pain yields only to morphia, either given by the mouth or hypodermically. Various applications have been made to the abdomen, but very little relief seemed to have been obtained from them. At an earlier stage of the disease it might have been well to have used some mercurial ointment. Dr. Fagge speaks highly of the *linimentum hydrargyri*, but the time has passed when it would be likely to be of any service. I have thus shown as fully as my time will allow, the difficulties which surround the diagnosis of this case. It may be that I have come to a wrong conclusion in regard to its nature, and that it will eventually prove to be one of disease of the liver, but with the present light we have upon it, I can not think this at all probable. (Since the delivery of the above lecture, the patient has steadily continued to improve, and has gained so much strength that her detention in the hospital is no longer necessary. Her attacks of pain have become much less frequent and severe, and the menorrhagia has been to some extent relieved. Her appearance at the present time indicates an almost entire restoration to health, and is certainly very different from that which usually accompanies serious organic disease of the liver. No important change has been made in her treatment except that she has been taking for some time past Trommer's Extract of malt, from which she seems to have derived much benefit. It has recently come to light that one of the attending physicians of the hospital, who saw her while the acute symptoms were still present, believed that she was suffering from entero-peritonitis. This fact, of course, fully confirms the lecturer's view of the nature of the case, and renders it almost certain that his diagnosis was correct.—Reporter).

CICATRICAL CONTRACTION FOLLOWING BURNS AND MALIGNANT LYMPHOMA OF THE NECK.

CLINICAL COMMENTS.

BY

HENRY E. SANDS, M. D.

Professor of Surgery College of Physicians and Surgeons, New York, Attending Surgeon Roosevelt Hospital, Consulting Surgeon New York and St. Luke's Hospitals, Etc., Etc.

CASE I. — *Cicatricial Contraction following a Burn.*—Boy burned himself severely last August. Has a large cicatrix in the axilla.

These results are not uncommon. They are the rule when the precaution is neglected during treatment to maintain the parts in proper position and to avoid adhesion and contraction. Very much can be done during the process of granulation to prevent these contractions. Sometimes they may be entirely prevented; always however to a limited extent. Perhaps this is a case in which if no treatment had been pursued the arm would have been drawn tightly to the chest. What can be done to relieve this boy of this great disability? The division of the cicatrix will allow of the restoration of the movements of the arm. I could pass a knife through the cicatrix and, by cutting across it, I am sure I could draw the arm above the horizontal

line. When these cicatricial tissues are divided it very often happens that the margins of the incision gape very widely and it is impossible to bring the parts into coaptation without using traction, which will interfere with the healing of the wound. It may be that the edges cannot be brought together when the cicatricial tissue is divided and you will allow them to heal by granulation or fill the gap by a piece of skin from some neighboring part. In the performance of plastic operations it is a rule that cicatricial integument should not be used for this purpose, for it is endowed with low vitality, is less vascular than natural skin.

My plan would be in this case to resort to the operation of dividing the cicatrix and I hope to narrow the gap thus made by the use of sutures. Failing in this, I would endeavor to produce a separate granulation of the wound along the arm and sides of the chest by the use of pads over the chest and arm, and by passive motion during the period of granulation to prevent contraction. This case is chiefly interesting in a pathological point of view as showing the disastrous consequences of any loss of skin.

CASE II.—Malignant Lymphoma of the Neck.—Male, æt. 51, has had swelling of the neck for nine months. I show him to you to exhibit the negative result of treatment which sometimes is beneficial if not curative. Observe that these swellings are confined to the neck. Notice further that they are confined to one side of the neck and are multiple. We find no cause of the disease. He has not had injuries of the head, eczema, eruptions nor any peripheral irritation to account for the ganglionic enlargements. They seem to have occurred spontaneously, *i.e.*, we do not know how they occurred. Is this a simple lymphoma which is simply an hypertrophy of the lymphatic glands, sometimes softer sometimes harder, sometimes affecting the connective or cellular tissue of the gland?

I am not sure that this is not an aggravated example of simple lymphoma, hypertrophic in character, and in which the glands are much more enlarged than usual. In the scrofulous form of lyma, the signs of inflammation are prominent and the skin becomes adherent to the tumors, which contain a cheesy material which sooner or later finds its way to the surface through abscesses, the skin falling extensively and undermined. Is it malignant lymphoma? The malignancy of this disease consists not in the presence of cancer or of simple sarcoma, but in the fact that the disease is characterized by a tendency to dissemination of hypertrophic glandular tissue in various parts of the body. It is found not only in the lymphatics, but also in other tissues, as the lungs, kidneys, etc. This disease is known by different names, *viz.*, nodular lymphoma, Hodgkin's disease, etc.

Where tumors have been limited to one place for a while similar tumors appear in other regions of the body. This patient has some enlarged glands in the axilla. Six weeks ago there was no indication of any dissemination of the disease. In Hodgkin's disease such deposits often occur in the groins, axilla, abdomen and chest. The disease may prove dangerous by pressure upon the blood vessels of the chest or upon the lungs. Is this leucæmic lymphoma? This only differs from Hodgkin's disease by the alteration in the quality of the blood where the white corpuscles are very much increased in number. Is the disease lympho-sarcoma, *i.e.*, sarcoma in a lymphatic gland? Only one gland in this disease as a rule is affected. It generally occurs in younger persons. The progress is usually rapid and presently the sarcomatous tissue bursts the capsule of the gland and then this disease behaves as cancer in so

far that it appropriates neighboring textures, causing a conversion into similar material, together with ulceration and destruction of tissue.

I think the diagnosis lies between simple and malignant lymphoma. For the past six weeks the patient has been kept under the influence of arsenic and has been treated by hypodermic injections of tincture of iodine.

The arsenic treatment has been known to cause a very decided arrest of malignant lymphoma and there are a number of instances in which this disease is reported to have been kept in abeyance for one, two and three years. Assuming this to be a case of malignant lymphoma this is the treatment which promises the best results, and I should strongly urge a continuance of it. Injecting the tumors also with Fowler's solution instead of iodine. If it is simple lymphoma an operation might be done to remove the tumors. But such an operation would be attended with very great risk and it would be doubtful whether all could be removed.

ABOUT BOOKS.

An Encyclopædic Index of Medicine and Surgery.—In one Extra Large and Handsome Volume. About 1,000 Royal Octavo Pages. Strongly Bound in Sheep.—Edited by Edward J. Brunningham, A. M., M. D.—Published by Brunningham & Co., New York, 1882. Price \$6.00.

How often we hear a tale of prowess in the field of letters or business, and prize-taking of the achievement of some task of heroic magnitude in days gone by, concluded with the remark, "There were giants in those days." And so there were, and yet if these same achievements were compared with the tasks that are now being undertaken and brought to a successful completion they would seem indeed the offspring of pigmies.

A hundred years ago authors and publishers alike would have stood aghast if asked to edit and publish works of the magnitude that are now turned off from the pen and press without comment.

It would seem almost incredible that an art which has grown to such proportions as that of medicine, and a science such as surgery could be condensed within the compass of a single book. And yet this has been achieved in the world before us, and achieved in such a manner as must command none but favorable criticism even from the most captious and carping.

Embodied in nine pages, printed from large type, in a child's handwriting and suitably hygienic uplay, just what a primer it is to be. "An Encyclopædic Index of Medicine and Surgery," which contains concise and yet complete articles on every medical and surgical topic by the most distinguished writers on both sides of the Atlantic, men such as Reynolds, Anker, Erichsen, H. Harris, Butcher, Paget, Jenner, Playfair, Roberts, Bryant, Thompson, of European; fame, Willard Parker, F. H. Hamilton, Alonzo Clark, T. Gaillard Thomas, Rudolph Barker, F. N. Otis, W. A. Hammond, H. P. Sargent, Jacoby, Post and many others equally eminent in our midst.

Never have we seen such an array of celebrities as contributors to a single work. The difficult task of editing such a mass of material from such a variety of sources so as to have each stone fit into the great mosaic, leaving no portion of medicine and surgery uncovered, and arranging the work so as to make it available for ready reference, has been ably performed.

As for the articles contributed, they are in every respect worthy expressions of the matured experience of their famed authors.

Of all the manifold encyclopædias and medical works of every description that have been published, we have never met with one that embraces so much in so little a compass, and which is offered at so trifling a cost. The medical press have very truthfully alluded to it as a "library in epitome." We are unable to compare it with any work that has ever been published. The book is essentially an unique one, and it will readily be seen must prove of incalculable benefit as a book for constant reference. Some of the articles embraced in it have already been presented to the profession by their authors in a different form, and have become classical.

As a matter of convenience, if not of necessity, or os culture, every practitioner should be possessed of a work which opens up to him the riches of the choicest portion of our medical literature, and places at his disposal what must be regarded as a complete reflex of the medical opinion of the age.

A Complete Handbook of Treatment: arranged as an Alphabetical Index of Diseases, to facilitate reference; and containing nearly one thousand formulae. By William Aitken, M. D., (Edin.), F. R. S., Prof. of Pathology in the Army Medical School; Examiner in Medicine for the Military Medical Service of the Queen, &c. Birmingham: S. & Co., New York, 1882. 12 mo., pp. 444. Price \$2.00.

To those who have closely studied the literary wants of doctors at the present time, it is apparent that what they need and are demanding is books which, in a comparatively small compass, shall embrace a resumé of what is known about the cure of disease.

It goes without saying, that the chief work of the doctor consists in devising and suggesting and adopting ways and means of effecting this object; in other words it is the *treatment* of disease that is his life work.

It of course naturally follows, other things being equal, that he whose knowledge of treatment is the most extensive, the most intimate and profound, will be the most successful doctor and will the most quickly acquire reputation and wealth.

The physician who is called in to treat some ordinary form of disease, as a rule, does not want to know the pathology, the symptomatology and all the otherologies so much as he wants to know how to get his patient well in the speediest and most agreeable way.

He wants to know how Dr. A, or Dr. B, or Dr. C, who have world wide reputations for their success in treating this form of disease, are accustomed to treat it, he wants to know all the details of their method, what medicines they give, and in what combinations and what dose, what hygienic measures they advise, what diet, etc., etc. To find these few simple, practical, but all important directions, doctors turn to their library in vain, for they have no book that tells them all this, fully, yet tersely, and must need wade through page after page and chapter after chapter of description and differential diagnosis, and prognosis, and etiology, and symptomatology, and pathology, etc., to sift out the all too barren hints about treatment, and all this at a great waste of time and temper, and at the end of the useless search, disappointment.

The book before us has been prepared with the definite specific purpose of meeting this want for what might be termed "ready for use knowledge." All the searching and sifting has been done, and what is left is

the explicit directions for treatment sought for, arranged so as to give at a glance what Dr. A, Dr. B or Dr. C does, for measles, or typhoid fever, or bronchitis or whatever the case may be.

The authorities quoted are none but the most eminent. Every disease is treated of. Nearly a thousand formulæ are given. The diseases have been arranged alphabetically so as to make reference to them most easy.

The eminence of the author, the well known excellence of his classical work on the "Practice of Medicine," from which this "Handbook of Treatment" has been developed, the simplicity of arrangement, the scope of the book, its pre-eminently practical character, its form, its unexampled cheapness, the acknowledged demand for a work of this nature, all conspire to make this one of the most useful and most important of recent publications. It is a monument of the enterprise of its publishers in furnishing works of this class at a merely nominal price, and must be welcomed far and wide by a Profession ever ready to recognize and appreciate what is of real worth.

HOSPITAL RECORDS.

NEW YORK HOSPITAL—NEW YORK.

CARDIAC HYPERTROPHY WITH DILATATION.

The patient was admitted to the hospital Nov. 2nd, 1881. Age 53. Is a druggist. Married. Has been a steady drinker. His father was subject to rheumatism, and died with dropsy. His mother died of cancer of the stomach. Patient had his first attack of rheumatism at the age of 38, in the knee and ankle joints. He has had frequent attacks every two or three years since then. Has had gonorrhœa, but no syphilis and no malaria.

One year ago he noticed that he began to lose his appetite and to suffer from dyspeptic symptoms, and that he was becoming short of breath upon exertion. Four months ago his feet and ankles became swollen. These symptoms increased in severity, until two months ago when he was obliged to give up work. He has now lost sixty pounds in weight and complains of anorexia and palpitation of the heart, in consequence of which he cannot lie on his back.

There is one point of interest in the family history, and that is, that his father was subject to rheumatism. From his own history we learn that he has been a hard drinker, and also that he has had attacks of rheumatism every two or three years. His general health was good until one year ago, but then it failed quite suddenly, and he began to suffer from dyspnœa and other evidences of obstruction to the circulation.

This history leads us at once to the heart as the probable seat of the disease.

Inspection.—The patient looks older than he is. Respiration is mostly thoracic and labored. The abdomen is distended. The legs are slightly swollen, the veins are somewhat varicose, and there is a mild eczematous eruption upon them. He lies in bed in a semi-reclining posture, with his head and shoulders propped up by pillows.

Palpation.—On tapping with the fingers at the side of the abdomen, a sense of fluctuation is appreciated by the hand on the opposite side. There is a diffused area of pulsation of the heart, and on expiration the apex beat can be distinguished at a point two and a half inches to the left of the nipple, and in the sixth

intercostal space, and so it is much farther to the left, and a little higher up than normal. The legs pit upon pressure.

Auscultation.—The heart beats rapidly. Over the third intercostal space at the left border of the sternum, a reduplication of the first sound of the heart is heard. And there is a sound like the crackling of a piece of leather, which is synchronous with the respiratory movement. It is evidently a friction sound, and is heard both on inspiration and expiration, and so must be a pleuritic, and not a pericardial friction murmur. At the upper part of the right lung there is no respiratory murmur, though the chest moves freely. It is exaggerated upon the left. Lower down on the right the vocal resonance and the respiratory murmur are more distinct. At the base of the left lung there is absence of respiratory murmur, but a friction sound is heard.

It will be interesting to seek the cause of this peculiar absence of respiratory murmur in the upper part of this man's right lung, although the chest expands freely. There has probably been at some time, some consolidation of the upper portion of the right lung as a result of bronchitis, or more probably in this case from an old pleurisy in which there was an exudation, which resulted in the formation of new tissue, which by gradual contraction has resulted in the condensation of the lung, which in its superficial portions is thus made impervious to the entrance of air. It is important to recognize the signs of an impervious lung; they consist in an absence of the respiratory murmur, while you get an effort at breathing; and you hear a faint murmur which is said to come from a point near the surface of the lung, but this sound has none of the characteristics of a true respiratory murmur. In examining the chest you must always have constantly in mind the character of the normal respiratory murmur, in order to recognize abnormal sounds, and if at any moment you forget it, you should go immediately to another part of the chest and listen until you get them well fixed in your mind, and then return to the examination over the suspected region.

We have not yet completed the objective examination, but we have gone as far as we can here. It remains yet to inquire into the condition of the urine, as to whether or not it contains albumen or casts, and as to the amount passed, and the frequency of passing it.

He says that he has been accustomed to examining it himself for albumen, until two weeks ago, but he found none. But since he came into the hospital, it has been found to be present. The amount passed is considerably diminished, and its specific gravity is 1022.

The symptoms elicited are, fluid in the abdomen, enlarged liver, spleen not made out, enlargement of the heart, shown by the displaced apex beat, friction sounds in the lungs, and pleuritic effusions on the surface of both, and fluid in the lower part of the chest, upon the left side, and consolidation of the upper part of the right lung with expansion in the lower portion. These objective signs with the subjective, lead us to the conclusion that there is dilatation of the heart, and, as a result, obstructive congestion of the kidneys and liver, though the evidences of portal obstruction are not pronounced. The hypertrophy of the heart depends either upon valvular lesions, or upon an adherent pericardium, the result of pericarditis, which may have followed some of his many attacks of rheumatism. Here again is brought to notice the fact that a man with heart disease may enjoy very fair health for a long time, and not be aware that there is anything

wrong with his heart, until the period of compensation has passed. This man was apparently in good health until a year ago, although for nearly all of his life his heart may have been working against some obstruction, which was the result of an old pericarditis or an endocarditis. But now the compensation from hypertrophy has ceased, and the heart tissue, like all hypertrophied muscles, has undergone a degenerative change, and so it has become weakened and dilated, and consequently it no longer has force enough to overcome the obstruction in the circulation. As is common, he first noticed an unusual trouble in breathing upon exertion, and then followed a succession of difficulties, general anasarca, peritoneal and pleuritic dropsy, an enlarged liver and kidneys.

Patients often come into the hospital in a worse condition than this man, but under the favorable conditions of repose, good diet and medication which they find here, they speedily get much better. They then go out again, and are quite well for a season; but from imprudence or over exertion they get into the same trouble again, and then they come back to the hospital; and again with rest, and the enjoyment of the same favorable conditions as before, their strength returns and they so far recover that they again go out, only to return again after a time to repeat the same process. These patients from their habits of coming to the hospital so often for the same trouble are commonly known as "returners."

So this patient, by reason of the advantages which the hospital offers, will probably improve rapidly and be more comfortably for a time.

SELECTIONS FROM JOURNALS.

INFANTILE CONVULSIONS.

The diet and regular treatment of M. Jules Simon, of the Hopital des Enfants Malades, for infantile convulsions is as follows:—On arrival at the hospital the child is given a diet of salt and water, salad oil, or glycerine, or honey, which he administers himself, as he has too often observed that the parents or the nurse have already lost their wits. If the child can be opened the artificial nipple is given, which allows the stomach of any food that could not be digested—the most frequent cause of convulsions. However, the attack continues, but soon ceases on applying a handkerchief, on which a few drops of chloroform are poured, to the mouth, which the child inhales largely. If the convulsions reappear the anæsthetic is renewed, and the child is placed in a mustard bath for a few minutes, and then washed and placed on his bed properly wrapped. Chloroform might be again administered if, after an interval, the child was seized again, and he is not again seized. M. Simon prescribes a large effusion of opium containing sixteen grains of bromide of potassium, and a small quantity of a medicinal preparation of opium, for he does not believe that the brain is congested in these attacks, it is rather excited, and the opium acts as a sedative. A teaspoonful of the mixture is given several times a day. On the following days the child is generally restless and irritable and ready to be attacked again, but a small blister about an inch square is applied to the back of the neck and left on about three hours, when it is replaced by a poultice of linseed meal, and gives most satisfactory results. M. Simon, in terminating, says "such is the treatment that I have instituted in my practice of every day."—*Med. Press.*

SIMPLE METHOD FOR THE CURE OF OZÆNA.

Dr. Gottstein (*Gaz. Med. di Roma*) considers ozæna as a constant symptom of chronic coryza. There is no doubt that, after interference with the function of the glands, there is a diminution and alteration of the nasal secretion. Part of it, drying rapidly, adheres to the mucous membrane on which it forms crusts, and it is the decomposition of these which is the cause of the odor. It is, therefore, only necessary that a limited portion of the mucous membrane should undergo atrophy to give origin to an ozæna. In adopting this theory it is evident that there can be no question of radical cure, since it cannot be hoped that the secretion of an atrophied mucous membrane can ever become normally re-established. We must, therefore, be satisfied with that treatment of the symptoms which is the most simple and convenient for the patient. The author was led by chance to employ the following method, from which he has already in fifteen cases of ozæna seen the best results to follow in less than three months. Dr. Gottstein commences the treatment with a nasal douche, which, by freeing the cavity from its secretions, permits the recognition of the character of the mucous membrane and the extent of the lesion. This is followed by the introduction of a tampon of cotton, 3—5 centimetres long, which should remain in position for twenty-four hours. About an hour and a half after the introduction of the cotton, there is a little secretion from the nose. When the tampon is withdrawn, the secretion is found to be fluid and without crust or odor. Twenty-four hours can be allowed to elapse between two applications of the tampon. When both sides of the nose are affected, the nose can be tamponed every twenty four hours on the alternate sides. The tampons cause an artificial contraction of the cavities, and so increase the action of the column of air and facilitate the expulsion of the secretions, which are absorbed as rapidly as they are formed, and their desiccation is thereby prevented.—*L' Union Med.*

CORRESPONDENCE.

CEREAL FOODS.

CARL SEILER, M. D.

EDITOR OF MEDICAL GAZETTE: *Dear Sir*—A few days ago I read in the *Medical News* a letter by my friend Dr. J. G. Richardson, in which he calls attention to a very serious blunder perpetrated by Dr. Ephraim Cutter of New York, in an article on the microscopical examinations of cereal foods. Having used some of the cereal preparations quite extensively in my practice I naturally became interested in the matter, and procuring Dr. Cutter's article, as well as a few samples of cereal foods, I read the article and examined the samples with the following results:

In his article Dr. Cutter says that all the gluten cells are contained in the bran, and that in preparing the ordinary white wheat flour, "three-fourths of the gluten is removed, and the chief strength (?) of the food is destroyed;" yet it is well known, as Dr. Richardson in his letter has pointed out, that the substance of the grain itself contains a large amount of gluten, which can readily be demonstrated by experiment. Furthermore, Dr. C. does not figure in his microscopical drawing, nor does he mention in the text, the presence of beards and particles of the outer coats of the grain in wheat flour which I found in considerable quantity in a num-

ber of samples examined with the microscope. This may be due to the fact that Dr. C. in examining flour simply mixed a small quantity with a watery medium on the slide, which causes the starch granules to collect in large masses, and thus will obscure the impurities. If, however, the flour is mixed with a small quantity of sugar, as suggested by Dr. Richardson, the particles on being mixed with water on the slide are spread out evenly and the beards of wheat become apparent.

What struck me particularly as singular in Dr. C.'s article was the great similarity in the microscopical drawings of Mellin's food and of Horlick's preparation, and the great discrepancy in the verdict regarding the utility of the two foods. For the author says about Mellin's food: "*The starch is changed into a soluble form so as to readily enter the circulation, and its introduction into a defective digesting alimentary canal. This food stands high on the list. Should the proprietors put in the full proportion of gluten, it would be faultless.*" And about Horlick's food he says: "*The starch, that makes up the bulk of the food, is changed into dextrose or sugar, hence it is soluble. It approaches common flour.*"

It seemed to me that if the starch was all in a soluble form and gluten cells were present as figured in both preparations, the difference could be but very slight, and that if one was nearly perfect the other could not be far from it.

Having some samples of Horlick's food on my mantel-piece, I made a number of microscopical preparations in various ways, with a view to determine the character of the preparation as compared with common flour and other cereal foods, and found that there were but very few unbroken and unchanged starch granules in any of the preparations, and they could only be detected by coloring them with iodine and by their reaction upon polarized light. The bulk of the preparation is soluble in warm water, and has no effect upon polarized light. Gluten cells, both empty and filled, were present in almost every specimen. The amount of impurities, such as beards from the grain and tissue fibres, is very slight, so that I examined a number of preparations before finding any. Thus it will be seen that this preparation is far different from ordinary uncooked flour, and very clearly resembles the food which Dr. C. places "high on the list."

Samples of other foods, such as Hay's cooked oatmeal, Hubbel's prepared wheat, Imperial Granum, etc., I also examined with care, and found them to be as represented on the label, containing more or less impurities, and different samples were more or less cooked, as indicated by the reaction of the starch granules upon polarized light, but all of them are undoubtedly more easily digested by a weak stomach than common flour, a fact gleaned both from microscopical examination and clinical observation.

I make this communication not because I have any further than scientific interest in the matter, but because I think the public should be enlightened as to the true merits of the case, and because as a lover of the microscope as an instrument of precision and investigation, I can not bear to see its value decreased in the eyes of the non-expert by misrepresentation of its revelations.

Very respectfully yours, CARL SEILER, M. D.

MEDICAL NEWS AND NOTES.

"What is the action of disinfectants?" was asked of a medical student. "They smell so bad that people open the door and fresh air gets in," was the reply.

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TUMORS ON THE CORD.

BY

WILLARD PARKER, M. D., LL. D.

Emeritus Professor of Surgery, College of Physicians and Surgeons, N. Y., Consulting Surgeon to the New York, Roosevelt, Mt. Sinai, Bellevue Hospitals, etc.

The following cases present points that are somewhat unique and seem to deserve recording.

CASE I.—Early in May, 1846, Mr. J. P., æt. 62, of Catskill, merchant, consulted me on account of an immense tumor of the scrotum. He was very shy in regard to it and had seen no physician. He wore a frock, which he kept buttoned, and to a good degree concealed the deformity. He was married, had several children, was temperate in all respects and belonged to a healthy, long-lived family. He stated that he discovered the tumor accidentally five years before, and it was then about the size of a walnut; had experienced no pain nor even uneasy sensation except, of course, that of the weight of the mass. His health had not been impaired in consequence of the disease, though this caused him some mental disturbance, partly from anxiety and partly from his over-sensitiveness.

The tumor was situated in the left side of the scro-

tum, and it was at once supposed that the testicle was involved; it presented a spherical appearance, being the size of a gallon-keg approximately. The color was normal; the superficial veins were somewhat enlarged; the integument was rather tense, but normal in structure and in temperature; was freely movable over the tumor; completely covered in the penis and gave no evidence of hypertrophy; there was no point of ulceration nor any indication of hydrocele. The size of the mass did not diminish on assuming the recumbent position nor did it increase on standing erect, holding the breath or making any muscular effort. The tumor was uniform and firm to the touch and gave no impulse on coughing. There was no fluctuation nor pain nor tenderness. The lymphatics adjacent were not involved. Shutting off the blood supply did not affect the size of the tumor. Percussion over the mass was dull.

After a careful examination I recommended removal and, on May 13, 1846, just before the introduction of anæsthetics, assisted by Drs. Simpson, Bullen and Bruce, I operated. None of the integument was removed; the mass enucleated itself, so to speak, so easily was it separated. The patient recovered quickly.

On cutting open the mass, which was found to weigh 14 lb. 10 oz., there appeared to be three lobes; the central one being the largest, its cut surface giving the appearance of fresh pork; the other lobes were somewhat different in color, but were not examined closely. The tumor was exhibited at the New York Pathological Society and considered to be malignant. I supposed it to be testicle. When I made a careful dissection I found the testis at the lower and posterior part of the growth a trifle smaller and softer than normal, but enclosed in its tunica vaginalis, which was not hypertrophied.

Mr. P. remained well for two years when a tumor began to develop on the stump of the spermatic cord; it was hard and painless and grew slowly. At the end of two years and a half it had attained the size of the double fist. On November 29, 1848, I operated a second time. The mass presented no new feature except that it was rather firmer and more closely adherent to the adjacent structures, and was tightly bound down by integument pressing into the abdomen. The operation was more difficult than the first one, the peritoneum being quite adherent at points. The mass after removal weighed 3½ lbs. The patient recovered and there was no return. He lived on in good health and died at the advanced age of 86.

CASE II.—W. D., of White Plains, æt. 64; cooper; married. Consulted me Feb. 13, 1849, for what was supposed to be an enlarged testis on the left side. His personal and family histories were good; he was temperate, without constitutional taint and at that time in good health; experienced no sensation beyond that of weight of testis except occasionally pain in the

small of the back to which however he attached but little importance. He stated that he discovered a small lump in the scrotum six years previously and that it had been gradually increasing in size. On examination the tumor presented the same general features noted in the preceding case, only that the mass was much smaller and the penis was not lost in the surrounding integument. The lymphatic glands in the neighborhood were not affected. The tumor was solid on manipulation and tender at the lower and back part, where the testis was presumably.

Ablation was recommended, to which the patient readily assented. The operation was performed in Bellevue Hospital under chloroform. As in the former case, none of the integument was removed; the adhesion between the mass and the testis and cord was so firm that it was determined to make an attempt to separate them, and the testis was removed with the tumor. The entire mass weighed $2\frac{1}{2}$ pounds and upon dissecting it the testis was found in the lower part, somewhat smaller and softer than normal, invested by an unhypercrophied tunica vaginalis, which contained perhaps $\frac{2}{3}$ iss of straw colored fluid. The patient soon recovered and was kept under observation for years without giving any symptoms of recurrence. The mass was undoubtedly benign, yet its precise histology was not determined—that department of science being then undeveloped.

CASE III.—A specimen presented by the late Dr. Conant at the New York Pathological Society which was taken from a farmer aged 75 in Vermont. Its growth had been gradual and it weighed several pounds. The general health of the patient had always been good, and he knew of no injury or other assignable cause for the disease. After the removal of the mass (in 1864) the patient did well and speedily recovered. I suggested that the tumor was independent of the testis and on careful inspection, that gland was found at the back and lower part of the mass and very small. There is no note of a subsequent reappearance of the growth.

CASE IV., of Dr. R. K. Hoffman. New York Hospital Records, 1st Surgical Division, 1846, p 850. Patient, æt. 31; married; father of two healthy children, discovered a swelling on right cord twenty years previously; suffered no pain from it; later small tumors or subdivisions of the swelling could be distinctly made out and these subsequently merged into one. During the latter two years there was a rapid increase in size and at date (1846) it measured 21 inches around the base. The mass was removed and weighed 11 pounds, the testis being found untouched, in a cleft of the tumor. The disease was pronounced encephaloid and colloid cancer. The patient recovered from the operation, but in four years the disease returned, and this time on the left side.

CASE V., of Mr. O'Ferrall, reported under title "Malignant Tumor of Scrotum," in the *Dublin Medical Journal*, 1846, Vol. I, p. 521 *et seq.* The patient was 44 years old and had first noticed the tumor in the left side of scrotum ten years previously. Ulceration had opened some of the enlarged superficial veins and had caused alarming hæmorrhage. This was one of the reasons for operating. The lymphatics were not involved. "It presented under the microscope the mixture of fibres and cells characteristic of malignant structure. The left testis was after a careful search found to occupy the position mentioned by the patient" (*i. e.* in lower and back part of the mass). "It was atrophied but otherwise unchanged and lay enclosed in its moist and polished tunica vaginalis. The cord above it was ost in the tumor." The writer then goes on to show that

the diagnosis was undoubtedly correct, differentiating the disease from elephantiasis scroti, hernia, hydrocele, &c. It cannot be ascertained that there was any recurrence of the growth.

In all these cases it will be observed that the testis was found untouched, the growth, whether malignant or not, involving the cord alone. It is to be regretted that the exact morbid anatomy of these growths is not known, for with due respect to the opinions of our predecessors it is probable that "malignant" and "encephaloid and colloid" tumors were diagnosed rather more frequently than they should have been. It is presumable, however, that of these five cases, the first three were benign, for although a recurrence is noticed in Case I, there was an interval of twenty-two years between the date of the second operation and the time of patient's death (which was the result of old age), and during this time there were no symptoms of recurrence. It must not, however, be inferred that the failure of reappearance of a growth is necessarily an indication of its benign character, still the absence of a secondary growth conjoined with freedom of the lymphatics from contamination, the good family history and the age of the patients would rather declare the innocent nature of the tumors—so much so that in similar cases I should have no hesitation in giving an extremely favorable prognosis, and I do not feel that I assume unwarrantably the optimistic side of the question in calling these tumors in many instances benign.

COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK—DERMATOLOGICAL CLINIC OF PROF. GEORGE HENRY FOX, M. D.— THIRD QUARTERLY REPORT.

BY

CHAS. A. KINCH, M. D., Male Division, *Clinical*
GEO. THOS. JACKSON, M. D., Female Division, *Assistants*.

REPORT OF MALE DIVISION.

CASE 258.—*Acne of three years' duration greatly improved in ten weeks.*—Dan. L., æt. 18, carpet printer.

April 3rd.—Face and back of shoulders covered with pustular nodules in various stages, and many cicatrices between them, especially on the back.

Treatment.—*R.* Sulphur, Lotion.

Sapon. virid p.e. M

Sig.—Rub on at night, and wash off in the morning.

April 17th.—Face brownish and blistered.

R. Zinci Oxid. 6

Ungt., 60 M.

May 15th.—Parts of the face much improved. Other parts, where the pustules keep appearing, are treated with sulphur paste, followed by zinc ointment, as before. Dyspeptic symptoms now being discovered, mist. rhei and sodæ was ordered.

June 12th.—Face looks quite well. Back is the worst. It will be treated in the same way.

CASE 266.—*Eczema Ani.*—John F., æt. 40, tailor.

April 12th.—Patient complains of an itching around and near the anus. "Has to stop in the street to scratch himself." Redness and scaliness around anus, extending above the coccyx and to the tuberosity of the ischium on either side. Has suffered for seven or eight years, with intervals of remission. At such times he would have itchings over entire body, and red spots, sometimes upon the head also.

Appetite capricious, "beating in stomach," and "gripping pain" over sternum and heart. Bowels cos-

tive. Pain under right shoulder-blade. Patient feels the cold. Neurotic temperament.

R Ungt. Naphthol, 6% 50

May 7th.—Much itching all over the skin. Local trouble relieved.

CASE 249.—*Eczema Manu*.—Henry N., æt 20, confectioner.

Feb. 27th.—On right ring finger skin thickened and fissured since last August. Same appearances on external surface of left middle finger for six weeks.

Treatment.—R Ungt. Naphthol. 8% 30.—

R Glycerinæ.

Alcohol, p. e., M.

S.—Apply after washing.

March 13th.—Improved; tendency to vesiculation,

R Ungt. Diachylon (Hebra) 30

CASE 273.—*Pigmentation from exposure to electric light*.—Jas. C., æt. 40, electric light machinist.

May 22d.—Discoloration of face and hands since July, 1881. It was first noticed about two months after commencing to work at the electric light. The dynamo-machines often throw sparks into his face. Deep pigmentation, almost like *argyria*. Pigment most heavily deposited around the follicles, making black dots of nearly 2 mm. diameter, on a more or less brown surface. Patient says that his face burns in the sun as any other face would, but the discoloration is not changed. It has been growing worse lately.

CASE 271.—*Scabies*.—S. B., æt. 38, tailor.

May 15.—Discrete papules on flexor surfaces of forearms, on abdomen and front of thighs. Not very marked. Tops of papules torn off. No other scratch marks.

Treatment.—R Sulphur. Loti.

Sapon. Virid p. e. M.

May 15.—Better.

May 20.—But few erosions remaining.

REPORT OF FEMALE DIVISION.

The following are notes upon the more interesting cases coming to the clinic since my last report, up to June 26th, 1882:

CASE 454.—*Acne vulgaris*.—June 12, 1882. Mary C. æt. 17. For past four or five years has had pimples on face and back. About three months ago patient had an attack of quinsy sore throat, since which her face has become worse. Bowels regular. Tongue red on tip. Appetite changeable, at present good. Menstruation regular and painless, but patient's mother thinks that it is somewhat scanty. Face becomes worse about one week before menstrual period. Patient is very anæmic, and face is swollen about eyes. Examination of urine showed no trace of albumen or casts. Patient tires easily on walking, and does not exercise much in open air. Hands and feet feel often cold. Drinks a good deal of coffee with much sugar.

The acne pustules are large and thickly scattered over whole face and on shoulders. A few comedoes.

Treatment.—Opened a number of the pustules. Directed her to have a farinaceous diet, and take plenty of fresh air. R Sapo. viridis and alcohol p. e. ad. 3 iv, to be well rubbed into face, then if face is sore afterwards to bathe it in hot water, and apply ung. zinci. oxid. Internally, fer. et. potass. tart gr. v t.i.d.

June 26.—Pustules much smaller but a good many of them. Discontinue the sapo. viridis, as it seems to irritate the face too much, and order instead a lotion containing sulph. precip. about 3 j. to the 3 j.

CASE 416.—*Alopecia Areata*.—April 3, 1882.—Bridget C., æt. 7.—Two years ago her hair came out in areas,

but grew in again in two months. About two months ago began shedding her hair again. The child's general health is good, and no particular cause for the baldness is discoverable. There is a tradition in the family that the child's maternal grandmother when about 7 or 8 years old suffered in the same way. Large areas of baldness over whole head, scalp being white and smooth. Some black hairs separating the areas.

It was ordered to rub into the scalp a 5% oleate of mercury night and morning.

April 17.—Is still using the oleate. Not much if any change. Gave small doses of calomel as a laxative.

April 24.—Substitute liq. ammon. fort. pur. for the hg. oleate as application to scalp.

May 15.—The black hairs separating the areas on the scalp have fallen, and no sign of new hair. Continue ammon. and give ol. morrhue.

June 5.—New eyelashes growing (these had also fallen out). Continue treatment.

CASE 449.—*Alopecia (ariata?)*.—May 29.—Margaret B., 42. Hair began falling out rapidly about 6 weeks ago, beginning on the left side. For some time, don't remember how long, hair has been thin in the line of the part (middle line). Has been living in Harlem till two years ago, and has had malaria for 12 years though no distinct chills; she is feverish in afternoon and drowsy all the time. Bowels regular; appetite good menstruates regularly. No history of syphilis. Has had a good deal of "dandriff," which was particularly bad just before hair fell out.

A general thinning of the hair over the whole head, only in two places a well marked area, and those not circular.

Treatment.—Tr. fer. chlor. gt. xv, with Fowler's solution gt. v three times a day.

June 5.—Hair has fallen out a good deal since was here last. Stop iron and arsenic and give R Sapo viridis 3 j.; spts. vini rect. 3 j.; and use as a wash. R Ext. jaborandi fld. 3 ss—j. before meals.

June 12.—For about one hour after taking jaborandi, teaspoonful doses, she sweated profusely; this was followed by chilly sensation and general malaise. After the effect of the drug has passed off she feels better, not so drowsy. Hair hair has almost ceased falling out. Continue the jaborandi in 3 ¼ doses.

July 10.—About the same as last time. Hair has ceased falling out. Continue treatment.

CASE 456.—*Chromophytosis (pityriasis versicolor)* and *Chloasma*.—June 12, 1882.—Mary C., 22. Has had malaria badly for three years, for which she has taken a good deal of quinia. Often has pain in left side and across back. Is easily startled. Menstruation regular and painless, lasting four days. Has considerable headache.

On chest the brownish discoloration of chromophytosis is present in furfureous patches, while on the forehead, nose, around the mouth and neck the brownish stain of chloasma is found.

Treatment.—For the chromophytosis, an ointment composed of sulphur, 3 ij.; sapo viridis, 3 iij.; and glycerine, 3 ss. was ordered.

NOTE.—The great similarity between the stainings on face and chest would easily lead one to think that they were one and the same process. But chromophytosis never occurs on the face, and is more or less furfureous, while chloasma is usually upon the face, is smooth, and seldom occurs on the trunk, excepting as a general discoloration.

CASE 432.—*Erythema nodosum*.—May 8th, 1882.—Thos. Petit. æt. 12. About one year ago he had first attack, and has had several since. His bowels are

regular; appetite good; has occasional headaches; sleeps well, and is generally in good condition. The eruption is apt to come out after becoming overheated. It itches but very little.

The eruption is located upon the backs of both hands and forearms, and consists of a number of disseminated, hard, shiny, and raised nodes about the size of a pea and larger. These come out suddenly and remain three or four weeks.

Treatment.—R Syr. fer. iodid. gt. v. t. i. d. Locally, ungt. zinci oxid.

CASE. 436.—*Lichen Planus.*—May 8th, 1882.—Arthur B—, æt. 10. The eruption appeared six weeks ago. His appetite is good, bowels regular, and digestion well performed. He has some sore throat, and a chronic rhinitis. General appearance healthy.

The eruption is universal excepting on head and face. It is miliary—papular, discrete, and in patches, these being specially thick over small of back. The eruption is of a purple color and scaly. Individual papules glistening, flat, and umbilicated.

Treatment.—R Sol. Fowlerii, 3 ij.; tr. cinchonæ co., 3 iij. Sig. 3 j. t. i. d.

May 15th.—About the same. Continue above, and order a 50% ointment of thymol to be rubbed into skin of right side.

May 22nd.—Skin is smoother upon the side on which the ointment was used. Itching continues. Double the dose of ointment, continue thymol ointment on right side, and order the left side to be rubbed in same manner with a 50% ointment of naphthol in vaseline.

CASE 457.—*Lupus Erythematosus.*—June 19th, 1882.—Elizabeth H—, æt. 38. Married. One year ago a "pimple" appeared on right cheek and spread from there. Six months after a similar pimple came on nose, which also has spread. The patient says that she always has had good health; has given birth to ten children, the last three years ago. Between each delivery at full term she has generally had one miscarriage. Husband healthy.

Appetite good; bowels regular; sleeps well. About once a week she has a "bilious attack," with bitter taste and eructations of yellowish bitter fluid. She says that she has always been nervous and suffers from palpitation of the heart.

Upon the right cheek there is an irregular, red, oval patch, dimensions about $1\frac{1}{2}$ in. x $2\frac{1}{4}$ in, with one red streak running up to inner canthus of right eye. On the tip of the nose is a similar patch about the size of a ten cent piece. The surface of the patches is uneven (in some places quite smooth, and in some places looking as if loss of substance had taken place), and covered with dry scales. Color reddish brown. Patient says that the surface has never been raw.

Treatment.—Ointment of naphthol 5% in vaseline. About three days afterwards I saw the patient, and found satisfactory improvement.

CASE 420.—*Psoriasis Universalis.*—April 10th, 1882.—Annastina W—, æt. 30. Married. When patient was 10 years old she had first attack of psoriasis, which lasted two years, and then disappeared, and she remained free from it till two weeks ago. Her appetite is poor; bowels constipated; and she suffers from pyrosis.

The eruption is guttate in form and quite generally scattered over the body.

Treatment.—For two weeks attention was directed to the stomach and intestinal disorder, bismuth subnit.; rhubarb and soda being given. On the 24th April, the stomach being in much better condition she was given R Liq. arsen. chlor., 3 iv.; tr. fer. chlor.,

3 ij.; tr. cinchona. co., 3 iv. M. Sig. 3 j. t. i. d. after meals.

May 1st.—Improved. The arsenic has produced constitutional symptoms, so it was stopped, and ungt. ac. chrysophanic 10% was ordered for local use.

May 15th.—Improved. Continue the ointment, and commence again with the arsenic in five drop doses t. i. d.

CASE 410.—*Rodent Ulcer.*—March 27th, 1882.—Mrs. B—, æt. 42. Patient states that her father's sister had cancer of the face, and his mother also.

Four years ago patient first noticed a red pimple upon forehead a little to the left of the median line. Up to last January it was in a non-progressive state, and covered with a thin brown scab, when it began to grow and ulcerate more freely. No pain in ulcer, but thinks that her left eye has begun to pain since ulcer began to spread.

She has neuralgia of head and in different parts of the body at times; occasional attacks of dyspepsia, with pyrosis. Bowels constipated.

At present there is a brown, honey-like scab upon a raised red base on forehead to left of median line. Upon removing the scab we find a small ulcer.

Treatment.—Scraped with curette.

CASE 425.—*Urticaria, Chronica and Psoriasis.*—April 17th, 1882.—Lizzie H—, æt. 17. Operator (steam power). Two years ago she was first attacked with urticaria, and since then has had it constantly, having two or three outbreaks each day of the characteristic, suddenly appearing wheals, accompanied by much itching. Becomes more aggravated in summer.

She has had psoriasis for ten years, only slight till one year ago, when it began to increase. The disease is of the guttate form and located on both elbows, knees, about the waist, and on hairy scalp.

Her appetite is good excepting in the morning, when her mouth tastes badly, and she has headache. Bowels regular, tongue slightly coated; menstruation regular and painful, and at these periods the urticaria becomes worse. For past year she has been pale. Has not noticed anything wrong about urine.

Treatment.—Acetate of potash, gr. xv., t. i. d.

April 24th.—About the same. Stop potash and give tr. ferri chlor. 15 drops t. i. d. after meals.

May 8th.—No better. Hands and feet often cold.

R Sal. Fowlerii, gr. v. and tr. fer. chlor. gr. xv. in water, t. i. d., after meals, and direct her to stay out in the sun for a week. Give her a 1-10 gr. pill of aloin every a. m. and p. m.

June 12th.—Decidedly better. Not so many wheals nor so frequent eruptions. Continue treatment, substituting the fer. et. pot. tart. for the tr. fer. chlor.

CHOLERA INFANTUM—ITS PATHOLOGY ETIOLOGY AND TREATMENT.

BY

O. C. TOBEY, M. D.

Westfield, Illinois.

It sometimes happens that important truths, like valuable inventions, long escape detection, apparently on account of their very simplicity. Theories are most useful when least complicated. These facts apply to the science of medicine as well as to other branches of progressive research. In regard to cholera infantum some new theories are evidently making, for physicians for the most part have long been in doubt when to apply the term in cases of bowel trouble among

infants. Of late, however, it has been the custom, especially in city practice, to apply it to every variety and form of infantile gastro-intestinal disease. This is manifestly an unfortunate error, for it directly retards all systematic investigation of the disease. Another error or delusion is to suppose that cholera infantum belongs to city life alone. Every Summer many cases are found in rural districts as well; proving that the disease follows of necessity certain operative causes.

Cases of acute or chronic diarrhoea in infants caused or aggravated by the reflex irritations of teething, bad feeding, crowding, etc., should not be called cholera infantum in the summer any more than in the fall and winter months. Diarrhoea from these causes are met with at all seasons of the year, yet who would have the temerity to announce a case of cholera infantum in January.

It is true that pædatrophia is found to a much greater extent in city than in country life, confined for the most part to the poorer classes and those who are crowded into close and unhealthy apartments, at the same time insufficiently supplied with wholesome food. That hot weather should increase the evils and render treatment more tedious and difficult, is no excuse for a monopoly of the term, cholera infantum. In true cholera infantum we have a disease affecting the whole system; in which convulsions are as much a part as vomiting or purging. The essential morbid condition being vaso-motor paralysis affecting chiefly the stomach, bowels and brain. There is rapid transudation of fluids through the lax serous membrane and expanded arterioles. The power of assimilation is gone or greatly impaired, sensation is blunted and the faculties enfeebled. The child usually dying from shock in the violence of the attack, convulsions or starvation. The most characteristic symptoms are severe vomiting and purging, thirst, rapid emaciation, prostration, convulsive movements, such as a chewing or sucking motion of the mouth. The eyes are rolled upward, the child either cries or keeps up a feeble moaning. Such is a brief account of the disease in contrast with cases of summer diarrhoea common among infants whose digestive systems are impaired either by unwholesome ingesta or irritation of teething. Heat is now universally allowed to be the chief cause of cholera infantum. But it is evident that this alone, will not produce the disease; for every summer infants are constantly exposed to a temperature of 85° Fahr. and upwards weeks together and remain entirely free from it.

Of a number of theories to explain the co-operating cause, none have so far proven satisfactory. I have observed, however, that infants who have been exposed to the intense rays of the sun during the heated season, are liable to and do take the disease. This simple observation, I think many can verify in their experience. As a general thing, the careful mother does not let her infant come in contact with the light of the sun although the heat cannot be avoided. Still, there are many ways in which they are exposed. I will mention the most common and baneful one, *i. e.*, the want of shade trees or shrubbery of any kind in the door yards or adjacent to the house where children are kept. But by whatever means of exposure, if the theory once becomes an established fact, and light recognized to be as essential as heat in the production of the disease, a new era would dawn over the badly mixed classification of gastro-intestinal diseases of children.

As confirmatory of the views of causation before given, is the fact, that in cases of cholera infantum the symptoms undergo a decided amelioration during

the night time, to be renewed with increased vigor during the progress of the day.

The treatment of cholera infantum would undergo some important modifications upon the establishment of these views of pathology and causation.

The child should be carefully excluded from both light and heat to every possible extent, according to the surroundings. Cooling applications should be constantly made and the utmost quiet enjoined. The greatest reliance should be given to these measures strictly carried out. For no doubt if the advantage gained through the course of the night were augmented by like favorable surroundings through the day, permanent progress towards recovery might be gained. The usual remedies prescribed in cases of vomiting and diarrhoea should not be neglected. Other remedies such as strychnia, chloral and the bromides would suggest themselves as suitable remedies. It is to prophylaxis, however, rather than to cure, that we must look to prevent annually a large death rate among children during the summer season.

IS ARTIFICIAL HEAT A NECESSITY IN THE PROPAGATION OF SMALL-POX?

BY

E. H. KEABLES, M. D.

Crossing the Plains in 1852, the writer visited a wagon bed about one hundred yards south of the emigrant road, and found lying therein a man having confluent small-pox. He had been left to die, uncared for, and was then nearly dead. The only chance he had to quench his thirst was in asking those who visited him to give him water or fill his pitcher. This was frequently done, and often refused by the many who called to see him. Not one of these took the small-pox.

In the winter of 1852, at Diamond Springs, California, three men occupied a cabin just north of the town on a hill. One of them was sick. No one knew what was the matter with the sick man except his comrades, and they did not tell. Whether the man died or not I do not remember distinctly. But in some way it became known that he had the small-pox. There was no other case in town. In order to prevent the spread of the disease, his clothing, bedding, and everything that could be suspected of containing any germs of the disease were carefully burned in the cabin fireplace. Within four weeks of that time not less than fifty cases of small-pox appeared in town.

Eighteen years ago the writer treated a family in this town for small-pox. A comb used by the family when convalescing was accidentally thrown over a bed upstairs, and, the upper room not being plastered, fell down between the plastering and the siding of the lower story. Ten years after, two small children, through a break in the plastering, found this comb. Their mother took it from them and threw it into the fire. Within three weeks those two children were taken with the small-pox. There being no other cases in town and the children being too young to leave the house, it was quite a mystery how they got the disease.

About twelve years ago a student in the Central University of Iowa was taken sick. There was no small-pox in town. No one suspected that he had it. His room being in the college building, nearly all the students visited him after the eruption appeared. The writer was then called, and pronounced it small-pox. The school was dismissed, the students scattered to

their homes, expecting themselves to have the disease; but not one of them contracted it. There was no fire at any time in the sick student's room. After he recovered he was taken to his house, when his sister washed his clothing, took the small-pox and died.

These facts, taken in connection with another, viz., that small-pox diminishes in the spring in proportion as fires are dispensed with, suggests the inquiry that heads this article.

Pella, Iowa, July 18, 1882.

THROMBOSIS.

BY

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Hewletts, Va.

Henry Fox, a colored man, sixty years of age, low of stature, stout, muscular, was attacked with difficulty of breathing, irregular action of the heart, and general debility in the early days of spring.

He was raised a house servant; was fond of night tramps, sometimes for twenty or thirty miles, and was peculiarly energetic, spirited and lively in disposition. He had an attack of syphilis, when about 25 years of age, and from his great exposures, and dissipation, suffered, more or less, afterwards with rheumatism. When emancipated he devoted himself to farming for a time, and then to day labors, at both of which he signally failed, and was reduced to great poverty and want. In this condition I took him to my home, clothed and fed him, and gave such remedies as his wrecked condition required. For a year or two he improved considerably and became very useful. During the early spring, however, he suffered more or less with rheumatism, and during an attack of the kind, the symptoms described in the opening paragraph were developed.

At first there was copious bronchial secretions accompanied with cough. A loud bellows murmur in the heart, attended with dyspnoea and great irregularity of pulse, both as to time and force. In a few days this was followed by a peculiar, loud and distinct sound, which could be heard at a distance of several feet. It resembled the sharp cooing of a raincrow, as much as one resembles another.

I gave him \mathcal{R} syp. sanguinaria 3i, bro. potass, and chlorate potass grs. iv aa. every two hours; applied unguentum tart. antimon. over the chest, and restricted his diet to buttermilk.

Under the use of these agents he gradually improved, and in a month was able to walk about and perform light work. The dyspnoea, cough, irregularity of pulse and heart sounds disappeared, and I hoped he would get well. But failing to arise one morning as early as was his custom, his wife discovered that he could neither talk or use one side. His face was distorted, his arm and leg paralyzed, and it was with difficulty he could swallow. General dropsy supervened and in a month he died.

I doubt not this was a case of thrombosis, followed by embolia in important blood channels, consequent obstruction, paralysis and death. Might this result have been avoided by quietude, light and nutritious diet, and a persistent use of the remedies?

LECTURES.

AMPUTATION AT THE KNEE-JOINT.

A CLINICAL LECTURE.

Delivered at the New York Hospital.

BY

THOMAS M. MARKOE, M. D.,

Professor of the Principles of Surgery, College of Physicians and Surgeons, New York.

GENTLEMEN: I have here a case of fracture of the leg which has excited our interest and attention a good deal for the past few days; and we have a very full record of the history, which I will not now take time to give you in full.

The patient is a man of about 32 years of age. Two weeks ago to-day he was knocked down by a stage, and he sustained some injury of the right leg; but he was able to get up and walk to the station-house. He was then brought to the hospital, and it was found that he had received a compound fracture of the lower part of both the tibia and fibula, the tibia being broken transversely and the fibula obliquely. The opening which connected with the external air was extremely small, and situated about one inch inside of the lower third of the crest of the tibia. For the purpose of exploring the wound the opening was enlarged, so that the finger could be introduced; and as the result of this examination it was thought that the limb might be saved. So drainage tubes were introduced so as to pass between the bones and to drain the deepest portions of the wound, in the way that we usually apply through drainage here, and then the leg was swung, and the whole wound was then syringed out through the tubes with a one in forty solution of carbolic acid and then dressed antiseptically, and the limb was put up in splints. All went on well for a while, and he did not suffer very much from pain. The temperature rose that day to 102° or 103° , and the next day to 103.5° ; but on the 16th of November it was only 100° . Then, upon removing the splints, I found that there was a good deal of œdema of the leg, and this swelling extended all the way up to the knee. There was also an accumulation of pus just over the crest of the tibia, and incisions were necessary to let this collection of pus out. After this all went on well for a time. But soon it was noticed that this ill condition of suppuration was extending into the cellular tissue of all the parts around, and was running upward also towards the knee. Yet the patient was still looking and feeling extremely well. It was therefore thought necessary to make numerous free incisions into the suppurating parts in order to let out the accumulated matter. This was done, and the matter flowed out. But a sluggish phlegmonous erysipelas seemed to have been set up, and it spread rapidly upward, and was not arrested, as it usually is, by making such free openings. This was somewhat peculiar. Yet we kept at work making new incisions as often as it seemed necessary. After this had gone on for a week or ten days, the patient was beginning to be reduced to a pretty serious condition; but then, by careful nursing and by making frequent incisions, and by proper attention to drainage, the inflammatory condition seemed at length to have been brought under control. And so I thought that there was still a pretty good chance of saving the limb. But one day the doctor called my attention to the fact that the patient did not seem to be as well as he had been, and when I

looked at his face I found that a rapid emaciation had been developed, such as I think usually marks a failure of the reparative process in such cases. You remember that I have told you before that there are three signs which usually denote a failure of the process of repair after severe injuries, and these are the occurrence of sudden and rapid emaciation, delirium at night, and obstinate diarrhoea. This man has had delirium at night, and sometimes also in the morning, and he has had diarrhoea, which, though it could be checked at first, at last became ungovernable. So I said that if we left him to go on in this way any longer, the reparative demand made on the system to counterbalance the extensive destruction of tissue made by the process of suppuration would destroy his life, and I therefore thought it best to amputate the leg immediately. And now, as the inflammatory changes are just at this moment favorable for amputation, I seize this occasion for the operation. My feeling is that if he is left in this condition any longer he will slip between our fingers and die from exhaustion. His temperature is now 102° , and his pulse is not very high considering the extent of the suppuration which has been going on.

As I expose the leg you will note the fair condition of the parts. The limb is not much swollen now, and you can all see the eight or ten openings in the skin where incisions have been made to let out the pus. In my judgment, this is one of those cases in which it is not advisable to apply the Esmarch's bandage to avoid hemorrhage. But though in this case it is necessary to save every particle of blood that we can, yet all that we can safely do is to put a loose roller bandage about the thigh, and secure the main artery by a tourniquet. The objection to bandaging the leg is, that we may thus force some of the foul products of inflammation into the veins and lymphatic tissues, so that they would be absorbed more easily, and thus poison the blood, or cause metastatic abscesses.

Operations of this kind should be performed as low down as is consistent with the safety of the patient. And I feel here that I may with safety amputate at the knee joint, and I do not care much if I do include in my flaps a little of the inflamed tissue. Either antero-posterior or lateral flaps may be made in this amputation. But of late, I have found the lateral flaps to be better, and they are less likely to slough; so I will make lateral flaps here. In all operations, you should bear in mind that it is always easier to cut off than to cut on again, and so you should make your flaps liberal. And there is no place in the body where it is so important to remember this fact as in amputations at the knee joint. My rule is, to find the line of juncture between the condyles of the femur and the head of the tibia, and then to let the flaps reach to a hands-breadth or a little more below this point.

Operation.—First of all, an assistant elevated the whole limb with the knee straight and the thigh flexed at right angles to the trunk, and then he gently pressed the blood out so as to empty the leg of as much as possible. A few turns of a roller bandage were next wound about the upper part of the thigh, and around this was tightly drawn a piece of rubber tubing so placed as to form a tourniquet over the femoral artery. Then while an assistant stood beside the patient, and strongly flexed the knee, the operator stood at the foot of the bed where he could command the limb as it hung over the edge. After finding his landmarks, he then made an incision from the middle of the lower border of the patella downward and outward to the side of the leg, and extending to about five inches be-

low the external condyle of the femur, and then a similar incision was made upon the inner side of the leg, through the skin and superficial tissue. Then the incisions were deepened, and each flap dissected backward and upward, including in each as much of the muscular tissue as possible. When the joint was reached, the quadriceps extensor tendon was divided just above its insertion, and then the knife was carried through the articular cartilages and the lateral ligaments. The knee was now strongly flexed, so as to separate the articular surfaces, and all the attachments were severed except the ligamentum posticum. Now the scalpel was laid aside, and with a long amputating knife the posterior part of the flaps was completed by transfixion and a downward sweep on each side of the tibia. At the same time the ligamentum posticum was divided, and the disarticulation was complete. The flaps were now separated, and the head of the gastrocnemius muscle cut off with the scissors. And upon examining the stump, a small abscess cavity was found, which ran upward into the thigh for a short distance between the muscles which made up the inner flap. This was thoroughly laid open for its whole length by a curved bistoury, and it was then cleansed and sponged out, and injected with a one in twenty carbolized solution. The tourniquet was now removed so that any bleeding arteries could be found easily, and catgut ligatures were tied around the only two or three vessels which bled to any extent, and those from which there was a slight oozing were controlled by torsion. All irregularities were now trimmed off from the flaps, and then they were drawn down and brought into a position, and after careful cleansing with carbolized water they were held together by a few interrupted sutures. Then a good sized tube for through drainage was inserted in an antero-posterior direction, and the flaps were completely closed about it with sutures. The wound was again washed out with a carbolized solution, and then the whole was dressed with antiseptic gauze, according to the Lister method.

Gentlemen: You now see the great advantage of these lateral flaps, for they bring the line of union between the two condyles of the femur, so that it is out of the way of pressure, and besides all the line is on the most dependent and posterior part of the stump; and it was for this purpose that I extended my incision farther posteriorly than anteriorly in cutting out my flaps. You also notice that the flaps now set quite loosely over the end of the bone while the thigh is flexed upon the belly, but as soon as the limb is straightened out, there will be more tension made upon them. The great advantage of that stump is, that it can be used as a point of support for an artificial leg. Where the bone is sawn off in continuity it does not afford any support for any apparatus that you may afterwards wish to employ, but it must be entirely supported by the parts above. Thus the tuberosity of the ischium and the trochanters are the supports for the apparatus after an amputation of the thigh; but here where the broad end of the femur with its condyles, forms the point of support, an artificial limb may be worn with much greater comfort, and the patient is much less maimed than by the former operation.

I once attended a child two years and a half old whose leg had been crushed by being run over by the cars, and I amputated the limb at the knee joint. After the operation the child grew rapidly better, and so after a little I did not go very often to see it. But one day when I called there I found the child kneeling upon one knee, and thumping along upon the floor with the other, which had not yet perfectly healed.

And in another case of a woman, after amputation at the knee-joint, when the stump had healed, I arranged a cup shaped apparatus for it to rest upon, and she passed out of my observation for a long time. But at last she came back to me one day in a pitiable condition generally, and begging for a few pennies to get something to eat, and I found that the naked stump was resting directly upon a hard wooden leg, without any pad to protect it, and yet it was in good condition. And Mr. Fergusson says that he knew a man who walked forty miles a day on such a stump, and he also says that he has known of a man walking one hundred and twenty miles in three days under the same disadvantages. But whether or not it was in three consecutive days, I do not know, for he does not state as to this. But all these facts go to show what a substantial support a stump of this kind will furnish.

You see there is now a slight oozing of blood from between the sutures which hold the flaps in apposition. Now one of the advantages of this plan of through drainage is, that if the stump bleeds to any extent after the operation, you can arrest this hemorrhage at once by injecting ice water into the wound through the tube. But generally, as soon as equable pressure is brought to bear upon the stump by means of the dressings and bandages, this slight oozing ceases.

DYSENTERY.

BY

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In my last lecture I discussed the subject of acute dysentery and its treatment, the chief element of which is the use of ipecacuanha in large doses. I said little about any other remedy, except opium, which, even in the acute stages, is often urgently needed; for really none other are, as a rule, necessary. But, in the conditions of which I have now to speak, other remedies may be required, according to the state or stage of disease, and it is to these conditions I now ask your attention.

First, let me speak of the subacute form, in which dysentery frequently occurs, and into which the acute form is liable to pass by recurrence of dysenteric action in the bowel, from any cause, after the first acute symptoms have passed away; or, as may happen, when it assumes this state from the outset; or, as it may be, after complete subsidence of the acute catarrhal condition, when there is no supervention of ulceration in the glandular structures and in the mucous membrane of the bowel. By subacute, I mean that variety where the symptoms indicate that some activity in the dysenteric process is present. There are pain, tormina, and tenesmus, though less than in the acute; and, when the disease has lasted some time, it is probable that ulceration, though not necessarily extensive, has taken place. In such cases, ipecacuanha must again be resorted to; and probably the combination of bismuth, carbonate of soda, and quinine. The latter, if there be any malarial taint, is especially desirable. When there is much pain on pressure on the abdomen, and the thickened gut can be felt on palpation, counter-irritation over the part most affected is likely to be of service. When there is much tenesmus, indicating rectal complication more than usually severe, opiate injections and large enemata of warm water are indicated, Dover's powder at night, and injections of two-grain solutions

of nitrate of silver to the ounce of water. As the subacute symptoms abate, and give place to those of a more chronic character, indicated by still frequent evacuations, with more or less straining and tenesmus, the discharges being mucous and occasionally tinged with blood, the internal use of twenty-drop doses of oil of turpentine, guarded by small doses (say ten minims) of tincture of opium, every third or fourth hour, will be of service. Indeed, this is a remedy to which I attach much importance. In the stage of ulceration, I repeat, I have found it exceedingly useful. Its power of stimulating vascular action, and of expediting the reparative processes, is shown by its power of causing granulation in an indolent chronic ulcer, say on the leg, when it is given in doses of from fifteen to twenty minims, the effect is most remarkable; the surface becomes florid instead of dusky, red granulations form, and cicatrization rapidly results. I have no doubt it acts in a similar way in the ulceration of the bowel; and I have often been gratified with the rapid improvement that has attended its use. Whilst any sign of activity in the dysenteric process continues, it is imperatively necessary that the strictest attention should be paid to diet, and that all solid or irritating articles of food should be carefully avoided. The use of alcoholic stimulants must be most carefully regulated, and, as a general rule, when there is no special reason arising out of former habits, or great depression of the nervous system, it is better to avoid them entirely. The greatest attention must be paid to clothing: flannel should be worn next the person; chills and sudden alterations of temperature most carefully avoided. All irregularities of living must be sedulously shunned. Chronic dysentery is of more than one kind. There is that which follows, or rather is left by, an acute attack, when it has not yielded entirely to treatment, and the bowel has become structurally diseased—*i. e.*, ulcerated, thickened, congested—after the first urgent symptoms have passed away. There is another variety which never was acute from the beginning, or scarcely even subacute. It begins insidiously and goes on so. It is truly chronic, may last for years, and then the two forms are somewhat alike, though in their origin they essentially differ. The chronic form which follows the acute is apt, indeed, to be more severe and to prove more fatal frequently than the other, which is more enduring, occasionally intermits, and though in the end perhaps fatal, is more slowly so. I have only recently seen a lady who suffers from this form of chronic dysentery, who first came under my care in India fourteen or sixteen years ago. Even then it was not the first attack. Though frequently ill and debilitated, this lady could not be said at any time to suffer from more than chronic dysentery; and to say the least of it, her health is as good now as it was ten or twelve years ago. I know others who have suffered for years, and even go backwards and forwards to India. But what a precarious life! Such cases, no doubt, are familiar to many of you; for it seems to me that they are not very uncommon, and that a considerable share of the trouble to which old tropical or Indian residents are liable is due to this disease. They are very apt to be troubled with hemorrhoids, either internal or external; and it may be difficult to say how much of the symptoms is due to the hemorrhoidal affection, or how much to chronic ulceration of the bowel higher up, or how far they may be attributed to contraction and stricture of the gut; such stenosis of the rectum being liable to induce attacks of tenesmus and the passage of mucous stools tinged with blood. The admixture of the mucous or sanguineous discharge

with fæculence points to rectal dysentery; while the blood and mucus following the discharge of fæcal matter indicate the hæmorrhoidal condition. In many cases it is exceedingly difficult to differentiate one from the other, nor, indeed, is that possible where the two conditions coexist. Such cases are liable to frequent intermittent attacks of acute or subacute mischief, and cause great suffering; others, though not liable to recur with such violence, are brought on after the least exposure to chill. The disordered digestion and the functional derangement of the liver and portal congestion accompanying that state, render the subjects of them more or less chronic invalids. So long as the thickened and ulcerated state of the bowel continues, so long is the person liable to suffer from symptoms of chronic dysentery.

SELECTIONS FROM JOURNALS.

ESMARCH ON THE TREATMENT OF INJURIES OF THE BLOOD-VESSELS IN WAR.

The following is the substance of a paper read before the section of Military Surgery in the International Medical Congress held in London in August 1881.

1. The indications for the treatment of injuries to the larger vessels, and for traumatic hemorrhage, have been materially simplified by antiseptics and artificial bloodlessness.

2. Ligation of the trunk of the artery above the wound, formerly practised, is uncertain, and therefore should be abandoned, especially when the tissues are infiltrated by inflammatory exudation.

3. Styptics should also be abandoned, since they are uncertain in their action, and, by rendering the wound dirty, retard its union.

4. In every case of hemorrhage threatening life, the injured vessel must, if possible, be laid bare at the injured spot, and tied above and below with catgut or antiseptic silk.

5. The operation must be conducted strictly antiseptically and, in the case of the extremities, by the aid of artificial bloodlessness (Esmarch's bandage).

6. The chief means of making such operations easy lies in making a long incision, which lengthens the wound in the long axis of the limb. When life is concerned, it matters little whether the incision be an inch or a foot long; as, if it succeed in checking hemorrhage, and be conducted thoroughly aseptically, a long incision heals just as well as a short one.

7. A proper incision having been made through the skin, the deeper tissues are laid open, the left forefinger being used as a director, upon which they are divided to the same extent by a blunt-pointed bistoury. They are then held apart by either blunt or pointed hooks.

8. Coagulated blood is now quickly and energetically removed, either with fingers, sponges, or raspatories, and as thoroughly as if it were intended to make an elaborate dissection. The coagulated blood covers everything, and is a fertile soil for the noxious matters exciting inflammation.

9. This being accomplished, the vessels and nerves are felt for with the finger, and an endeavor is made to get some idea as to the nature of the injury by the

aid of the cleansing sponge, with which arteries, veins, and nerves are isolated.

10. If the veins be quite bloodless and collapsed, it is difficult to distinguish them from cords of connective tissue; it is therefore advisable to form a reservoir of blood below the wound by placing a ligature round the hand, for example, before applying the elastic bandage to the arm. Afterwards, on elevating the limb and removing the ligature, the blood flows out of the injured vein, if the vessel have been such.

11. If the injured part of artery or vein have been found and exposed sufficiently to enable the whole extent to be seen, the vessel must be isolated and tied, above and below the injury, in a healthy situation, securely and tightly, with catgut or antiseptic silk (reef-knot). The vessel, if not already divided by the injury, is then cut between the ligatures. If any branches be found between the ligatures, they are isolated and tied, and separated from the trunk of the vessel.

12. The tubing is now released, and all remaining vessels from which any blood issues are ligatured; the limb being elevated, as in amputations when the tubing has been removed, to lessen the parenchymatous bleeding.

13. Divided nerves and tendons, should they be found in the wound, are to be united by fine sutures of carbolized silk or catgut.

14. Foreign bodies, *e. g.*, bullets, fragments of clothing, very loose bone splinters, should be carefully removed.

15. The whole wound is then disinfected most carefully by washing, rubbing and rinsing with solutions of chloride of zinc and carbolic acid, or iodoform-spray. An endeavor must be made to penetrate into every crevice of the wound.

16. Counter-openings having been made in suitable situations, and drainage tubes introduced, the wound is closed by antiseptic dressing.

17. The performance of this operation is not suitable to the battle-field, because it requires much calmness, time, and care; and because the antiseptic precautions can only be observed in a well-constructed lazarette.

18. For provisional hæmostasis on the battlefield, elastic compression is alone suitable.

19. The use of styptics is to be forbidden, therefore such articles as perchloride of iron, Pinghwar Yambi, etc., should be left out of the dressing materials.

20. Equally injurious and dangerous are the much used tourniquets, not only because they require a certain amount of anatomical knowledge in their application, but because the pad (be it ever so well adjusted) becomes displaced during transport, and so only checks the venous circulation instead of the arterial; the result being dangerous infiltration if the opening of the wound be closed, and recurrence of hemorrhage if it be open.

21. Satisfactory and lasting compression of the vessels is obtainable by an elastic tube or girth being drawn round the limb several times, tightly stretched. By this means the soft parts are so well drawn together, that not a drop of blood can pass through the vessels.

22. No anatomical knowledge is requisite, as the compression is useful wherever undertaken. Displacement of the tube or girth is impossible in transport if the ends have been well secured.

23. Tourniquets should therefore be replaced by elastic girths in the stores and in the dressing-bags of the men of the hospital corps.

24. Since caoutchouc suffers by being stored, and

loses its elasticity, it is impossible to keep a store of these girths in the magazines; and, in the event of war, contracts would be badly carried out.

25. I have, therefore, given a necessary article of clothing the construction necessary for its double use as a brace and as an elastic tourniquet.

26. This tourniquet-brace consists of an India-rubber girth, 150 centimetres (nearly 2 feet) long, and is strong enough to compress every vessel in a limb at any point.

27. Since every soldier must have a pair of braces, and this one is not dearer than any other, the desire that each soldier should be so equipped in war is a reasonable one.

28. In this case, every soldier would carry a means of checking a dangerous hemorrhage, in himself and others, on his own person. In case of a severe injury he would, in any case, not require braces; and on the field of battle the braces of the dead and wounded could be removed in great numbers if necessary.

29. These braces might also be used for tying-off poisoned wounds, for procuring artificial bloodlessness in operations, and for the resuscitation of the apparently dead after severe losses of blood, etc.

30. It is a matter of course that every wounded man, in whom hemorrhage has been provisionally checked by the girth, should be brought to a lazarette as soon as possible, in order that the compression may be there removed, and the definite ligature of the bleeding vessel carried out.

31. It is also of importance that, before applying the elastic tourniquet, the limb be bandaged in an elevated position; and, if bones be shattered, that these should be rendered immovable during transport, by means of splints, etc.—*Lond. Med. Rec.*

CAZIN ON THE DIAGNOSIS OF HIP-DISEASE BY RECTAL EXAMINATION.

DR. H. CAZIN (*Rev. de Chir.*, March 1882) refers to the difficulty of diagnosing the exact seat of the disease, especially with regard to the acetabulum. This difficulty is of much importance when the question of resection has to be considered, and is one of the strongest points of argument advanced by the opponents of resection. The author made researches in 98 cases of hip-joint disease, 64 being suppurative and 34 non-suppurative. Hitherto, only incomplete evidence has been obtained by depending upon the seat of the pain, the seat of abscesses and fistulæ, and by exploration with the sound.

Abdominal palpation enables us to detect enlarged iliac glands or pelvic abscesses; but if we also examine the patient through the rectum, the diagnosis will be much more sure. The hip-joint, from its deep position in the tissues, is not very accessible to ordinary methods of examination, but the finger can approach it most easily through the rectum. In the cavity of the pelvis, immediately above, and a little behind the obturator foramen, is a quadrilateral surface of the bone, corresponding with the bottom of the acetabulum. In a child under fourteen years, this part of the pelvis is partly cartilaginous. The Y-shaped cartilage is so situated that the area of the base of the acetabulum is divided by a transverse line of cartilage into two equal parts, and the lower half is again divided by the horizontal line of cartilage.

In examining a patient, the natural extent of the cartilage should be considered, and the two sides

should be explored for the sake of comparison. This mode of examination has afforded appreciable results in 49 of the 98 cases which Dr. Cazin has had under observation. Of the 64 cases of suppurative hip-joint disease, positive results were obtained in 37. Of the 34 non-suppurative cases, in 12 only was the examination *per rectum* diagnostic. The ages of the patients were between three and eighteen years, and the majority were between eight and ten years; 41 were boys, and 23 girls. Examination *per rectum* disclosed an alteration in the pelvis in 36 of the cases. Sex has no importance with regard to the facility of examination. Among the elder girls, the presence of the uterus has caused very slight trouble, and the position 'on the knees' has facilitated the examination. In young adult females, recourse should be had at the same time, or exclusively, to examination *per vaginam*.

The results of Dr. Cazin's examinations have been verified six times by resection, four times by necropsy, and twice by resection and necropsy combined.

The symptoms elucidated by a rectal examination have been pain localized to the postcotyloid surface, produced by pressure; enlargement of the intra-pelvic glands; thickening of the bone; depression, flexibility, mobility, destruction, or perforation of the postcotyloidean surface; congestion of the soft parts; and pelvic abscess.

Pain upon pressure is the least certain of these symptoms. If the bone be penetrated, and the head of the femur be felt by the finger, a doubt in diagnosis may be removed if upon movement of the thigh the head of the femur is felt by the finger (*per rectum*) to move. Many cases are recorded. One was the case of a girl, thirteen years old, in whom there were some symptoms of hip-joint disease, but it was thought by one of Dr. Cazin's colleagues that contraction of the muscles was the only affection. Under chloroform the deformity disappeared, and the joint became freely movable; and it was only by a rectal examination, which disclosed a postcotyloidean swelling, that Dr. Cazin was convinced that particular disease existed. In conclusion, Dr. Cazin urges the adoption of this means of diagnosis, in addition to other methods, especially in reference to the subject of excision of the joint. He also maintains that *redressement force* should never be attempted until an examination *per rectum* has been made.

The only other surgeons who, Dr. Cazin states, have referred to this method of diagnosis in hip-joint disease are Mr. Holmes, in his work on *Surgical Diseases of Childhood*, and MM. Mathieu and Strauss, who have quoted Mr. Barwell.—*Lond. Med. Rec.*

VERNEUIL ON ERYSIPELAS.

M. Verneuil, in a communication to the Paris *Société de Chirurgie* (*Revue de Thérapeutique Médico-Chirurgicale*, 15 Mars, 1882), points out that erysipelas has considerably diminished in frequency in hospitals. Formerly there was always erysipelas in surgical wards, but at the present time there are no longer seen in Paris those great epidemics and constant epidemics of erysipelas which frequently arrested the hand of the surgeon. The antiseptic method has rendered great service in relation to erysipelas, but it has done still more with reference to septicæmia. At the present time, in fact, people still die of erysipelas.

We begin to know what is to be feared when we operate on a diabetic or alcoholic patient; but who have we to fear when we operate on a patient who has

already had one or several attacks of erysipelas? Do these previous erysipelatos attacks influence the prognosis of the operation?

M. Verneuil furnishes three cases, as a contribution to the study of this question. When he was a young surgeon, he was called to see a merchant suffering from alcoholism who had spontaneous erysipelas of the face, of which he was cured; it left, however, a swelling of the glands which persisted instead of becoming dispersed. Two or three months afterwards, an abscess was formed in the sheath of the sterno-cleido-mastoid muscle; he opened it. Two days later, erysipelas developed itself, invading the whole face, becoming complicated with delirium tremens, and ending very speedily in death.

In 1866, M. Verneuil was called in by Dr. Brown-Sequard to see a Creole, who had lived for some time in France, and who was attacked by osteitis in the foot: M. Verneuil found that two years previously the patient had had spontaneous erysipelas of the face. As he suffered from severe pains in the foot, M. Verneuil made subcutaneous injections of morphia. At one of the punctures erysipelas was developed, and invaded the whole of the leg; abscesses formed, and in one of the fistulous passages erysipelas occurred, which successively invaded the whole body. Some time afterwards, further and very intense inflammatory symptoms appeared; and amputation at the tibio-tarsal joint became necessary. The amputation was accompanied by considerable hemorrhage. On the third day, erysipelas showed itself; then secondary hemorrhage supervened, which necessitated ligature of the posterior tibial artery. The patient died on the evening of the next day.

M. Verneuil was consulted by a man, aged 51, in strong health, very tall and fat, who had been operated on by M. Cusco for an epithelioma of the lip. There was an enlarged submaxillary gland. At Vichy, this man had had an eruption of eczema on the thigh. In September he had, without any apparent cause, erysipelas of the face; it was cured in nine days. M. Verneuil operated on his gland, at the end of September, in his own country house, under excellent hygienic conditions, one Sunday, without having previously visited the hospital, having new instruments, and assisted by two colleagues, who, at that time, had not a single case of erysipelas among their patients. He applied the antiseptic method in all its rigor. Four days afterwards, the patient had a rigor; there was lymphangitis of the right arm, then phlegmonous erysipelas of the right arm and the left leg, which necessitated several incisions. On the third day, he had severe sore throat, which seized on the cheeks: he had erysipelas of the face of pharyngeal origin, to which he succumbed twenty-three days after the operation.

It becomes a question whether there is a special pathological condition determined by repeated attacks of erysipelas. We know that in certain regions, in Brazil, for instance, attacks of lymphangitis are very frequent. M. Verneuil knows a woman who has had seventy-nine attacks of erysipelas of the face. What, then, are the risks run by the surgeon who operates on the patient who has had one or several attacks of erysipelas? The recurrence of erysipelas in the same region may possibly be explained by anatomical conditions. But the difficulty is how to explain the recurrence of erysipelatos attacks at a distance.—*Lond. Med. Rec.*

TWO CASES OF MALIGNANT PUSTULE, TOGETHER WITH A TABLE OF SEVENTEEN CASES TREATED AT GUY'S HOSPITAL.

By J. N. C. DAVIES COLLEY, M. B.

In this paper the author tabulated seventeen cases of malignant pustule or charbon which had occurred during the last nine years at Guy's Hospital, and gave more fully the details of two which were admitted into his wards last year.

CASE I. F. R., aged 31, worked in a hide-warehouse, and had been engaged for eight days with Australian fleeces. On April 10th, 1881, a small red spot appeared on his right lower eyelid. It grew rapidly. On the 16th he was admitted with the eye closed, and with a partly dry, partly vesicular eschar, covering nearly the whole of the swollen lower eyelid. He was in little pain, but weak, trembling and feverish; the glands were swollen. Immediate relief followed the excision of the eschar. In a few weeks the wound had healed, but the eyelid remained everted. Bacilli were found in the blood at the time of the operation.

CASE II.—T. W., aged 39, a tanner, had been handling foreign hides until July 2nd, 1881. He then left off work, and on July 6th noticed a red itching swelling on the cheek. It grew rapidly. On the 10th he lost appetite, and on the 11th he was admitted, with a raised nearly circular patch of more than an inch in diameter in the middle of his cheek. The centre of this patch was slightly depressed, dry, and nearly black. The sides were covered with small, closely packed vesicles. There was swelling of the cervical glands and œdema of the neck. The eschar was excised, and chloride of zinc applied. He recovered rapidly. Appended was a colored drawing of the charbon, and drawings of the microscopic sections of the eschar, showing the bacilli anthracis in the corium and round the hair follicles. The author called attention to the following facts: 1. Malignant pustule or charbon is not unfrequent among tanners or wharf laborers who have to handle foreign hides and fleeces. 2. It has not yet been observed at Guy's Hospital as a primary disease in the viscera, or in the form of malignant œdema of the integument. 3. It has been seen only on exposed parts of the body, *e. g.*, the face, neck, and arms, the most dangerous position being the neck, probably from its vicinity to the larynx. 4. The seventeen cases were between the ages of 11 and 47, and the majority were young adults of the male sex. 5. Twelve out of seventeen cases occurred in September and the four following months. 6. The disease may be confounded with malignant facial carbuncle, poisoned wounds, and primary chancres of the face. The chief points to notice are the painless character of the eschar, its vesicular margin, and slightly depressed, dry, blackish centre. 7. The nature of the disease is not unfrequently overlooked, and its symptoms have been attributed to such causes as the bite of a mosquito, or the absorption of arsenic through an abrasion. 8. It should be treated at once by excision or free cauterization. Out of fifteen cases in which the eschar was excised, eight were already suffering from constitutional symptoms, and twelve had considerable œdema or glandular enlargement. The two cases in which excision was not performed, were admitted with dyspnoea and other serious symptoms, and it is probable that in them the operation would not have averted the fatal result. 9. Swelling of the most superficial part of the cutis with the formation of a ring of papules surrounding a zone of vesicles, at the centre of which is an eschar, is the earliest change recognized. 10. Bacilli are present in these papules but not beyond them, being numerous in

the tissue of the cutis immediately below the eschar, and above to its borders, and most abundant just below the Malpighian layer of the epidermis covering the outer part of the eschar.

FORMULARY AND POINTS IN PRACTICE.

ACUTE DYSENTERY.

- ℞ Cupri. sulph..... grs. ss
 Magnes. sulph..... ʒ i.
 Acid. sulph. dil..... ʒ i.
 Aquæ..... ʒ iv.
 M. Sig. A tablespoonful every four hours.

CHRONIC DIARRHŒA.

- ℞ Bismuthi subnitrat..... grs. v.
 Morphæ sulphat..... grs. ʒ ss
 M. Sig. This much two or three or more times daily.

CHOLERA MOREUS.

- ℞ Chloral hydratis..... ʒ iij.
 Morphæ sulph..... grs. iv.
 Aquæ laur.-cerasi..... ʒ i.
 M. Sig. From fifteen to twenty minims hypodermically.

DYSENTERY IN CHILDREN.

The child should have a warm bath and subsequently a bran or linseed poultice should be applied over the abdomen. It is a good plan to make such a poultice with strong decoction of poppies instead of water. If the vomiting will permit of the administration of medicine the following may be given with advantage :

- ℞ Ol. ricini..... ʒ i.
 Pulv. acaciæ..... ʒ i.
 Syrupi..... ʒ i
 Tinct. opii..... min. iv.
 Aq. flor. aurant..... ʒ vj.

M. Sig. A teaspoonful every four hours for a child one year old. If this be rejected an enema consisting of half an ounce or less of mucilage or starch with three or four drops of tinct. opii should be carefully injected. Mucilage and chalk mixture with opium in small doses are also useful. Ipecacuanhæ is regarded by some as specific. Fair doses of the powder is the best form to administer. Brandy is of all stimulants the best. Raw meat and strong extract of meat may be given and milk, arrowroot and rice.

When the more acute symptoms pass away the following may be given :

- ℞ Liq. ferri pernitrat..... ʒ ss.
 Acid nit. dil..... ʒ ss.
 Syrup zingî..... ʒ i.
 Aq. anethi..... ʒ iii.
 M. Sig. ʒ ii. every six hours.

The following prescription is employed by Dr. J. Lewis Smith in the majority of cases of non-inflammatory diarrhœa in children :

- ℞ Tinct opii deodorat..... gtts xij.
 Bismuth. subnitrat..... ʒ ii.
 Syr. simplic..... ʒ ss.
 Mustur. cretæ..... ʒ iss.
 M. Sig. One teaspoonful from three to four hours.

MEDICAL NOTES AND NEWS.

Sponge and Warm Water Dressing for Carbuncle.—Dr. George McClellan of Philadelphia, treats carbuncles by moderate pressure and moisture applied by means of a large, soft sponge, and a bandage. He says it limits the inflammation, alleviates the pain, hastens suppuration, and, after the carbuncle has opened, it expedites the separation of the sloughs.

The sponge is wet with warm or hot water several times daily through small openings in the bandage ; and twice daily it is removed and reapplied.

Novel Method of Committing Suicide.—On May 26th, Sarah Newman, aged 38, married, a patient in the County and City of Cork Hospital for Women and Children, committed suicide in the following remarkable manner. Deceased had been in hospital for about a month, under Dr. Cummins' care, for endocervicitis, and had been informed that she was sufficiently well to be discharged. On hearing this she was dissatisfied, not wishing to return home. She was found at a quarter-past 6 A.M. by the night nurse dead in her bed, and part of a stocking protruded from her mouth. The lady-superintendent of the hospital was immediately called, and saw her. She felt her heart and pulse, and found both had ceased to beat. She observed a piece of stocking in her mouth, took hold of it, and pulled part of it out; but it was so firmly fixed that the remainder did not come. The woman was then dead. At the inquest, Bridget Sullivan deposed that the deceased occupied a bed in the room in which witness slept. At about 5 o'clock on that morning she heard her getting up and closing the shutters; she then returned to bed. Witness got a pain in her side, and did not notice the deceased until 6 o'clock; she did not notice her moaning, as she was in the habit of doing so. Witness, however, believed she did moan soon after she returned to bed. She heard her say that she hated to go home, that she would rather stop in the hospital. The lady-superintendent and the night nurse were also examined, and deposed as stated above. As there were several other patients who slept in the same ward as the deceased, who were too ill to be present at the inquest, the coroner had visited them, and was told that Dr. Cummins visited her the previous day, and he then told her that she would soon be going home, as she was getting better. When Dr. Cummins left her she felt annoyed at being told that she was to leave the hospital, and she did not think herself that she was fit to go. As to making any threat of doing away with herself, she never expressed any such intention. Dr. Cummins deposed that the woman was quite dead when he saw her; that she died of suffocation; and he produced a very long stocking, which he said he had taken out with the greatest difficulty, as it was very firmly fixed in the throat. The jury, in accordance with the suggestion of the coroner, found "that the deceased committed suicide by putting a stocking down her throat, while in a state of temporary insanity." They were also of opinion that no blame could be attached to any one in the hospital. This case is of interest in a medico-legal point of view. The facts of the case are beyond all dispute: that the patient destroyed herself wilfully, in this strange manner, without making any noise or disturbance whatever.

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SOME POINTS ON DIAGNOSIS OF DISLOCATION OF THE HUMERUS,

BY

J. S. WIGHT, M. D.

Professor of Operative and Clinical Surgery at the Long Island College Hospital.

It has always seemed to me proper and desirable to consider the sub-glenoid, the sub-coracoid, and the sub-clavicular dislocations of the humerus as varieties of the axillary dislocation, because in any one of these dislocations the head of the humerus is more or less in the axilla. This way of designating these dislocations prevents confusion and misunderstanding.

At times there are special and almost insurmountable difficulties in making a diagnosis of dislocation of the head of the humerus, cases of such accident occasionally being overlooked by the medical attendant. Experts have failed in making a diagnosis of dislocation of the head of the humerus; hence the ordinary practitioner cannot be blamed for failure in making a diagnosis. And the question arises—Can we avoid making such mistakes? Is there any way by which we can make a diagnosis of dislocation of the head of the humerus when the case is involved in great obscurity?

I take it that the patient is at least entitled to ordinary skill; and if the surgeon is possessed of any skill outside of that which is ordinary, the patient is no

doubt entitled to that. Now, is there any such skill? Let me explain what I do in obscure cases and what I advise students to do, that is, when I am not positive and certain that, in a case of injury to the shoulder, there is no dislocation of the head of the humerus:

In a case of doubt assume that there is a dislocation, give an anæsthetic, and make the proper manipulations for reducing a dislocation of the head of the humerus: (1.) If there is no dislocation, no harm can be done, and the facts will become plain; (2.) If there is a dislocation, reduction will be made, and the diagnosis established. This simple advice will save the surgeon and his patient, from time to time, from grave mistakes and serious results. And I am not sure but that the surgeon who neglects this procedure in an obscure case of injury about the shoulder might be reasonably and legally blamed for negligence.

I have thought it best to report briefly the following cases, on account of the light they throw on this subject:

CASE 1.—Mrs. M., 35 years of age, fell down stairs and injured her left shoulder. She was seen in a short time by her family physician, who made a diagnosis of fracture of upper end of humerus, and applied temporary splints. The family physician requested me to aid him in putting on more permanent splints. On removing the temporary splints I found that the patient was very fat, so much so that all reliable landmarks were obliterated. It was impossible to make a positive diagnosis. The indications, such as they were, appeared to point to a dislocation of the humerus. At my suggestion the family physician etherized his patient, when I made the manipulations requisite to reduce a dislocation, and the head of the humerus could be felt to slip into the glenoid cavity, thus giving us the diagnosis and the treatment at the same time. The case did well subsequently.

CASE 2.—A sailor fell on his left side, and after one week was seen by a doctor, who made a diagnosis of contusion of the shoulder, and prescribed a liniment. Sixty-one days after the receipt of the injury the patient came under my care, when I found he had a sub-coracoid dislocation of the left humerus. After the patient was etherized, I broke up the adhesions by appropriate manipulations and made the reduction in about one minute. This case did well, and the patient recovered with a useful arm. I may remark that I was surprised, because the reduction was so easily accomplished in this case.

CASE 3.—A Mr. B.,—tailor, 59 years of age, married, and having rheumatism from time to time, while intoxicated fell on his right side, and was treated for thirty-nine days on account of rheumatism complicated by contusion. The patient was under the care of his family physician. The family physician requested me to see and examine his patient—when I found a sub-coracoid dislocation of the humerus. The patient was

fat and his shoulder was swollen:—Thus the diagnosis was obscure and difficult. After the administration of chloroform, I accomplished the reduction in about ten minutes—removing the deformity and confirming the diagnosis. On account of the complicating rheumatism and the deranged health of this patient improvement was slow, but he finally made a good recovery.

CASE 4.—Mr. S. an artisan, about 40 years of age, a strong muscular man, was running to get on the ferry-boat, and fell on his left shoulder; he was seen in a short time by his family physician, who treated him for a contusion of the left shoulder for about ten days, when, his patient not improving, he requested me to see and examine him. I found the shoulder covered with thick strong muscles, and very much swollen. The case presented difficulties in the way of diagnosis; the special signs of a dislocation of the humerus were obscure:—and I told the family physician, that two things were required to enable us to make our diagnosis sure: (1) The patient would need to be put under the influence of an anæsthetic; (2) and it would be necessary to make the proper manipulations for reducing a dislocation of the humerus. The doctor gave his patient ether, when I made the proper manipulations and reduced a sub-coracoid dislocation of the left humerus. This patient made a rapid and good recovery.

CASE 5.—Mrs. L. widow, about 60 years of age, weighing 230 pounds, was found lying on the floor. A strong butcher took hold of her left upper limb, and with the aid of two women, pulled and lifted her on her bed. Her family physician suspected a dislocation of the humerus and was of the opinion that he had reduced it. About one week after the accident a surgeon saw the case and said it was all right. About fifty days after the injury I saw the case with the family physician, and came to the conclusion that there might be a dislocation of the humerus. The patient was etherized, the adhesions were broken up, and attempts at reduction appeared to be successful in about twenty minutes. The next day the shoulder was greatly swollen and tender. A few days after, the patient was trying to turn in bed having loosened the bandages, and felt something slip in her left shoulder. I went to see this patient and found the bone out of place—but the shoulder was not in a condition to renew the manipulations necessary to reduce the dislocation; and so I advised the family physician to make the best of the case he could without further attempt at reduction:—Subsequently this case did as well as the average unreduced dislocation of the shoulder.

The following remarks may be made in regard to these cases:—

1. At times it is very difficult to make a diagnosis of an injury to the shoulder: in fact, in some cases, it may be quite impossible to conclude, that there is not a dislocation of the humerus.
2. In some cases of injury to the shoulder the most expert may not be able to make a diagnosis:—of course, without a diagnosis, the treatment must be entirely empirical—and may augment the results of the injury.
3. In a case of injury to the shoulder, when the surgeon is not sure of the diagnosis, it being possible that there is a dislocation of the humerus, it will be desirable to give the patient an anæsthetic, and make the attempt to reduce a dislocation: when in all reasonable probability, if there is a dislocation of the humerus, reduction will take place.
4. I am so far convinced of the correctness of this

practice, that I consider it inexpedient to omit it in an obscure case of injury to the shoulder:—and it seems to me that such practice ought to be held as belonging to those practices implied in ordinary skill.

5. If the surgeon employs this procedure properly in conjunction with other appropriate treatment he ought not to be held responsible for imperfect result after dislocation of the shoulder.

RECOVERY FROM ACUTE TRAUMATIC TETANUS.

JOHN J. BUCHANAN M. D.

Pittsburg, Penna.

AT 2 P. M., May 20th 1882, Frank E., aged 7 years sustained an injury of the left lower limb by the wheel of a moving freight car. The tarsal bones were comminuted, the ankle joint opened and completely disorganized and the soft parts of the lower portion of the leg lacerated. At 6 P. M. he was etherized and the limb was amputated through the middle third by the water, assisted by Drs. J. G. Buchanan, D. W. Riggs and A. P. Shafer. The Petit tourniquet was used. The anterior and posterior tibial arteries were twisted and oozing was checked by application of hot water. No drainage tube was inserted. The patient promptly recovered from the effect of the ether. One twelfth grain morphia sulphate was ordered every three hours.

At one o'clock on the following morning (eleven hours after the injury) his jaw became rigid and convulsions shortly commenced. In the intervals of the spasms, the patient vomited from the effect of the ether, projecting the matters through his nose. At seven o'clock the jaws were so tightly closed that a knife-blade could not be forced between them, severe convulsions were occurring at intervals of five minutes, the abdomen was board-like, the head was drawn back into the pillow, the bed-clothing was saturated with perspiration, the brow was corrugated and during the paroxysms the respiration was very labored. Chloral and potassium bromide, five grains each, and morphia sulphate, one-twelfth grain, were ordered to be given every three hours, the lips being separated and the solution dropped on the teeth with a dropper. A liniment composed of equal parts tincture aconite root, laudanum, ammonia water and olive oil was rubbed well into the integument of the entire trunk, neck and sides of the face. It was directed that this application be repeated every third hour. At 10 A. M. the frequency, duration and violence of the convulsions were undiminished, the contraction of the brows was more marked, the jaw was as rigid and the tonicity of the muscles of the trunk was increased. The inside of the right cheek was wounded (as was afterward discovered) by being caught between the teeth. The convulsions ceased at 3 P. M. An hour later the jaw was so far relaxed that a finger could be pushed between the teeth. At 11 P. M. the jaw could be depressed an inch, there had been no more convulsions, the abdominal muscles were softer and the head less extended. The corrugation of the brow and the profuse perspiration continued. On the 22d all the muscles were relaxed. Temperature was not taken systematically, but the highest point observed during the continuance of

trismus was 101.5° . The pulse ranged between 125 and 150. The external and internal treatment was persevered in till the evening of the sixth day, when the use of the aconite liniment was discontinued. Some twitching and transient stiffening of the jaw observed by the nurse during the ensuing night rendered it prudent to renew the outward application. At the end of the fifth day the dressings were for the first time removed. The edges of the flaps had united except at a single point at the inner angle kept open by a silk thread. At the expiration of the second week the treatment was discontinued except an occasional dose of the anodyne to quiet restlessness. On the thirtieth day the lad was discharged from treatment, the stump being healed.

The interest in this case centres first in the recovery of a case of rapidly developed, violent, acute traumatic tetanus and secondly in the treatment used. Prof. John Ashhurst Jr., in his Treatise on Surgery says: "The prognosis of *acute* tetanus is invariably unfavorable. It is doubtful whether there be any authentic case of recovery under such circumstances." Mr. Alfred Poland, in Holmes' System of Surgery, says: "In acute traumatic cases, the prognosis is most unfavorable, and there is scarcely a well-authenticated instance of recovery on record." Although recovery in such cases is sufficiently rare, still, it has occurred in a number of recorded instances. In the literature accessible to the writer are accounts of 103 cases of recovery from traumatic tetanus. In 41 of these cases the interval between the injury and the appearance of the disease is not stated; in 32 it exceeded two weeks; in 19 it was between one and two weeks; in 4 it was between three and six days; in 3 it was between one and two days; in 4 cases the access was within twenty-four hours of the injury. Of these cases, 20 were treated chiefly with chloral 15 with curare 13 with opium 13 with calabar bean, 5 with tobacco and the others with bromides, cannabis indica, amyl nitrite, lobelia, chloroform, belladonna, conium, purgatives, ether, quinia, aconite, arsenic, jaborandi, nerve-section and stretching, counter-irritation and support.

In the *Medical and Surgical Reporter* for April 1st, 1882, appeared an account of a case by Dr. J. G. Buchanan of recovery from traumatic tetanus occurring on the seventh day, treated by chloral, bromide and morphia internally and aconite externally. The treatment in that case and in the one now recorded was based on the belief that the tonic and clonic spasms of tetanus are due to superexcitability of the cord and are largely augmented by peripheral impressions conducted by the afferent nerves, and that if the reflex nervous tract can be sufficiently depressed at one or more points before the nervous and muscular systems have become exhausted and pathological changes have occurred in the cord, the cord will return to its normal state. Chloral and bromide were given to reduce the excitability of the cord. It was then thought that if the cord could be isolated from the external world by paralysis of the terminals of its sensory nerves its chances of rest and recuperation would be largely increased. The external application of tincture of aconite root was considered the most efficient agent for this purpose. The prompt amelioration of symptoms following this treatment appeared to mark it as remedial, and, certainly, in view of the frequent failure of the internal treatment alone, entitles it to further trial.

ENDEMIC MALARIAL FEVER DURING THE MONTH OF JULY, 1882.

BY

W. M. SHULER, M.D.

Colleton County, S. C.

Malarial fever of unusual severity appeared here on the 25th of June and continues to present date (August 1st, 1882.)

The first cases occurred among the raftmen who are employed in floating lumber on the Edisto River from this region to Charleston and Beaufort. In a few days, however, after seeing the sick raftmen, I was called to several families consisting of white and colored persons residing on the back swamps of the river, evidently affected with the same disease.

That all these cases had a common origin emanating from the impure atmosphere of the stagnant waters contiguous to the Edisto, is beyond doubt. All had been exposed to the same influences of air and water, all presented the same symptoms and were subjected to the same plan of treatment with identical results.

The most prominent symptoms were a sense of chilliness, severe pains in the head with constant and distressing nausea. The cerebral disturbance in adults often amounted to delirium, and in children produced convulsions. In many cases the nausea was attended with constant vomiting. The patient ejecting quarts of thick mucus with dark soot-colored clots of vitiated bile. The temperature of the skin after the chill stage was invariably hot and dry. The pulse full and very frequent, an occasional case (one in twenty) would present obstinate costiveness and the bowels when moved discharged very offensive matter similar in color to that ejected from the stomach.

In those cases where the nausea was constant whether attended with vomiting or otherwise any remedial relief proved only temporary until free evacuations had been brought on from the bowels by mercurial purgatives. The treatment adopted here has been first to apply the spirits of turpentine with flannel to the epigastria, give the protochloride of mercury in doses ranging from five to ten grains every two hours until free catharsis ensued, after which sulphate of quinine was administered in doses ranging from five to ten grains (according to age) every three hours until from ten to thirty grains had been given—sponging with cold water and using the tepid bath was also employed, and seemed to be valuable adjuncts. Blistering the pit of the stomach in a few protracted cases proved beneficial. About 136 cases have been treated on the above plan. I may safely say that 100 have fully recovered. The remainder are convalescent except four new cases which have been under treatment only the last 24 hours. Two negroes, not included in the above, tried the cold water plan. Both died, one on the fourth day, the other on the fifth day from the commencement of the attack.

It will be seen that I varied from the treatment of the *all quinine* advocates. Could their plan have proved more successful. Let them answer, and then submit it to Stuart of Beaufort, S. C., and Love, of Mississippi, two of the veteran fever physicians of the South to decide between their theory and my practice.

LECTURES.

EXTERNAL AND INTERNAL URETHROTOMY—FISTULA IN ANO—ALLINGHAM'S OPERATION.

A CLINICAL LECTURE DELIVERED AT THE NEW YORK HOSPITAL

BY

GEO. A. PETERS, M.D.,

Visiting Surgeon.

EXTERNAL AND INTERNAL URETHOTOMY.

The first case is a man 43 years of age, born in the United States, and a clerk by occupation. Was admitted December 5th. Twenty years ago he contracted a gonorrhoea for which he was treated by internal medication. But the discharge continued and ran on into a chronic gleet. Urination became painful and at last he could only pass his water slowly, and it came away in drops, but it did not become entirely stopped. About a year after the contraction of the disease a perineal fistula formed and the urine was discharged through this. He says that he had not noticed any abscess or ulcer in the perineum before this, and he did not know that anything was wrong there until he found a small opening through which the urine dribbled. This fistula remained open for six years, but at the end of that time he was able to pass his water through the urethra again. He did not have any further trouble until three years ago, when he again contracted a gonorrhoea which ran on into a gleet, and at last, one year ago, the perineal fistula reopened and the urine was passed through this as before. For the stricture of the urethra he was treated with the tincture of the chloride of iron, but without relief. He came to the hospital in this condition, but his general health was yet good.

When I first saw this man I found him in bed, and there was such extreme irritability of the urethra that it was impossible for me to make any examination of it until I had put him under the influence of ether. So I propose to make this examination to-day, and I shall at the same time be ready to perform any operation which I find necessary. His first gleet no doubt caused several strictures in the urethra, which resulted eighteen years ago in a rupture of the walls of the urethra and an extravasation of urine into the perineum, which caused an abscess and the formation of a fistula. And, therefore, I infer that we will now find several strictures pretty close together and closing up the perineal portion of the urethra. So I think that it may be necessary to perform both internal and external urethrotomy. But we will put him on the table and make an examination first, and then be prepared to act in accordance with what we shall find.

Examination.—In order to lubricate the parts oil was first injected into the urethra, and then the meatus, which was unusually small, was incised by a bistoury so that it would allow the passage of a large sound. And now the number and locality of the strictures were determined by passing conical bulb-pointed bougies into the urethra until they were arrested by an obstruction. A number 22 passed back $1\frac{1}{4}$ inches and stopped, and an 18 passed beyond this first stricture and was arrested at $2\frac{1}{4}$ inches from the meatus. A number 16 passed in a distance of 4 inches, and at this same point the smaller instruments were also stopped. Elastic bougies were now substituted for the steel ones, and a number 12 passed in 4

inches and no farther, and a number 10 and number 5 encountered the same obstruction. Then numerous whalebone filiform bougies were passed down to this obstruction, and each as it was introduced was pushed down with some force and moved about in hopes that it would find some narrow passage through this obstruction. In passing these they would sometimes get caught in the pockets formed by the strictures nearer the orifice. After a considerable time spent in this way one of the bougies passed beyond this lower obstruction and apparently entered into the bladder, and in a few moments more a second one was made to pass by the side of this. Although in a typical operation of external urethrotomy, a grooved steel instrument should be passed as a guide to cut down upon, yet here as the stricture was too small to allow a steel sound to pass, and as the whalebones which had passed could be faintly felt through the perineum by the surgeon it was decided to cut down upon them as a guide. Accordingly preparations were made for the operation.

Operation.—The patient was put into the position for the operation for lithotomy, and the hands were bound tightly to his feet. In this position the orifice of the old fistulous track could be seen opening through the perineum just below the scrotum, and into this a probe was passed to determine its direction. Now while an assistant steadied the guide, the surgeon seated himself directly in front of the part to be operated upon, and with a scalpel made an incision through the skin directly in the median line, and extending from half an inch below the lower edge of the scrotum, a distance of one and three-quarter inches towards the anus. Now, while an assistant moved the whalebone guide up and down, the operator felt for it with the forefinger of his left hand, and having appreciated its position, he kept the finger pressed firmly upon it, and then with the other hand he carefully and slowly dissected in that direction, being careful not to deviate from the median line or to turn the edge of the knife downward, lest he should open the deep perineal fascia, or divide the artery of the bulb. Soon the urethra was reached, and an incision was made into it upon the guide, and the stricture at that point was cut. A grooved director was now passed into this opening in the urethra and along this a female catheter was passed, but it failed to enter the bladder, so it was withdrawn, and the opening in the urethra was enlarged a little by an upward incision with a sharp-pointed bistoury. And now the catheter passed easily into the bladder, and the urine flowed freely through it. After withdrawing the catheter, a large-sized steel sound was passed along the director, and it entered the bladder without any difficulty. This completed the first part of the operation.

The whalebone bougies were now withdrawn from the urethra, and sounds were again passed in to measure the exact location of the strictures in the canal. And the smallest ones were all arrested at a point three and three-quarter inches from the meatus; so it was necessary to overcome this constriction by internal urethrotomy. An Otis' urethrotome was first tried and introduced as far as the check, which was placed at the mark of $3\frac{3}{4}$ inches, would allow. But this instrument was too large, and so it was withdrawn and a Maissoneuve was substituted. The gum elastic filiform conducting bougie was first passed on into the bladder, and onto this the urethrotome was screwed, and the shaft was passed down until it had gone beyond the stricture, and then with three or four up and down movements of the blade, the stricture was divided, and

the instrument was withdrawn. And now a number 20 sound could easily be passed into the bladder. An Otis' dilating urethrotome was next introduced as far as the perineal stricture, and the dilating screw was turned and the urethra was thoroughly stretched. Upon removing the instrument, a number 30 sound could be passed as far as the perineal stricture, but there it was arrested. So the Otis' urethrotome was again introduced, and this lowest stricture was divided with the cutting blade, and then it was found that a number 30 sound would pass on into the bladder. In doing the cutting, the edge of the blade was always directed downward towards the floor of the urethra, so as to avoid wounding the neighboring parts. A free passage for the urine having been thus made, the operation was completed, and the patient removed.

FISTULA IN ANO.

The next patient is a man 30 years of age, who was admitted to the hospital December 2d. He gives no specific history, and does not use alcohol to excess. Three years ago he noticed a pain and a throbbing sensation about the right side of the anus, and then a swelling appeared, which in three or four days more became filled with pus, and then it ruptured and discharged its contents. After this it caused him but little inconvenience for a time. But finally the swelling reappeared and formed a lump by the side of the anus which at times became very painful; so he went to a surgeon and had this abscess opened, and thus he obtained relief. This fistula has remained open, and discharging at intervals only, so that sometimes he thinks he is getting well of it, and then again he begins to think that he is not, and he comes here to be cured.

There are several varieties of fistulæ which have received different names. A fistula is said to be complete when it communicates by one end with the interior of the rectum; and opens by the other upon the external surface. And a blind or incomplete fistula is one which has but a single aperture, which may be external or internal. The fistulous track is sometimes large and sometimes small in size, and it may be tortuous or straight in direction. The source of the trouble is sometimes a foreign body, which by getting lodged in a little sac in the rectum has set up an inflammation there, and this has gone on to the formation of an abscess, which has opened through the skin externally, or into the rectum, and has thus left a fistulous track. Other cases are the result of violence, as when a man falls violently upon the floor, or across a chair or other obstacle in such a way as to bruise these parts, and an abscess results which opens as before. And any source of irritation in or about the rectum, which can give rise to an abscess may be a cause of fistula in ano.

Upon examination of this case, I find only a small abscess, and the probe enters a fistula pretty close to the anus on the left of the orifice, while the end appears in the gut about one inch from the anus. Now the ordinary way of treating such a fistula is to pass a probe into the fistula until its end appears in the rectum, and then the surgeon places his finger over the point of the probe, and a probe-pointed curved bistoury is passed along the guide in the fistula until it touches the finger in the rectum, and then the blade and the finger are quickly drawn outward, keeping up the pressure between them, and thus dividing the intervening tissues.

Now, I propose to show you to-day what I think is a neater and a better operation, and one which was recently proposed to me by a friend. It consists in

introducing into the fistula a steel-grooved director with a sharp point, and when it has reached the bottom of the tract it is pushed forcibly through the walls of the rectum on to an ebony protector, scoop-shaped at its extremity, which has been previously introduced; then a sharp pointed bistoury is passed along the grooved director until it meets the protector in the rectum which catches its point, and both are then drawn downward together dividing the intervening tissues as they pass. The after-treatment consists in stuffing the wound with carbolized lint, and allowing it to heal from the bottom.

Operation.—The patient was put upon the table in Sims' obstetrical position, with the buttocks overhanging the lower edge, and the patient lying upon his left side. With some difficulty the small external opening of the fistula was found, and a silver probe was introduced to determine its direction. After withdrawing this, the sharp pointed grooved director was passed in, and then the protector was introduced into the rectum, and into the hollowed-out end of this the point of the director was thrust; and now the point of a bistoury was introduced so as to take the place of the director which was then withdrawn. Then, while the protector was firmly held in one hand, the knife was forcibly drawn down with the other, and the tissues between the fistula were all divided. After exploring the rectum with the finger to see if the operation had been properly performed, a few pledgets of carbolized lint were introduced, and the patient removed.

ALLINGHAM'S OPERATION.

The next case is one of hæmorrhoids, which will illustrate some points of interest as regards operation; and of the various modes of operating, the one which I consider the best is that which I shall adopt here. The patient is put in the position for stone in the bladder, and then the sphincter ani is thoroughly dilated, either by the thumbs or by a rectal dilator, so that easy access can be obtained to the parts to be operated upon. Then, with a fenestrated pile clamp, the pile is to be seized and dragged down, and the mucous membrane which unites it with the rectal walls is to be snipped about with a pair of scissors until finally only a narrow pedicle which contains the blood-vessel that nourishes the pile is left. Then a thin catgut ligature is to be tied about the base of this pedicle so as to cut off the circulation and strangle it, and the pile is then cut off above the ligature, but not too near it lest it should shrink and allow the ligature to fall off. The advantage of this operation is, that only a small amount of tissue is involved in the ligature which is tied about the single artery going to the pile, just the same as other arteries are ordinarily ligated. The patient should be prepared for this operation two or three days beforehand by the administration of castor oil, so as to thoroughly clear out the bowels, and on the morning of the day of operation the rectum should be washed out by an injection of warm water. If you do not take these precautions you are apt to find impacted fæces which will bother you when you come to operate.

This patient's name is R. V., 40 years of age. He walked to the hospital on Dec. 2nd. He has never had syphilis. But he had an attack of rheumatism four years ago, which was not complicated by any cardiac trouble. Since then he has run down and become much emaciated. Three years and a half ago he first noticed a slight protrusion of the gut during defecation. But it easily reduced itself. The amount of protrusion, however, gradually increased, and it became

quite painful, and at last it could only be reduced upon his assuming the horizontal position. Then he became afflicted with almost constant tenesmus, and he had five or six stools a day. This condition went on until one year ago he began to pass blood in his stools, and since then the hæmorrhoids have become more and more painful, and have increased in size up to the present time.

He now has several hæmorrhoids which are probably for the most part in the lower portion of the gut. But I have not yet examined him thoroughly, because I usually like to make my examination at the same time at which I perform the operation.

Operation.—The patient was drawn down to the edge of the table and placed in the lithotomy position, with his hands and feet bound together. Then a Cusco's rectal dilator was introduced, and the screw was turned until the sphincter was stretched so far as to paralyze it. After removing the dilator two large hæmorrhoids were found at the left of the anus, and one on the upper surface of the rectum. One of the lateral piles was now seized by a fenestrated rectal clamp, in such a way as to take up a little more of the mucous membrane than protruded with the pile. This was drawn downwards, and its base was cut about by the scissors in such a way as to leave only a narrow pedicle through which passed a single artery, and about this a catgut ligature was passed and tightly tied, and both ends were left hanging until the other piles had been treated similarly, when all were cut off at once. The next thing was to snip off the portion outside of the ligature with the scissors. And this finished one. The others were operated upon in the same manner. The pedicles were left for nature to take care of until they should drop off, and the wound heal up.

ENDOCARDITIS.

BY

H. C. WOOD, JR., M. D.

W. J., 32 months old, was suddenly seized at noon, on May 18th, with violent fever. He seemed as well as usual at breakfast, but soon afterward grew listless. There was no other prodrome. I saw him three hours after the attack; he was then dull and quiet, though conscious. The skin was intensely hot, without rash, though the mother said that there had been slight transient flushing of parts of the surface immediately after the attack. There was no sore throat; the tongue was moist and covered with light, whitish fur; occasionally there was twitching of the hands. The breathing was frequent, the pulse, 150; there was no cough, and no physical sign of lung trouble. On careful examination of the heart, a soft but distinct systolic murmur was heard, most intense over the middle of the heart and toward the apex, but not transferred up along the aorta or pulmonary artery. It resembled a soft sawing sound. There was no pericardial friction, though evident præcordial tenderness existed. There was no vomiting, the bowels were moved in the morning. A blister an inch square was applied over the base of the heart, and the child was ordered:

R Tinct. digitalis..... gtt. iij.
Potas. acetat..... gr. v.
Liq. potas. citrat..... L 3 j. M.

Fiat sol. Sig—Take every four hours.

The night passed comfortably, and the following morning he was easier; the pulse was 125 and less

frequently excited. The murmur over the heart was stronger, but there was no friction or effusion. Temperature was 101°. There was no rash and no swelling of the glands of the neck, nor signs of articular rheumatism. By noon the temperature increased to 104°, the pulse to 150; great restlessness came on, with frequent startings and twitchings. There was delirium, and sleep was disturbed by frightful dreams, so that he awoke screaming that he was falling, &c. I now ordered brom. ammon., gr. v., q. t. h. At 4 P. M. a violent convulsion limited to the right side occurred, lasting several minutes, and followed by intense cyanosis and coma, from which reaction was induced with difficulty. In the evening he was much exhausted; the surface was moist, the extremities tending to become cool; the pulse was 120 and labored; the cardiac murmur was less distinct. He was scarcely conscious, and lay dozing, occasionally waking up with partially developed convulsions, which now affected the muscles of both sides of the body, the face and both eyes, though still more marked on the right side. The mixture of bromide of ammonium and digitalis was given every three hours; quinine sulph., one grain every four hours, was ordered; a teaspoonful of brandy every hour and a half, with milk, uncooked white of egg, and beef tea for nourishment; a small blister was applied over the heart, and kept on an hour and a half. Toward midnight he grew more restless, fever again became high, the pulse rose to 150, and the temperature ran up to at least 104°, but under the influence of doses of digitalis, increased to four drops, it subsided, and on Monday morning he was again somewhat better. The pulse was 120, the murmur not so strong, but of the same character, and the action of the heart less distinct and excited. The head, body and legs were warm and slightly moist, but the hands and arms up to the elbow were very cold and white. He was quite conscious, swallowed easily, and had no sore throat; the stomach was retentive, the bowels quiet, and the urine free. He slept quietly during the day, and the bromide was omitted. The calomel powders he had taken previous to the convulsions were now discontinued. The quinia and digitalis were continued. Toward evening a slight swelling appeared on each side of his neck, and he passed a very restless night; on Tuesday morning there was the same intense coldness of the hands and forearm, the pulse from 130 to 140, heart sounds less distinct, and no effusion. Brawny infiltration of subcutaneous tissue on both sides of the neck was increasing. The throat was swollen and a pseudo-membrane beginning to appear. He still swallowed easily. The tongue was thickly coated. He dozed continually, but was still conscious; atomization of lime water was ordered every three hours. The amount of brandy was increased, and a mixture of quiniæ, gr. j., potass. chlorat., gr. ijss., tinct. ferri chl., gr. iv, and tinct. dig., gtt. iij; given every three hours. Cracked ice was wrapped around the neck, and mustard plasters applied to the forearms. During the day vomiting occurred, and the pseudo-membrane grew rapidly; the pulse ran up to 156, during the early evening the pupils were dilated to blindness almost. During the night there was some reaction and he grew conscious. The pulse came down to 136, and he remained in about the same condition till 5 A. M. on Wednesday morning, when he sank rapidly and at 6:30 died. There was no diphtheritic deposit, and no distinctive eruption appeared. The post-mortem examination was made forty-eight hours after death. The head was not examined. The lungs were found to be healthy; there was no pleural effusion, but a small

patch of recent adhesion over the antero-lateral aspect of the right lung. There was no pericarditis or effusion in the pericardial sac. The cavities contained some dark fluid blood, and soft dark clots; but in addition there was an extensive ante-mortem clot, pale, firm, and tightly attached to the wall of the right ventricle by numerous prolongations under and around the trabeculae, and also extending through the tricuspid valve into the right auricle and auricular appendage. The pulmonary artery valves, and the tricuspid valves were healthy but the clot must have been very seriously interfered with the function of the latter for some time before death. The left ventricle was quite firmly contracted, but also contained a smaller mass of ante-mortem clot attached to the mitral leaflets, and extending into the aorta. The aortic valves were slightly fenestrated but healthy. The mitral valve presented evidence of severe acute endocarditis in the form of irregular, thickened, prominent, reddened ridges or lips on the auricular surface of the leaflets, near their free border. This was not divided into distinct and definite points of thickening, but formed a continuous, though somewhat irregular, ridge of infiltrated and thickened tissue. This was more red and injected than the surrounding parts. There was no ulceration, and no projecting filaments, or vegetations, which could have been detached and formed emboli. Microscopic examination showed extreme granular degeneration of the muscular fibrils of the heart's walls, with some proliferation of muscle. The kidneys were not markedly congested, but a microscopic examination showed the epithelium granular, and many of the tubules choked with epithelial debris. The above case presents many points of great practical value. At first the diagnosis was difficult, and the detection of the mitral murmur suggested the possibility of the case being one of severe rheumatic fever without distinct articular inflammation, but with endocarditis occurring at the outset. It is a fact that rheumatism not rarely presents these peculiarities in children, which so often cause it to be overlooked. It may be added, that the mother stated that on the day before the attack the child seemed to have some slight soreness of the hands, though this was doubtful. It must be remembered, too, that in some cases of rheumatism with very high temperature, grave cerebral symptoms appear; but I have never noticed such symptoms in rheumatic children, and certainly never at so early a period in the case as that at which the nervous symptoms here occurred. The case was, therefore, regarded as one of malignant scarlatina with severe cardiac complication. The correctness of this was shown by the grave nervous symptoms which supervened; and by the occurrence of severe throat symptoms on the third day; by the rapid fatal ending; and by the post-mortem changes, especially in the kidneys. The absence of rash is, as is well known, not unusual in malignant scarlatina. Another point of great interest in this case, was the existence of carditis and endocarditis at the very earliest stage of the attack of scarlatina. It shows how necessary careful physical exploration is in every case of acute disease. It also illustrates a truth which has been but slowly recognized, that by no means all cases of cardiac disease in children are of rheumatic origin, but that they may owe their development to inflammation of the membranes, or substance of the heart, occurring in connection with some one of the specific fevers, especially variola, diphtheria and scarlatina. This fact explains some cases of heart disease whose origin would have otherwise been obscure; it also reminds us how carefully we should be on the

lookout for the occurrence of cardiac complications in the above diseases. But another question of interest which it suggests is the possibility of there being one group of cases of malignant scarlatina where the violent disturbance of circulation, the absence of rash and early failure of peripheral circulation, and perhaps some of the other grave symptoms may be associated with a serious affection of the substance or membrane of the heart. It may be suggested that the poisons of rheumatism and scarlatina co-existed in this case, but such a suggestion is altogether untenable. The first attack of convulsions was limited to the right side, and I consequently thought it might be due to minute embolisms at the nerve centres, but the character of the subsequent attacks shows that it should rather be attributed to the poisoned state of the blood, and the intense rapidity of the circulation. It can scarcely be doubted that the lesions of the endocardium also favored the formation of the ante-mortem clot which was found, and which, by interference with the function of the valves, certainly hastened the fatal result. The occurrence of ante-mortem clot in the heart in diphtheria is well known, and constitutes one of the greatest causes of danger in that disease. Particular attention should be called to the positive evidences of endocarditis, and to the marked degeneration of the cardiac fibre caused in so short a time. The treatment was based upon the theory of quieting the nervous excitement, and sustaining the tone of the heart's action. The free use of digitalis seemed, for a time, to produce good effects, but the development of grave throat symptoms, and the formation of heart clot, precipitated death. It will be noted as a point of difference between this and true diphtheria, that no pseudo-membrane formed on the blistered surfaces. The case is valuable as a contribution to the clinical and pathological study of malignant scarlatina.

CHRONIC BRIGHT'S DISEASE—LARYNGITIS —JAUNDICE.

A CLINICAL LECTURE,

BY

AUSTIN FLINT, M.D.

Professor Practice of Medicine Bellevue Hospital Medical College, Visiting Physician Bellevue Hospital, Consulting Physician Charity, St. Mary's, St. Elizabeth's Hospitals, etc., etc.

Male, æt. 65; laborer; native of Germany; admitted May 20; was perfectly well and strong till about two weeks ago; then became weak and suffered pain in the abdomen. Urine was scanty, red in color; sometimes burned when passed. Feet and abdomen became swollen; there has been nausea but no vomiting; bowels often constipated; has had no headache but complains of a sense of shortness of breath and cough; has emaciated very much.

On admission there was fluid in the abdomen and both pleural cavities, more on the right side than on the left. Feet slightly œdematous. There has been a sensitiveness to pressure upon the abdomen, most marked in the epigastric region. There is a large ulcer in the right leg. Urine amber-colored, clear, acid, sp. gr. 1018, contains 15 per cent. albumen; also hyaline and fatty casts. Urine passed in 12 hours;

May 24.—Six ounces.

May 25.—In 24 hours twenty-five ounces.

May 26.—In 24 hours, thirty-three ounces.

May 23.—Had a chill and some fever.

May 25.—Had another chill, temperature 103°.

May 26.—Temperature normal.

Here, gentlemen, we have evidence of disease of the kidneys. We have the statement that he was well and strong until two weeks ago. That the patient emaciated would suggest the existence of some malignant disease other than disease of the kidney. These are points to inquire into and without them we are not in a condition to form a definite opinion as to the existence of any other than kidney disease. It is to be noted that in the course of two days his urine increased from six to thirty-six ounces *per diem*. This increase of urine did not occur under any direct diuretic remedy. He is taking the tincture of chloride of iron. This patient will be kept under observation.

CASE II.—Male. This patient, gentlemen, has difficulty of speech. You can see when he answers my questions that he makes an effort to speak. It is a stridulous rough vocal sound. He has therefore if we exclude paralysis of the laryngeal muscles due to pressure upon the recurrent laryngeal nerve by tumor or aneurism—which we may—a laryngitis. He has had it for some time, so that he has *chronic laryngitis*.

The objects of bringing this patient before you to-day are briefly these: There is no question as to the diagnosis. That is made in his instance so far as chronic laryngitis is concerned. There is no aphonia here, but dysphonia. If the voice is reduced to a whisper we say there is aphonia; if the voice is more or less impaired we say it is dysphonia. A patient with aphonia may or may not have chronic laryngitis. Aphonia may depend upon chronic laryngitis or not. It may depend upon simple paralysis, usually occurring in young women. The means by which we may recognize by the whisper alone whether it be paralytic aphonia or aphonia incident to laryngitis is this: If incident to laryngitis on asking the patient to make an effort to speak we can perceive that the patient makes an effort and with the effort the whisper will be more or less stridulous and husky. If, however, the aphonia be purely due to paralysis of the laryngeal muscles the patient when asked to speak gives us no evidence of making an effort and the whisper which we get is always a pure soft whisper, so that by the whisper alone we may determine without much difficulty whether it be due to chronic laryngitis or paralysis. Of course the laryngoscope settles this question at once. We have here then a chronic laryngitis, and the next practical point I wish to present in connection with the rare case is this: A chronic laryngitis in the vast majority of cases involves either a tuberculous or a syphilitic disease. If tuberculous in character in almost all cases there is existing pulmonary phthisis. If syphilitic it is a mere matter of coincidence to have pulmonary phthisis. This patient confesses syphilis and on examination we find no evidence of phthisis. Here then we have a case of syphilitic laryngitis.

This patient came into the hospital with so much obstruction in breathing that it was thought very probable that tracheotomy would be called for. He has happily improved since he has been here. This very seldom happens in tuberculous troubles.

CASE III.—This patient, gentlemen, is also troubled with aphonia. He gives no history of syphilis, however, and on examination we find evidences of pulmonary lesions. At the right summit the respiratory sound is full and broncho-vesicular. Elsewhere in the chest there are moist rales. These signs are sufficient

to establish the existence of pulmonary phthisis. Here as usual the pulmonary trouble preceded the laryngeal trouble.

CASE IV.—Male. You will remember this patient, gentlemen, as presented to you several weeks ago. The surface of his body and eyes presented the characteristic hue. The coloring principle of the bile has not disappeared from the skin as yet; but the patient is practically well. The fecal evacuations show the presence of bile in sufficient quantities and the urine shows but a small quantity of bile. We may infer from these facts that the obstruction which existed here is removed. Therefore he is well as regards the conditions giving rise to jaundice.

Why then does he still show strong yellowness of skin and eyes. The answer is that this discoloration is in the tissues and not in the blood. The process of taking it up from the tissues and eliminating it completely requires time. In the course of a week or ten days he will find his complexion natural.

SELECTIONS FROM JOURNALS.

THE CONTAGIOUSNESS OF PULMONARY CONSUMPTION.

This question has from its importance given rise to so much discussion of late and so much has been done by eminent scientists toward solving it, that it may not be uninteresting to our readers to present a brief résumé of what is claimed by the exponents of the theory of the contagiousness of consumption.

In a clinical lecture by J. Burney Yeo, M. D., F. R. C. P., published in the *British Medical Journal* the following propositions are laid down as embracing what is now claimed regarding the contagiousness of this malady:

"1. Tubercle is an infective malady, originating in a specific virus, and propagated by the conveyance of that virus from body to body, and originating in no other way.

"2. The specific virus of tubercle consists of a particular micro-organism, found only in tubercle; this organism can be seen in the cells of tubercle, can be obtained in a separate form, and cultivated in successive generations, without losing its original properties.

"3. Certain forms of disease, termed "scrofulous", are essentially tuberculous; and their characteristic anatomical morbid products contain the infective organism peculiar to tubercle.

"4. The disease known as pulmonary consumption is, in the main, a tuberculous disease, and is dependent on the presence and propagation in the body of the infective organism characteristic of tubercle.

"5. Pulmonary consumption is a contagious malady."

Some of the most instructive and conclusive observations and experiments on this head are those of Dr. Hippolyte Martin of Paris.

Dr. Martin's experiments completely establish the following conclusions: 1. Tubercle, inoculated locally, determines, after incubation, the formation of a local tubercle, and, after a variable time, general tuberculosis; and the virus seems to acquire increased activity by inoculation in series of animals of the same or allied species. 2. But, if we inoculate matter obtained from those tubercles secondary to the injection of non-tubercular foreign bodies, they never give rise to general tuberculosis; and, after two, or, at most, three terms of

the series, they even lose the power of producing a local inflammation, and become absolutely inoffensive.

The tubercle bacilli appear as "delicate rods from a quarter to half the diameter of a blood-corpuscle in length"; that they have been found "in large numbers in all places where the tubercles are of recent formation and spreading rapidly, more especially at the border of the cheesy masses." They possess a special relation to the giant-cells, being found in their interior sometimes to the number of twenty in each cell. They do not appear to possess any power of movement. In some of the rods, oval spores have been seen. They have been seen in the human subject in cases of military tuberculosis, in cases of caseous broncho-pneumonia, in tubercle of the brain, in intestinal tuberculosis, in freshly extirpated scrofulous glands, and in certain cases of synovial degeneration of joints. Need I repeat the account (already published in this *Journal*) of the beautiful series of experiments by which Koch has shown that it is to the presence of this organism, and to this alone, that tubercle owes its infective property. "It was found that these bacilli required a temperature approaching that of the human body for their growth." The minimum temperature of 86° Fahr., and the maximum of 104°, are the limits between which they can develop and multiply. This disposes of the first and second propositions, and brings us to third; viz., "that certain forms of disease termed scrofulous are essentially tuberculous."

Both the experiments of Koch, as well as those of Dr. Hippolyte Martin, go to establish this proposition. I have just said that Koch has found the infective bacillus of tubercle in freshly extirpated scrofulous glands, and in certain cases of (scrofulous) degeneration of the synovial membrane of joints. And Dr. Martin has obtained a series of cases of generalized tuberculosis, by successive inoculations in guinea-pigs; the original inoculations being in one instance from a small collection of pus found, after death, in a firmly encased submaxillary gland of a child, who had died of measles and broncho-pneumonia without any trace of tubercular disease, but with well marked clinical characters of scrofula; and in another, from non-degenerated (non-caseous) scrofulous products, a few instants after surgical removal.

In the same lecture Mr. Yeo states for the purpose of throwing some light on this question, I collected, a few years ago, the particulars, of 1,055 cases of consumption that had come under my care, consecutively, in the institution to which I have referred. Of this number, 621 were males and 434 females. Of the 621 males, 306 were married, 297 were single, and only 18 were widowers; about 3 per cent. of the whole, and about 6 per cent. of those who had been married. Of the 18 widowers, two only could state positively that they had lost their wives by consumption, and one of these wives had been dead thirteen years; six of them had lost near relatives by consumption (father, mother, brother or sister), giving a presumption in favor of hereditary predisposition, and in ten no precise information could be obtained. Of the 434 females, 199 were married, 206 were single, and 29 were widows; the widows being about 7 per cent. of the whole, and about 15 per cent. of those who had been married. Of the 29 widows, 5 only were able to state positively that their husbands had died of consumption, one lost her husband "in a fit," 6 had lost near relatives (father, mother, brother, or sister) by phthisis, pointing to hereditary predisposition, and 17 could give no precise information.

At the same time that I was collecting these particu-

lars from my out-patients, Mr. J. P. Bartlett, at that time acting resident medical officer, was good enough to obtain the following particulars from those who were then in-patients. Of the 94 males in the hospital with phthisis, 53 were married, 37 were single, and 4 were widowers; of these 4, 2 had lost their wives by consumption. Of the 53 whose wives were alive, all the wives except two were quite healthy. Of the 83 females who were then in the hospital with consumption, 62 were single, 15 married, and 6 widows; of the 6 widows, 3 had lost their husbands by consumption; in 2 of the 3 there was marked hereditary predisposition; and in 1 there was none; in the remaining cases the husbands were healthy.

Taking these figures for what they are worth, it seems certain that the communication of consumption from wife to husband, even among the class in which the conditions of life favor to the utmost the communication of contagious disease, is very rare; while it would seem that communication (assuming, for the sake of argument, the disease really was communicated) from husband to wife is more frequent.

About the same time that I was making these observations, Dr. Herman Weber brought the subject of the communicability of consumption from husband to wife before the Clinical Society, and in his paper he states that he possesses the history of "68 persons, male and female, who, with a more or less pronounced consumptive taint, have married healthy partners. One or several of the partners of 10 out of these 68 cases become consumptive. The question, however," he says "takes a different aspect if the originally tainted husbands and wives are considered separately. Of the 68 persons, 39 were husbands, 29 wives. Only one of the husbands of the 29 wives became diseased, while the wives of 9 out of the 39 husbands became affected. These 9 husbands lost 18 wives, viz., 1 lost 4 wives, 1 lost 3, 4 others lost 2 each, and 3 only 1 each."

In a subsequent lecture on the antiseptic treatment of pulmonary consumption Mr. Yeo says.—I know of no disease in which so many and various indications for treatment arise during its progress. But, if pulmonary phthisis be pulmonary tuberculosis, and if tuberculosis depend on the presence of an infective organism in the tissues, a rational treatment of phthisis must include the administration of antiseptic agents, or the surrounding our patients with antiseptic conditions.

A substance which has been given in Germany, and recommended as an antiseptic in cases of tuberculosis by Dr. Max Schuller of Griefswald and Dr. Rokitsky of Innsbruck, is the benzoate of soda. This they give in the form of spray, *i. e.*, the two to five per cent. solution in distilled water. But the great objection to this mode of treatment was the amount of fluid it was necessary to inhale (twenty ounces of a five per cent. solution daily) in order to take in the minimum dose. The patient would have, as indeed Dr. Max Schuller says, to devote his life to his cure; for you cannot inhale a spray and do anything else at the same time, whereas the inhalation of an antiseptic vapor by the method I adopt can be continued at the same time with almost any other occupation.

I have adopted this plan of treatment in a great number of cases, and in nearly all of them it has been attended with conspicuous benefit. Even in somewhat advanced cases, it allays the cough, lessens the amount of expectoration, and diminishes the fever.

The readers of the GAZETTE will recall a recent article by Prof. F. H. Hamilton in which this subject is discussed and after a careful analysis of the evi-

dence the verdict rendered "not yet proven." And this we think must be the verdict of the profession at large, at least until some more conclusive facts are adduced to substantiate the claims made.

Dr. J. Hilgard Tyndale who has made a special study of this question apropos of Dr. Hamilton's article, writes as follows:

CONCERNING THE CONTAGIOUSNESS OF PULMONARY CONSUMPTION.

Editor MEDICAL GAZETTE:

In the *GAZETTE* of July 22d, Prof. Hamilton quite correctly takes exception to the sweeping announcement of the Michigan State Board of Health to the effect that "consumption is now believed to be a communicable disease," &c. But in rebutting this statement, Dr. H. falls into the error of assuming that in the question of contagiousness of tubercle there is only one affirmative and one negative: "it is not yet proven, nor indeed, in our opinion, rendered probable."

This whole question of contagiousness of tuberculosis and its sequences amounts to the same as many other half-solved questions in medicine. As long as we seek and believe in *one* etiological factor and in *one* pathological one for every abnormal condition, just so long are we trying to twist the science of medicine into an exact mathematical frame, where it does not belong. Etiologically the bacillus of tubercle is one of the many direct causes, which may give rise to consumption. But owing to the difficulties in the way of direct communication from person to person this cause is a *possibility*, but not a great *probability*, and just as long as it takes continued, persistent and forcible inhalation of the breath of consumptives to bring forth once in a great while a case of direct infection, so long are we dealing with a possibility. But possibility it is and remains, and as such the direct transmission of the bacillus must be put down as *one* of the direct causes of tubercle. As we all know, stagnation and multiple embolism in the pulmonary capillaries is another and far more frequent direct cause.

Pathologically the bacillus of tubercle plays a far more important part than etiology. We know that all germs are not settlers in necrosing tissue, but that putrefaction, ulcerative destruction is ushered in by their presence, after parts have ceased to be living matter. Here it requires a permanent temperature, such as the animal body alone furnishes, and very rapid proliferation, both of which factors are present in the case of our bacillus. Pathologically then he is not only a possibility, but a great probability; yes, we might say a *sine qua non*, provided two questions are permanently settled:

- 1, Can putrefaction be ushered in by other agents than bacteria? Cohn of Breslau says it cannot.
- 2, Does it require the bacillus from another consumptive to start a destructive process in a given case, or is the said bacillus only one of a common family of bacteria, and only one stage of a common bacterial development? Coloring matter alone does not solve that question.

Truly yours,

J. HILGARD TYNDALL, M.D.

ON STERILITY. — BY ARTHUR W. EDIS, M.D., F. R. C. P.

It is somewhat surprising that more notice has not been taken in our modern works on gynaecology, of the frequency with which married women miscarry

during the first few months of their matrimonial existence, or become mothers within the first twelve months, and yet never afterwards conceive.

The mere fact of conception occurring once, shows that the reproductive organs are in a normal physiological condition to start with. Some new factor must, therefore, have been introduced to explain this sudden cessation of fertility. Can it be that the effort is too great, and the capacity for further child-bearing exhausted? Is it not rather from some of the numerous complications likely to follow the act of parturition? That these latter will explain the occurrence of sterility in many cases, may be readily admitted; but there are a large number of cases where parturition is safely accomplished at full term, where there is no history of subsequent inflammatory mischief, and where, beyond a somewhat tedious convalescence, with possibly prolonged or profuse vaginal discharge, no active symptoms are present, such as to necessitate a local investigation.

A history by no means unfrequently met with is, that the patient was perfectly well up to the time of marriage, mensturation being normal, and unattended by pain or any serious discomfort. The first few periods may be somewhat painful and profuse, and followed by more or less mucous discharge. Cessation of the catamenia and other well recognized symptoms soon warn the patient that pregnancy has commenced. Increased leucorrhœal discharge, pain in the back, inability to stand or walk far, are naturally attributed to her condition, and no steps are taken to relieve them. Miscarriage occurs before the first half of pregnancy has been reached, due really to gradually extending inflammatory mischief of the cervix uteri, aggravated, it may be, by some imprudence in the way of over fatigue or undue excitement, such as dancing, riding on horseback, traveling, etc. The miscarriage being attributed solely to some apparently preventable cause, no steps are taken to ascertain the exact condition of the uterus. After resting up for a longer or shorter interval, generally the latter, the patient begins again to take her place in society and attend to her domestic duties. Although warned by her own sensations in the form of backache, leucorrhœa, menorrhagia, and other distressing symptoms, that all is not as it should be, the patient imagines that these are but the sequelæ of her miscarriage; and, beyond resting up a little more than usual, simply because she cannot endure fatigue as heretofore, nothing is done to improve the state of the uterus, which meanwhile is in a very unhealthy condition.

Now, what is the interpretation of this? In many of these cases the patient has become infected with latent gonorrhœa, as pointed out by Dr. Emil Noeggerath; and the whole genito-urinary tract becomes involved in the specific inflammatory process—chronic endometritis and ovaritis of a very intractable form resulting.

The mischief begins so insidiously and extends so gradually, as not at first to interfere with impregnation. With the increased functional activity of the uterus, however, a fresh impulse is given to the development of the diseased action; and, the two conditions being incompatible the one with the other, the process of gestation is cut short, and the ovum expelled.

The presence of inflammatory disease of the cervix, as Dr. Henry Bennet long since pointed out, however slight, often appears to arrest, independently of any diseased state of the body of the uterus, the natural process of absorption which occurs after parturition, before the uterus has regained its natural size and

weight. This morbid size and weight of the organ is generally attended with displacement, mostly retroversion, and often keeps up hemorrhage. When the disease of the cervix is removed, nature will often renew the interrupted process of absorption, and slowly restore the uterus to its natural size and position without any special treatment. Inflammation of the cervix uteri has a remarkable tendency to perpetuate itself indefinitely, notwithstanding the removal of all acute and sub-acute inflammatory action. This tendency is no doubt increased by the periodical sanguineous congestion to which menstruation physiologically exposes the inflamed tissues.

In many other cases of acquired sterility, the uterus remains for many months following parturition in a state of subinvolution, due possibly to some strumous diathesis, or to some temporary cause of depressed vitality, the result of, or independent of, the performance of the act of parturition, complicated or not by ill health during pregnancy. In some instances, no doubt, it is due to patients getting about as usual too soon after their confinements. The uterus, more than double its normal size and weight, in place of being supported by the relaxed and distended vaginal walls and suspended in its proper place by ligaments now stretched and weakened, and unable to bear half the usual strain, sinks in the pelvis beyond its proper level; congestion is thus kept up, and the process of involution still further interfered with. The increased bulk and partial prolapse of the uterus generally cause symptoms of backache, bearing-down and other pelvic distress. For this, the patient finds it requisite to lie up, and generally does so, in the dorsal position. The uterus being heavier than normal, often becomes markedly retroverted, and, being also softer in structure, becomes not unfrequently retroflexed; the tendency to this being often still further increased by the compression due to a tight binder or abdominal belt. Should peritonitis occur at the time, from the patient catching cold or other cause, the uterus may become bound down by adhesions whilst retroverted or flexed. Coupled with this subinvolution, we not unfrequently find an intensely granular degeneration of the mucous membrane lining the cervical canal, in many cases doubtless intensified, if not produced, by the cervix having been slit up on one side during labor. Where the perineum has also been ruptured to any extent, the vaginal walls lose a great part of their support. The uterus thus descends lower in the pelvis, even if it do not become otherwise displaced; the external atmosphere thus gains ready access to the vagina, and keeps up a constant irritation of the exposed cervical mucous membrane. Much acrid discharge results, and not unfrequently prolonged menorrhagia. The patient being obliged to rest a great deal, and not being able to take exercise in the open air, her general health often becomes much deteriorated, her appetite impaired, her bowels confined, she sleeps badly, feels very languid, is unable to attend to her domestic duties, becomes depressed in spirits, and too often drifts into confirmed invalidism.

The ovaries themselves may have become atrophied from having undergone a considerable amount of inflammatory mischief at the time, or from the subsequent contraction of the deposit by which they are surrounded, or from an abscess having formed in the ovary, leading to the destruction of the normal structure of the organ. Adhesions binding down the Fallopian tubes, or fixing the uterus in some abnormal position, may also interfere with impregnation.

Superinvolution of the uterus when the organ under-

goes an excessive amount of involution, becoming inordinately diminished in size, as seen later on in life in senile atrophy, occasionally occurs, as if really the effort of reproduction had been too great, and the capacity for it had become exhausted. We frequently meet with instances of patients who are fruitful once only in a series of years, more especially in ill-nourished women and in those who are inordinately stout, where presumably the ovarian activity is much below par, or there is a natural tendency to premature decay. Although superinvolution is by no means so frequent as the contrary condition of subinvolution, yet it is by no means so infrequent as might be imagined. Some inflammatory mischief following parturition, involving one or both ovaries, may possibly have been the initiating cause. Although well authenticated cases of fertility are on record where, at the necropsy, only one ovary has been found to be developed, still it is a question whether, contrary to what obtains in other double organs of the body—such as the kidneys, for instance—when one ovary is destroyed or impaired in function, instead of the energy of the sound one being redoubled, the very reverse occurs, and the remaining ovary becomes atrophied, the uterus following suit in due course. This may explain some of the cases of premature menopause, with subsequent atrophy of the uterus.

Where there is any tendency to the development of fibroids in the uterine walls, the increased determination of blood to the uterus during pregnancy, and the unusual developmental activity, unquestionably encourage the growth of fibroids. These do not, as a rule, take part in the process of involution which follows parturition, but go on gradually increasing in size, and so offer an effectual barrier to conception.

The menorrhagia which usually accompanies intramural uterine fibroids, more especially when they tend towards the mucous surface, may cause extravasation into the decidual membrane, or produce such other disturbance in the uterus as to interfere materially with the fixation, maintenance, or development of the ovum; and thus practically the woman remains sterile.

It is curious to observe with what persistency the uterus will revert to any abnormal position, whether of flexion or version, that was present before the pregnancy [occurred. Acute ante or retro-flexion that for many years produced sterility, when overcome by the wearing of an intra-uterine stem, or by other appropriate treatment, so as to allow of impregnation taking place, and where the pregnancy advanced to the full term, has yet been found to recur to its original condition on completion of the process of involution following parturition. The cause of the sterility in the first instance becomes again the cause of acquired sterility, and needs treatment equally as in the former case.

Treatment.—It would be out of the question to attempt entering into the details of treatment in all cases. The mere enunciation of the probable cause is sufficient to suggest the appropriate line of treatment. What I am anxious to direct special attention to is the preventive treatment. It should be considered a part of every medical man's duty who attends a patient in labor, to examine her carefully at the end of a month or six weeks afterwards in order to determine whether she has incurred more than the ordinary penalties of parturition, and whether she is in a fair way to recover her former physiological condition. Every surgeon, before discharging a patient who has undergone an operation, sees that the wound is properly healed; and we should equally satisfy ourselves that everything is

as it should be. Where, however, precautionary measures have not been taken, and we are only consulted after some years' interval, our first care must be to ascertain the exact nature of the uterine disorder, and not to promise too speedy relief, or the patient may become discouraged, and neglect to follow up treatment. A very important element of success in these cases is, that treatment should be patiently and perseveringly pursued for many consecutive months. As soon as one difficulty is overcome, we frequently find some other associated condition, which has been thus far overlooked or obscured, and only now becomes evident.

We must remove, as far as practicable, every abnormal condition that can be discovered; and, even when we have done this, it may still be many months, and in some cases years, before nature restores the uterus to its normal physiological condition such as allows impregnation to take place, and pregnancy to advance in due order. Supposing, as frequently happens, we find the uterus excessively bulky and tender, retroverted, the cervix more or less slit, the os patulous, and this and the cervical canal intensely granular, giving exit to a thick glairy mucous discharge, what are we to do? The first thing probably will be to lessen the bulk and diminish the sensibility of the congested or inflamed organ, by means of puncturing or scarifying the cervix, the employment of hot water vaginal injections, the application of the tampon soaked in glycerine, and other well recognized expedients. Nitric acid may then be applied to the granular mucous lining of the cervix; or the operation of tracheloraphy, for the restoration of the slit cervix to a normal condition, may be performed, as the nature of the case may seem to require.

When the uterus has become less bulky and less sensitive, gentle efforts may be made to rectify any displacement, noting carefully if the uterus be mobile or bound down by adhesions. In the latter case, we must proceed very cautiously, not attempting to tear down adhesions, but rather trusting to the wearing of a well adjusted pessary to exercise gradual yet constant pressure upon the fundus, and so keep the adhesions on the stretch; and then we may trust to their gradual removal by absorption.

Lying in the prone position, or resorting to the genupectoral position from time to time, will also assist in encouraging a return of the uterus to its normal position, where it is retroverted; though at first the patient will probably experience much inconvenience, and perhaps state that it is impossible for her to carry out the suggestion. The importance of so doing must be explained to her, and she must be encouraged to persevere in attempts, gradually prolonging the time as she finds it practicable. The patient must avoid long standing or prolonged exertion of any kind, more especially just before, during and after the menstrual period. The diet and bowels should be carefully regulated, and the general health improved in every way possible. Skirt-supporters and garment-suspenders, by taking off pressure round the lower abdomen, assist in relieving congestion of the pelvic organs, and may be recommended if thought desirable.

I will not here enter into further details of treatment; but from much practical acquaintance with these cases of acquired sterility, I can confidently assert that the difficulty may be overcome (if only sufficient time be allowed to follow up the treatment) in a fair proportion of cases, and that without any unreasonable trouble on the part of the practitioner, or prolonged rest on the part of the patient.—*Brit. Med. Jour.*

FORMULARY AND POINTS IN PRACTICE.

IN CHRONIC CYSTITIS.

- ℞ Acid. nit. dil. min. iij—v
Tinct. hyoscyam. min. v—x
Decoct. pateræ ℥ ii—iv
Sig. This amount three times a day.

IN IRRITABLE BLADDER AND ACID URINE.

- ℞ Pot. bicarb. grs. v
Tinct. hyoscyam. min. v
Inf. buchu. ℥ ii

DIURETIC AND FERRUGINE.

- ℞ Sp. Juniperi. min. v
Decoct. chimaphile. ℥ ii
Sp. ætheris nit. min. v
Syr. croci ... ℥ ss
Aque. ℥ iv
Ft. mist. quartis horis sumend.

IN MUCOUS URINE.

- ℞ Succ. scoparii. min. x
Decoct. uvæ ursi. ℥ iij

A PLEASANT DIAPHORETIC.

- ℞ Liq. ammon. acetat. 3 ss
Syr. rhœados. 3 ss
Aque flor. aurant. 3 iv
May be given every three or four hours.

IN TONSILLITIS.

- ℞ Acid. citric. grs. xv
Tinct. guaiaci. min. x—xx
Potass bicarb. ℥ j
Mucilaginis. ad ℥ i
To be taken while effervescing every 3 or 4 hours.

IN CHRONIC BRONCHITIS.

- ℞ Tinct. benzoin co. 3 ii
Pulv. tragacanth. 3 ss
Aque cinnamomi. 3 iij

When expectoration is viscid and difficult the following may be taken.

- ℞ Vin. ipecac. min. v—xv
Syr. scillæ. 3 ss
Oxym. scille. min. v—x
Decoc. senegæ. ℥ ii—iv

A VALUABLE FORMULA IN PHTHISIS AND CATARRHAL COUGH.

- ℞ Mist. ammoniaci. 3 vj
Sodæ bicarb. 3 ss
Tinct. camph. co. 3 ii
Tinct. hyoscyam. 3 i
Vin. ipecac. 3 iij
Dose. 3j sæpe urgent. tuss.

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FRACTURE OF PATELLA.

According to the *Lancet* of April 29, 1882, Mr. Lund, of Manchester, England, has found a new method of treating transverse fractures of the patella; and this is itself a great point gained, inasmuch as it can be said that if he leads where no man will follow, he follows where no man leads.

Mr. Lund does not open the joint and then perforate the fragments and wire them together; nor perforate antero-posteriorly and wire the fragments without previously opening the joint; nor put the wire through the ligamentum patellæ; nor force them together with Malgaigne's hooks, for the reason, probably, that all these methods have killed a considerable number of patients—and by "patients" we mean people, whose lives were perhaps as valuable as our own—but the patient being under the influence of an anæsthetic, a strong steel pin is drilled through each fragment, from side to side, and then the pins (and fragments) are approximated by wire enclosing their extremities.

He declares that in the two cases thus treated bony union was obtained—a fact which, we venture to say, he does not know, and we do not believe.

Mr. Bryant, in the course of the discussion which ensued, called attention to the great danger of penetrating the joint by this method; but Mr. Morris made the most conclusive argument against Mr. Lund's method, the sole purpose of which was to obtain a bony union, when he said that he considered "a close

ligamentous union to be superior to an osseous" union.

At the same meeting Mr. Adams referred to a fatal case at St. Bartholomew's Hospital due to the use of Malgaigne's hooks.

YELLOW FEVER.

Surgeon-General Hamilton, of the Marine Hospital service, in view of the presence of yellow fever upon our Southern borders, has issued the following circular:

TREASURY DEP'T, OFFICE SUPERVISING
SURGEON-GENERAL U. S. MARINE HOSPITAL
SERVICE, WASHINGTON, D. C., August 9, 1882.

To Medical Officers of the Marine Hospital Service and
Medical Officers of State and Municipal Boards of
Health:

I am directed by the Secretary of the Treasury to inform you that Congress at its last session enacted that "The President of the United States is hereby authorized, in case of a threatened or actual epidemic, to use a sum, not exceeding \$100,000, out of any money in the Treasury not otherwise appropriated in aid of State and local boards, or otherwise in his discretion, in preventing and suppressing the spread of the same."

He further directs me to inform you that the President has decided to employ this contingent appropriation through the agency of the Treasury Department, and that, in case of a threatened or actual epidemic, immediate action will be taken upon application from the Governor of a State addressed to the Secretary of the Treasury. JOHN B. HAMILTON,

Surgeon-General United States
Marine Hospital Service.

Accounts from Havana state that twenty-two deaths from yellow fever occurred during the week ending August 11th.

BROWNSVILLE, Texas, August 12.—Twenty-five new cases of yellow fever—21 Mexicans and 4 Americans—and one death were reported here to-day. It is the opinion of physicians that the fever material is becoming exhausted. Eight deaths and several new cases are reported at Matamoras.

JACKSON, Miss., August 12.—The Mississippi State Board of Health will establish immediately quarantine stations at Osyka, on the New Orleans and Chicago Railroad; Fort Adams, on the Mississippi River, and at a point in Hancock County on the Mobile and New Orleans Railroad, the latter under the charge of Dr. Rice, of Vicksburg. A certificate of the National Board of Health will be required of all persons traveling.

Acting Collector Goodwin, of Brownsville, under

date of August 12th, telegraphed Surgeon-General Hamilton as follows:

"First case of yellow fever occurred in Matamoras a month ago. Introduced through Bagdad, Mexico, by railroad tramps from Tampico. Average daily deaths in Matamoras for past ten days, 10. Disease appeared in Brownsville two weeks ago. Total number of deaths, 10 or 12. Several distinct types of fever prevail in both cities at present. No new developments to-day. Total number of all classes of fever cases in Brownsville, 62. Disease in statu quo. Will report to-morrow."

According to Barton, La Roche and others, yellow fever is apt to invade the Gulf States after great floods of the lower Mississippi, and after a mild winter. The coincidence of both of these conditions during the present year increases, therefore, the probabilities of its extension in the direction of New Orleans, Memphis, etc.

The control of most of the national appropriation intended for the exclusion of yellow fever has been transferred from the National Board of Health to the Surgeon-General of the Marine Hospital Service. Dr. Hamilton is an experienced, conscientious and intelligent officer, and a most zealous and indefatigable worker. The public may be assured, therefore, that the money will be wisely and economically expended; and that, with the assistance which can be given to him by the now very much crippled National Board, the several State quarantine departments, and the various State and Municipal Boards of Health in the vicinity of the Gulf States and along the Mississippi river, everything possible will be done to prevent its extension.

A TIMELY BUT MYSTERIOUS WARNING.

A writer for one of our city contemporaries, who intimates that he is one of the "stalwarts" who voted to lower the flag, but who conceals his name, says to the editor, "I want you to warn the county societies of our State not to allow themselves to be *propelled* into undue action." The suggestion is cool, elegant and classical. They are to be "warned" not to permit of the application of any *vis a tergo*, which shall propel them into undue action. But seriously, what boots it whether the impulse comes from behind or from before? In either case it might result in undue action. Violent attraction would seem as dangerous to the morals of the society as violent propulsion.

This is, however, a nice metaphysical question, in the discussion of which we confess to a little mental confusion; and we suspect our readers will also. Perhaps the author will explain his meaning more fully; and it is hoped that he will do it over his own signature, in order that his suggestions or warnings may have additional weight.

We notice that the editor, in parenthesis, at the close of the correspondent's letter says, that he understands it, and it is all right, and "eminently sound." Probably we ought to accept of this as a sufficient explanation.

LECTURES.

EXCISION OF CARPAL BONES.

A CLINICAL LECTURE DELIVERED AT THE NEW YORK HOSPITAL.

BY

GEO. A. PETERS, M. D.,

Attending Surgeon.

The patient, J. S., is 29 years of age, was born in the United States, and is a roofer by occupation. He was admitted Dec. 12th, and he applied in person for admission. Four years ago he had an acute articular rheumatism in all the joints of his body, which disappeared under treatment in about seven months, except from his wrist joints. And after he had resumed his work he was prevented from continuing it by the pain and swelling of the wrist joints, which were made worse by moving the hand. This partial loss of motion increased so much that his hand became quite useless. Eighteen months ago he went to Bellevue Hospital, and while there he developed a chronic synovitis and an arthritis of the left wrist joint. When he left the hospital there were several sinuses discharging pus upon the dorsal aspect of the wrist, and these have remained open ever since. During the past year there has been no change, but the joint has remained stiff, swollen and painful. He gives no history of any injury of the part to account for this inflammation, but he gives a history of phthisis for the past fifteen years. There is no evidence of any Bright's disease.

From the fact that he was not able to work he determined to come here to see if anything could be done to give him a more useful hand. So the other day he was put under ether, and an examination of the sinuses showed that they reached down to the wrist bones. It is, therefore, a disease of the carpal bones that we have to deal with, but of how great extent I can not yet say. So I now put him on the table, not knowing whether I shall merely have to remove the pieces of dead bone or whether I shall have to amputate the whole hand. I shall save the hand if possible, but if, after an exploration of the diseased parts, I find it necessary to amputate, I am prepared to do so, and he has consented to the operation. The operation which I propose to do, if I am able, is to remove as many of the bones of the carpus as are diseased, and to leave the sound bones and the tendons uninjured. There are several possible ways of performing this operation, and the most common method is that of Lister. But I will not stop now to describe this, as I shall not use it to-day. But the operation which I prefer is one that I have performed several times, and I have always found it very satisfactory. It consists in making a single flap of skin alone upon the dorsal aspect of the hand, and in dissecting it up as far as the upper border of the wrist, and leaving the extensor tendons untouched. Then the flap is to be turned back upon the forearm, while I work my way down between the tendons, which are drawn to one side, and by gouging and picking I clear out all the diseased bones of the carpus. But as I say, if I find the disease to be more extensive than I now suppose, and I therefore think it better to amputate the hand, I will do so. I will first have an Esmarch's bandage applied from the tips of his fingers up to the elbow, for

this empties the vessels of blood, so as to leave the parts upon which I am to work almost dry, and therefore more easily to be seen than they would be otherwise.

Operation.—After applying the Esmarch's bandage, and the tourniquet so as to compress the brachial artery, the sinuses were explored with a silver probe to determine their direction. An oval incision was then made with the knife by a single motion, extending from the styloid process of the ulna around upon the dorsum of the hand to the styloid process of the radius. This marked out a flap about two inches in length from above downward. Taking the free border of this flap in his fingers, with the other hand the operator dissected it back so as only to include the skin and superficial areolar tissue, and to leave the tendons uninjured. The hand was now allowed to rest upon the patient's abdomen while the diseased bones were being removed. It was found that most of the carpal bones were more or less involved. While the tendons were held aside with retractors and the dressing forceps, the dead bone was picked out with a vulsellum forceps, and loosened or broken away from the sound bone by the gouge and chisel, most of it coming away in small detached pieces, though three or four masses of considerable size were removed, about which new false bone tissue had formed. In this way it was found necessary to remove all the bones of the carpus except the pisiform and the hook of the unciform. But it was very hard to distinguish the line of separation between any of the bones, because they had all grown together into one mass. Finally all roughnesses were smoothed off from the bones which were left behind, and the surplus soft tissues were trimmed away with the scissors, and then the tourniquet was removed and three or four arteries were ligated and several twisted, and the whole cavity was washed out with a solution of carbolic acid. The flap was then drawn down so as to cover the wound, and a small drainage tube was inserted so that one end lay within the cavity of the wound, while the other projected from the radial side about three quarters of an inch, and then the flap was closed over all and confined by small silk sutures placed a quarter of an inch apart. The cavity was again cleansed by an injection of a carbolized solution through the tube, and the surface of the hand was washed with the same, and the dressings were applied. These were to consist of borated cotton, which was to be left on for twenty-four or forty-eight hours, and then it was to be changed for some other kind of dressing. It was expected that this cavity would in time fill up with new tissue, such as usually forms in cases of this sort, and that the tendons would form proper connections with this, and finally, if the man had good luck, he would get some motion of the hand.

EMBOLISM.

BY

J. M. DACOSTA, M. D.,

Professor of Practice of Medicine in Jefferson Medical College Philadelphia.

A very healthy girl, aged six, had a sharp attack of diphtheria about December 10th, 1876. The membrane disappeared on the fifth or sixth day, but recurred forty-eight hours later, and she was much more ill than at first, with very extensive formation of pseudo-membrane. She was treated throughout with full doses of

quinia, tincture ferri chloridi, potassium chlorate and solution of iron, and chlorate of potassa applied locally to the fauces. Again the membrane disappeared, also the swelling of the cervical glands, and the subcutaneous infiltration, which had been extreme, slowly subdivided; she regained strength, and was apparently beginning to convalesce early in the third week of the attack, when she was seized with vomiting. The urine was slightly albuminous; no microscopical examination was made. The vomiting was constant, and resisted every effort of a most judicious kind for four days. I saw her with Dr. Yarrow on Dec. 29th. It was agreed to stop all food by the mouth; to give injections of Valentine's beef extract, with three grains of quinia and two drops of tincture of opium, every four hours, and by mouth a powder of calomel, one-third of a grain; soda bicarbonate two and a half grains every three hours. A blister was applied to the epigastrium. She was then very restless, tossing from side to side; the pupils were dilated, surface very pale, extremities not cool, tongue slightly coated, dryish; epithelium rough, and papillæ prominent. It was difficult to ascertain whether there was epigastric tenderness; it certainly did not seem to be intense. More minute examination was avoided, for fear of producing vomiting. The next day she seemed better, had vomited only once in twenty-four hours, and had begun to retain a few drops at a time of milk and lime water. The injections had all been retained. The tongue was a little less dry, but the child quiet and indisposed to speak. The pulse was small and weak, but not more so than seemed natural, considering the exhaustive character of the attack. The powders were now ordered to be given less frequently; injections, also, at longer intervals, and a little more nourishment, with a few drops of brandy, cautiously given by the mouth. December 31st vomiting had entirely ceased; the child had retained teaspoonful doses of nourishment about every two hours; the injections had also been taken regularly and retained. The surface was pale, and perhaps slightly cool, but this was not specially noticed; pulse small, but regular, 85—90 in a minute. There was no cough. The heart and lungs were examined, and nothing unusual noticed. There was no valvular murmur; the sounds were faint, but neither tumultuous nor confused. About twelve drops of tincture opii deodor. had been given, in divided doses, during twenty-four hours. The amount of nourishment by the mouth was increased. Full doses of quinia were continued by injections. Two or three hours after our consultation it was noticed that the child's feet became cold, and that this soon extended to the knees and arms. The child's appearance changed; she gave a sudden gasping effort and a motion, as though to push the mother away, and died without further struggle. At a post-mortem examination, made on the following day, intense congestion of the liver was found, with enlargement and a deep purplish color. The kidneys were also deeply congested, the secreting cells of the tubules being in a state of "cloudy swelling." The spleen was slightly enlarged from engorgement. There was no pleural or pericardial effusion. The lungs were pale, retracted, and crepitant. The right cavities of the heart were enormously distended. The auricle contained much soft, dark, clotted blood. There was a firm white clot entangled in the tricuspid leaflets, and extending from there into the right ventricle, where it was very slightly attached to the muscular trabeculæ by delicate prolongations; was thence prolonged into the pulmonary artery, the calibre of which

was, to a great extent, obstructed by a firm, white, ante-mortem clot obstructing the mitral orifice, partly filling the left ventricle and prolonged into the aorta. The muscular fibres from the heart were in advanced fatty degeneration, their transverse striation being in places completely obliterated. The contents of the stomach were only ingesta. Its mucous membrane was for the most part not much congested; but at one spot, near the middle of the greater curvature, there was intense congestion. Otherwise the stomach was entirely normal. The occurrence of heart-clot is not known to be among the dangers in so many diseases that it demands careful study. It must be understood, of course, that I only refer to such clots as are formed in the heart some considerable time before death, and which play a principal part in causing death. It is well known that whenever the act of dying is protracted, heart-clots are apt to be formed. But these have little or no pathological significance. The true ante-mortem heart-clot is distinguished by certain anatomical characters which are usually well illustrated in the above case. It is whitish, firm and tough; it is apt to be moulded on the inequalities of the inner surface of the heart, and may be tightly attached by delicate prolongations passing around the muscular trabeculae. The circumstances which favor the formation of such clots are quite various. Attempts have been made to explain their production, but none of the theories have been fully substantiated, or can be applied to all cases. Among the conditions which predispose may be mentioned:

An excess of the fibrinous elements of the blood, roughness or vegetations of the leaflets of the valves of the heart, obstructions to the circulation of the blood, failure or momentary arrest of cardiac action, and the introduction of certain specific poisons into the blood. There are doubtless other conditions, but these are the most prominent, and often several of them are associated in a single case. Thus, in diphtheria there is a greater tendency to the production of corpuscular fibrinous exudations than in other zymotic diseases, and the blood contains a larger proportion of fibrinous element. There is also a marked tendency to degeneration of the cardiac muscular fibres, with great enfeebling of its action; not rarely, also, there will be found slight evidences of endocarditis, in the form of minute, bead-like vegetations on the mitral leaflets. The latter were not found in the above case, but the degeneration of the muscular structure of the heart was marked. The tendency to heart-clot in diphtheria is, accordingly, so very strong that it must never be forgotten or lost sight of. This accident may occur at any stage of the disease, and not rarely, as in this case, it takes place after convalescence seems established. I have also known it to occur at an earlier stage in cases which were apparently doing perfectly well. The only special determining influence which I have suspected in such cases has been an undue amount of muscular effort. This, therefore, should be scrupulously avoided in all cases of diphtheria, for this as well as for other reasons. Although usually followed by death, it is important to be able to detect the occurrence of heart-clot, if possible. The symptoms which may be stated as indicative of this condition, are anxiety and great dyspnoea; pallor of face and coolness of extremities; small, frequent pulse; and obscure, dull heart-sounds, with occasionally a blowing murmur. It will be seen that the symptoms we have detected in the case here published were peculiarly obscure. I am inclined to regard the violent vomiting as one of the first results of heart-

clot. The obstruction to the entrance of blood into the right cavities of the heart caused intense congestion of the liver and of the mucous membrane of the stomach. This would readily account for the obstinate vomiting, and careful examination of the stomach after death failed to reveal any other cause. It is true that there had been found, a few days before, a trace of albumen in the urine, and that the early stage of kidney disease, with cloudy swelling of the epithelium, existed; but these do not suffice to account for the sudden occurrence of such violent and uncontrollable vomiting, without any symptoms of anæmia. Considering the marked ante-mortem characters of the clots, it must be admitted that they had existed for several days before death; yet until a half-hour before death no symptoms occurred to call special attention to the heart. It is true that they may have been masked by the frequent vomiting and the slight opiate effect which was maintained. There was no extreme dyspnoea, however, and the pulse was regular and not very rapid. There was also nothing special about the heart sounds, which were observed to be merely faint. It is important, therefore, to note how insidious may be the formation of heart-clot, and how closely we should be on our guard against it. When finally the clots attained such size as to seriously obstruct the orifices of the heart, and prevent the closure of the valves, very characteristic symptoms appeared, and were rapidly followed by death. The prognosis in cases of heart-clot is very grave. Still, in a few instances, it cannot be doubted that the clot has gradually contracted and finally become attached to some part of the heart's cavity, where it has not interfered seriously with cardiac action, and thus life has been saved. In other cases it is possible that a small clot may have undergone gradual molecular disintegration, and have been distributed without occurrence of serious embolism. This fortunate termination cannot, however, be hoped for in any given case, and nearly always death follows in from a few hours to a few days. The most important part of the treatment is prophylactic, as the marked tendency to formation of heart-clot in diphtheria is probably connected with the special alteration of the blood, and there is no remedy known which will avert this dreadful accident. But there is little doubt that, by judiciously sustaining the tone of cardiac action, and by carefully guarding against all muscular exertion, especially in the way of sitting up or rising to the feet, a good deal may be done to lessen the danger of its occurrence. Should it become evident that the formation of heart-clot has taken place, the only treatment to be recommended still is active stimulation of the tone of the heart. The various remedies which have been advised, with the idea that the solution of the clot might be promoted, are useless. Ammonia is valuable, not in this latter way, but simply as a stimulant to respiration and circulation. Alcoholic stimuli and concentrated nourishment must be given as freely as seems called for by the prostration and the depression of circulation. I should place more reliance upon digitalis, freely administered, than upon any other remedy. Absolute avoidance of muscular efforts must be insisted on. Still, as before stated, it is only in very exceptional cases that death does not follow.

EVULSION OF THE SCALP—HEATON'S OPERATION—EXCISION OF HEAD OF FEMUR.

A CLINICAL LECTURE.

BY

T. M. MARKOE, M. D.,

Professor of the Principles of Surgery at the College of Physicians and Surgeons, N. Y.

The first case I show you, gentlemen, is one of those rare and curious accidents which sometimes happen, where a young woman standing by a rapidly revolving shaft in a factory has her hair caught by it, and instantly the whole top of the scalp is torn off. But what is peculiar in this case is that only half of the scalp was twisted off, and there was no invasion of the eye and no laceration of the ear. I never before saw just such a case. The portion of the scalp which came off, I cannot show you at present, for it has been sent to the tanners to have it tanned for preservation. The story of this young woman is, that a few days ago she was standing near a revolving wheel, and the belting around it caught one clump of hair on the left side of her head and tore off the scalp on that side only, but did no further harm. This is one of the curiosities of surgical experience, and is of special interest because of the extensive injury in the immediate vicinity of the brain while there are no cerebral symptoms, and also because of the peculiarly large surface involved. In the treatment of such injuries the process of cicatrization is assisted by the operation of skin grafting. My plan is, not to begin the skin grafting until the cicatrization has advanced to a considerable extent. But when this healing process begins to waver and hesitate around the borders of the wound, as if exhausted by the effort to cover over such an extensive surface, then I put my skin grafts into the central portion of the bare part, and forthwith the borders start up anew, and they and the grafts grow along together, and nature infuses a new vitality into them, so that the process of cicatrization goes on, until finally the whole denuded surface becomes covered over again with a layer of new integument. This process may occupy several months or even years before it is completed, for only a few of the many grafts implanted take root and grow. I merely brought this case in to show you as one of the rare accidents.

HEATON'S OPERATION.

Now the next case is one which you have seen before, and it is a man on whom I propose to operate again by Heaton's method for the radical cure of hernia. I have already done this operation twice upon him, with the result of only a very imperfect obliteration of the inguinal canal. He is one of the three or four cases in which I have tried this method, and in none of these cases has the result been entirely satisfactory. But whenever a surgeon of high standing proposes some new operation with which he has himself had good success, I think that we should always give these new methods a fair trial, and that we should perform the operation in precisely the same way in which he has done it. So we feel that this method of Heaton's has sufficient testimony in its favor to make it worth our while to try it thoroughly. The operation consists in injecting a solution of white oak into the areolar tissue of the inguinal canal, with the idea that a sufficient amount of inflammation will be set up in this way to effect a permanent closure of the canal. The solution injected consists of the fluid extract of white oak, with a certain amount of alcohol and ether, to

which is added a little morphia. But this addition of morphia I do not like, because if this drug is present in any considerable quantity it bars you from using the solution to any extent you wish. Suppose, for instance, that twenty drops of the solution contain the usual quantity of morphia for a single dose, then if I wish to deposit three times twenty drops I am prevented, because I fear giving an overdose of the anodyne. And besides if the morphia is needed it can easily be injected into the arm in the proper dose.

For injecting the solution I use an instrument which varies somewhat from the usual form, and which I suggested and had made for myself. The idea in it is to have a hollow needle with a blunt point of steel which is nevertheless somewhat acuminated, so that it can be run about in the loose areolar tissue of the canal as far and as freely as a sharp needle, while the danger of wounding the adjacent parts is avoided. With a little care you can determine exactly where the point of the needle is going, and you can easily avoid wounding the vein, which is the chief point of danger here.

This man has been operated on three times before this, and two of them were done by me; and there is now a certain amount of solid material effused here, and there is some degree of obliteration of the canal. But I think it needs to be further obliterated by the injection of more of the solution.

Operation.—My syringe now contains twenty minims of the fluid, and I will be contented with this amount for to-day. At the point where I intend to insert the needle I first make a small cut through the skin with a sharp knife, and then through this opening I push the needle into the canal, directing it upwards and outwards, and then moving it in any direction I like. And by taking this precaution I can feel the utmost certainty that I have the needle in the canal. Now I deposit a few drops at three different points in the canal: one near the external ring anteriorly, and another directly opposite to this and posteriorly, and another near the internal ring and anteriorly, as nearly as I can locate them. An ordinary broad bandage will be all the dressing needed at present.

EXCISION OF HEAD OF FEMUR.

The next case is a young man 18 years old. Four years ago he noticed something irregular about the appearance of the hip joint of the right side, and this was followed in a few days by swelling and pain which did not disappear again but remained, thus disabling the hip joint. This chronic inflammation of the joint went on for eight months, and then an abscess formed in the neighborhood, which finally opened on the anterior and upper portion of the thigh and discharged freely. This sinus remained opened and the discharge persisted. So two years ago the joint was cut down upon, and a small piece of bone was removed. Since then his health has steadily depreciated and his growth has been stunted, so that he looks like a boy only eleven or twelve years old. He is in a very anæmic condition, and he has a well developed Bright's disease, and he shows every indication of enfeebled general powers, such as is apt to follow from waxy degeneration of the kidneys.

Upon examination I find the upper part of the femur apparently much thickened, as if it contained a sequestrum upon it. And I find that there are two fistulæ, one opening a little below the great trochanter and discharging freely, and the other opening below Poupart's ligament, and presenting an appearance as if it were caused by the presence of a foreign body. With this

is associated pain on motion of the limb, and a feeling as if there were a sort of ankylosis of the hip joint, and a certain amount of stiffness of the knee joint. The question for decision in this case is, whether the disease is situated only upon the trochanter of the femur, whether these fistulæ run back and behind the trochanter and into the cavity of the hip joint. But in either case the incision would be the same, so my first act will be to cut down so as to expose the head of the bone, and then I can explore the wound and see if it is the trochanter alone that is diseased. Life itself may be endangered if the limb is left alone, and so I think we are justified in performing a severe operation if necessary, to remove the cause of the disease. But I do not yet know whether we will only have to remove a small piece of necrosed bone, or whether it will be necessary to excise a considerable portion of the upper end of the femur. I confess that I am a little uncertain at present whether the hip joint is involved in the disease or not. There is great atrophy of the limb, which may be due to simple lack of nourishment. And there is some shortening of the limb; but measurements are uncertain.

Operation.—A probe was first introduced into the lower fistulous opening to explore the depth and direction of it, and it was found to lead to the neighborhood of the great sciatic nerve. Then with a small scalpel a longitudinal incision was made, about six inches in length over the great trochanter of the femur. After cutting through the skin and superficial tissues the surgeon's finger was introduced in order to explore the wound before going deeper; and various smaller channels were found branching out from the main fistulous canal. There then seemed to be no question of the location of the disease being in the hip-joint, so it was determined to proceed immediately to the excision of the head of the bone. The incision was therefore deepened and enlarged, and the head of the bone was carefully dissected about until the sciatic nerve was exposed and drawn aside to avoid wounding it. The thigh was then flexed upon the abdomen by an assistant, and the limb was rotated back and forth so as to enable the surgeon to make out the condition of affairs with his hand in the wound. But the changes which four years of diseased action had impressed upon the joint made it difficult to determine this. But the head of the bone seemed to have slipped down out of the acetabulum, and to be resting upon the anterior surface of the obturator membrane. But a portion of the great trochanter which was now exposed seemed to be necrosed; so a chain saw was put about it, and a part was thus removed. And other small pieces of dead bone were broken off by a chisel and mallet. The head of the bone was now thoroughly detached from its surroundings, and the next step was to throw it out of its bed in the obturator foramen by flexing the knee and thigh and at the same time rotating the knee inwards, and by using considerable force the head of the bone was thus thrown out, so that it projected from the wound. It was now evident that a considerable part of the head had been destroyed by necrosis. So with a surgical saw the operator now removed the upper two inches of the femur, and then he trimmed the stump off smoothly with the bone forceps. The wound was now again explored, and there was found what appeared to be a shell of new bone structure upon that portion of the ischium where the head of the femur had rested, and the lower and outer margin of the acetabulum seemed to have become disorganized so that it encroached upon the obturator foramen. A little of the disor-

ganized bone was removed, but it was thought best to let the shell of new bone remain.

The surgeon now said that it was evident that the disease had been located in the hip-joint all along. There had been an inflammatory thickening of the upper end of the femur, and finally a softening and destruction of the bone. He had removed all that portion of dead bone which he could reach, and had sawed off the upper two inches or the trochanteric portion of the femur. He had not found any evidence of disease within the cavity of the acetabulum, which seemed to be well filled up, but its lower and outer margin had become inflamed and disorganized so that its shape was changed, and it now encroached upon the outer margin of the obturator foramen. And so the whole limb had settled down so as to make a partly new joint at this point.

Antiseptic precautions were observed throughout the operation, and now the wound was washed out with a one in forty solution of carbolic acid, and a rubber tube perforated for through drainage was inserted, and the edges of the wound were drawn together and closed with silk sutures. The operation had been almost bloodless and no vessels required ligating. Only one end of the drainage tube projected from the closed wound, for the other end was made to emerge from a fistula internal to the wound and connecting with it. The whole was again washed out through the tube, and then the Lister dressing was put on. First a roller bandage was placed around the thigh and hip, and over this was placed a layer of several thicknesses of antiseptic gauze, and then a layer of oiled silk, and all was confined by a thin gauze bandage. Then a plain roller bandage was wound around the foot and leg up to the knee, and in the popliteal space was placed a thick layer of cotton batting, and the bandage was then continued over this, and up around the thigh and the dressings, and then over two folded towels placed over the abdomen, which were afterwards to be removed so as to allow free respiration, and after making several turns around the abdomen the end was secured. Then over all this was wound a thin roller bandage containing plaster of Paris moistened. Next a layer of flannel was placed around the thigh, and then a layer of plaster of Paris was plastered over the whole limb and abdomen, and then another roller plaster of Paris bandage was wound about all, and finally all was confined and protected by a plain roller bandage, and then the dressing was left to set. The ends of the drainage tube were allowed to project through holes left open in the dressings. The limb was thus kept steady.

CYSTIC TUMOR.

BY

J. FORSYTH MEIGS, M.D.

A little girl, some ten years of age, was brought before the class suffering from a cystic tumor in the right hypochondrium. Not quite two years ago an enlargement began to make itself visible in the upper part of the right side of the belly, and soon assumed a definite projecting form. The child became emaciated, weak, and nervous. There was no jaundice, and examination showed no disease of the kidneys or thoracic organs. The tumor could be defined, extending from the right hypochondrium down to the umbilicus, and from a little to the left of the median line to the superior spinous process of the ileum, on the

right. The dulness of the tumor was continuous with that of the liver, and the mass moved with the liver in the act of breathing, so there was evidently a close connection between the two. The tumor had grown slowly and without pain. The child was before the class on two former occasions. On the first of these the tumor had been tapped, and from forty to fifty fluid-ounces of clear, limped serum removed. This would have been analyzed for albumen and salines but that the vessel containing it was broken at the time and the serum lost. The child went away, but came back a second time, with the cyst as large as at first. Again it was tapped, and about the same quantity of slightly turbid fluid removed. An injection of iodine was afterwards made into the cavity. After this the cyst began to shrivel up and the child improved vastly. Three months ago the cyst again began to increase in size, and the symptoms returned. The abdomen, though not so much enlarged as at first, was much distended, and the superficial veins turgescient. On percussion the flatness extended over about the same space it originally occupied. There was distinct fluctuation. On palpation the *crumbling* sensation peculiar to one kind of cyst was not felt here. Careful percussion showed that there were no coils of intestine between the cyst and the abdominal wall. The cyst was for a third time tapped and aspirated before the class, and twenty-two fluid-ounces of light, straw-colored and slightly turbid serum were removed, and a solution containing one-half fluid drachm of iodine to one and a half fluid-drachms of water injected into the cavity. The operation was attended with no difficulty whatever, and was followed by no pain or fever. The child was discharged from the hospital two days later. The examination of the product of this third tapping revealed the following characters, viz.; specific gravity, 1.008; reaction, alkaline; color, very light straw; two per cent. of albumen; a trace of sugar; no urea; one hundred and twenty-five grammes of solid matter, some fat cells, red blood corpuscles, and a few leucocytes; no hooklets of echinococci were found. Abdominal tumors in children are far from rare, and usually, on account of the greater thinness of the abdominal walls, it is more easy to diagnose their character and location in children than in adults. In the present case the palpation shows clearly that the tumor is a cystic one. It is further evident that it is closely, if not organically, connected with the liver. The kidney is sometimes the seat of cystic disease, but in the present case the collection is evidently not in that organ, or it would be more deeply seated, and would not rise and fall with the movements of the liver in respiration. It is more difficult to determine the exact nature of the cyst occasionally following a blow or injury to the abdomen, for without known cause a local peritonitis is set up, which may bring on an effusion circumscribed by adhesions and false membranes, thus forming an encysted dropsy. This is a rare condition, however, and in the present instance there is nothing in the history of the case which would lead us to suspect its existence. I would call particular attention to the entire absence of pain during the development of the disease. Another form of cystic tumor is that due to hydatid disease. These hydatid cysts are caused by the embryos of the tapeworm gaining access to the tissues through the intestinal canal. They may become fixed in almost any of the organs, particularly the liver and spleen. Subsequently, they are surrounded by a membrane in which fluid is formed, so that ultimately a cystic tumor, even of enormous size, may be developed. Such cysts

may be single, or may contain several cavities. The fluctuation in them is usually very distinct, and occasionally on palpation a peculiar crumbling sensation is evident. Whatever doubt may exist as to the nature of a cystic tumor, such as the present, it can usually be removed by a simple exploratory puncture, since the fluid of a hydatid cyst differs entirely from any other fluid, healthy or morbid, found in the human body. It is limpid, like spring water, and colorless, containing chloride of sodium, but neither sugar, urea nor albumen; of course, if from any cause inflammation of the lining of the sac has been set up, the fluid will contain a small amount of albumen, and leucocytes will be found. There may also be discovered fragments of the echinococci, especially their small hooklets. Now, in the present case, the fluid of the first drawing resembled precisely the fluid of the hydatid cyst. Unfortunately this was lost and could not be analyzed. The fluid of the third and last tapping, however, contained two per cent. of albumen and a trace of sugar, but no urea. It is not probable that in any ordinary case of inflammatory effusion the amount of albumen would have been so small, or urea absent, while the slight amount of sup-
puration evidently established in the lining of the cyst would easily account for the small amount of albumen and leucocytes present. So that this serves to confirm me in my view that we have probably to deal with a hydatid cyst of the liver. Hydatid cysts are very common in some countries, but rare in the United States. In regard to their treatment neither internal remedies nor local counter-irritation can effect their absorption. The only available method then is the evacuation of the contents. It is true that in some instances a spontaneous cure may be effected by the gradual shrivelling and contraction of the sac, but as there is constant danger of the sac rupturing and bringing on peritonitis, and as the operation of evacuating the sac is almost entirely free from danger, I should advise, by all means, its performance, and not trust to the slim prospects of a spontaneous cure. In evacuating hydatid cysts some have recommended causing adhesions between the cyst and the abdominal walls by escharotics, and then making a free opening into the sac and maintaining it until the cavity is altogether obliterated. This mode of operation is often followed by fatal results either from exhaustion, from protracted discharge, from purulent absorption or from peritonitis. I would, therefore, recommend the use of a delicate trocar and canula to make the puncture, and the removal of the liquid by aspiration. Even if adhesions do not exist between the cyst and the abdominal wall there is very little danger of bringing on peritonitis. In the first tapping, even if a few drops of the limpid fluid should escape into the peritoneum, it is not likely that they would cause inflammation, while if a second operation be required, and the fluid be purulent it is probable that adhesions would have been formed at the point of first puncture. I have but little fear, however, of any fluid escaping into the peritoneum through the opening made by the fine needle employed in the present case, and as a matter of fact there has not been the least evidence of peritonitis after either of the three tapplings of the cyst. It frequently happens that a hydatid cyst is cured by a single evacuation. But in the present case it will be seen that it has been necessary to perform the operation three times. It will be remembered, however, that these cysts are often multilocular, and it is by no means impossible that, while the original cyst has shriveled up, a secondary one has continued to develop, and has, in

turn, required to be emptied. This view is rendered probable by the long interval that elapsed between the second and third operations. I trust, however, that I have now performed it for the last time, and that the third puncture and injection of diluted iodine has been followed by the complete obliteration of the sac.

The child has continued quite well after the last operation some five months ago, and when last seen, several months subsequently, there was no appearance of a return of the tumor, but merely a circumscribed dullness on percussion and sense of resistance on palpation, to mark the spot where the tumor had formerly been.

PERINEAL SECTION FOR STRICTURE OF THE URETHRA.

A CLINICAL LECTURE.

BY

JOSEPH D. BRYANT, M. D.

This patient, gentlemen, came into the hospital unable to pass his water. An examination of the perineum showed it to be very much swollen and distended. I made an incision and opened a large abscess which contained broken-down material communicating with the external surface by a small fistula. I took some French and English bougies and made an exploration. The points I wanted to ascertain were, first, has this man a stricture? Second, what is the size of the stricture? Third, the location of the stricture. Fourth, the number of strictures. Any instrument which will go through the meatus externus will pass into the bladder provided there is no obstruction. The first instrument I took failed to pass through the meatus. No. 12 English went through the external meatus. No. 10 stopped just at the width of the bulb inside the meatus, showing a small stricture just $\frac{1}{2}$ " from the external meatus. The next size passed directly through this stricture, showing size and location, and stopped at $2\frac{3}{4}$ ". At $5\frac{1}{2}$ " no bulbous bougie would go through. We had then three strictures, one which gave rise to rupture of the urethra, causing a fistula; a second at $2\frac{3}{4}$ " and a third at the meatus.

In injecting into the urethra sweet oil, and taking filiform bougies, we push them carefully down till they strike bottom. The theory of these instruments is to fill up all the openings except the stricture opening. It has been taught both in text-books and orally that wherever water passes through the urethra one of these little instruments should be caused to go. We kept the patient in bed, giving him flaxseed tea, hot baths night and morning, and under the influence of these he began to pass water. On the following day I made a free incision into the perineum which allowed some little pus and urine to escape. This did him some good. Perineal section without a guide had, however, to be performed. I accidentally took up a No. 1 sound, put it into the urethra, and all of a sudden the thing slipped into the bladder. To draw off the urine after placing the whalebone guide in the bladder, use the tongue catheter.

I will show you the operation of perineal section on the guide.

I make an incision from the posterior portion of the sacrum directly in the centre. The peculiarity about

some of these cases of ruptured perineum is this, the fascia covering the perineum serves as the great guide to the direction which the urine takes; that is, when the superficial perineal fascia is implicated simply, as the urine rests beneath it [the superficial fascia rests over the whole surface of the perineum], it goes everywhere; when it remains beneath the superficial fascia which is attached to the rami of the pubes, the extravasation of urine is limited in its extent. In this case there is no extravasation existing on either side, but it is directly in the median line. It does not run on the surface, does not go up into the abdomen, and does not implicate the scrotum. The whole perineal structure here is infiltrated with inflammatory products. In some cases a little extravasation of urine takes place, and immediately around it there is a large amount of inflammatory products formed called plastic material, which confines the urine in such a way that it does not extend over any great surface.

By inserting the finger into the bladder you dilate the bladder itself. This man has cystitis as indicated by the reaction of the urine. Nos. 13 and 16 go directly into the bladder. In cutting the meatus, cut to the right or left of the median line. We expect that the wound in the perineum will heal up. He will pass water through the urethra just as he did before he had the gonorrhœa.

Could this man have been cured without perineal section? Can a man be cured by enlarging the size of the urethra so that water flows out freely and allows the fistula to heal up? This man has been cut by internal urethrotomy five years ago. He had a very small strictural retention at that time, still he comes with a stricture so small that for the last four weeks he has been unable to pass his water except in a little corkscrew stream. The only treatment is to make a free incision. If this were a simple case you could never cure a fistulous opening until every stricture in front of it is properly dilated. Unless the two anterior strictures are cut, the wound in the perineum will not heal. After having operated for perineal section upon a person with stricture of the urethra you cannot hope for a reasonable recovery until you have cured every stricture. Suppose this had been a case of perineal section without a guide, what difference would there have been in the operation? I should have put in a grooved staff just the same. I should have cut upon the grooved staff just the same. Then I should have taken a piece of silk thread, passed a needle directly through the mucous membrane of the urethra on the right and left sides; made two loops which would pull the wound open. The bottom of that wound would correspond to the mucous membrane of the urethra.

In cases of retention of urine there are two ways of avoiding accident in endeavoring to relieve the patient, one is to give chloroform and make your examination; the other is to take the aspirator and draw off the superfluous urine and then give your anæsthetic.

I remember very vividly how in 1869 a man came into the hospital with distended bladder and stricture. There was no aspirator in the hospital. Ether was given, and during the tonic stage of anæsthesia the man ruptured his bladder. He died without an operation.

ABOUT BOOKS.

A Treatise on the Physiological and Therapeutic Action of the Sulphate of Quinine. By Otis Frederick Manson, M. D., Professor of Physiology and Pathology in the Medical College of Virginia. Published by J. B. Lippincott & Co., Philadelphia, 1882. Price, \$1.00.

No better testimony to the development of the scientific analysis of medicines could be borne than the fact that a book of nearly two hundred pages should be written to explain the history, nature, therapeutical and toxicological action of a single remedy.

This little work tells the story of the action of quinine in a thoroughly scientific way. It gives many interesting facts regarding the history of the alkaloid and of its growth in medical and popular favor. It is interspersed with therapeutical suggestions, and concludes with some useful hints regarding its administration.

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK.

SERVICE OF

DR. GEO. A. PETERS.

AMPUTATION OF FOREARM.

GENTLEMEN: The patient whom I will bring before you to-day is Mrs. M. O'B., a widow, 45 years of age. On Nov. 22nd she received an injury from some accident with a washing machine, upon her right hand. She was an inmate of the Bloomingdale Lunatic Asylum, and she was brought here from there several hours after the accident. At the time of her admission to our wards she was suffering from great prostration and shock, and the surface of the skin was cold, and the muscles relaxed everywhere. Stimulants were freely administered until she revived sufficiently. The examination then showed an extensive lacerated wound of the right hand involving the dorsal aspect from the wrist down to the extensor tendons of the fingers, and reaching from the palmar surface on the ulnar side across the back of the hand to the thumb, the skin of which was left uninjured. The metacarpal bones were not involved.

The reason why an operation is now necessary is that the wound has failed to repair, and the destruction of the soft parts has become so extensive that there is no longer any hope of saving the hand. The old rule was that if half of the skin of the hand was involved the member should be amputated. And from the appearance of this case you can judge for yourselves of the advisability of a surgical procedure here.

Examination.—There is total destruction of the integument over the whole of the dorsal surface of the right hand, from the wrist to the tips of the fingers, except that portion which covers the thumb. There has also been destruction of the subcutaneous tissues to the depth of the extensor tendons of the fingers, and the exposed surface looks red and raw upon the hand, but the fingers have a black and dead appearance, as if from a dry gangrene.

Operation.—An Esmarch's bandage was first applied to the arm from the wrist to the elbow, so as to empty

the vessels of all blood; and then the brachial artery was compressed just above the elbow by a tourniquet, and the Esmarch's bandage was taken off again. It was thought best to amputate about two inches above the radio-carpal articulation, and to make lateral flaps; the radial one being broad and long, and the ulnar flap short and narrow. So, after sponging off the surface of the arm with carbolized water, an incision for the long flap was made with a scalpel through the skin, extending from a point two and a half inches above the styloid process of the radius downwards and in a curved direction across the back of the arm to a point on the front of the arm two inches above the styloid process of the ulna. The lower border of this incision came close up to the eroded surface on the back of the wrist. Starting and ending at the same points as in making the long flap, an incision was made upon the opposite side of the arm, marking out a second flap, which was only half an inch in length. The long flap was now dissected back, and only the skin and superficial areolar tissue were included in it. Then, while the skin was drawn back by an assistant, the operator divided the muscles overlying the bones with a slender amputating knife by a downward sweep on the inner side of the arm and an upward sweep upon the outer side. Then the knife was thrust down between the ulna and radius, and the interosseous membrane and the remaining muscles were thus divided. The divided ends of the muscles were now retracted strongly while the two lower bones were sawn through at the same time. And afterwards the rough edges of the bone were trimmed off with the bone forceps. One or two small arteries were now tied or twisted, but the operation thus far had been entirely bloodless. The next thing was to take off the tourniquet so as to reveal any bleeding points, and immediately two arteries were seen to spout. The bleeding was temporarily controlled by an assistant compressing the brachial artery while the vessels were secured by catgut ligatures. The smaller arterioles were controlled by torsion. The flaps were now fitted to each other and all irregularities trimmed off, and then a thorough drainage-tube of small calibre was inserted across the stump, and the flaps were brought into apposition and united by silk sutures less than a quarter of an inch apart. This brought the line of union upon the upper and inner side of the forearm, where it would be less exposed to injury than in any other position. The wound was now washed out by injecting a carbolized solution into it through the drainage-tube, and the surface of the stump was sponged with the same, and finally an ordinary dressing of antiseptic gauze was applied, according to the method of Lister.

SELECTIONS FROM JOURNALS.

TREATMENT OF HEMORRHOIDS BY INJECTIONS OF CARBOLIC ACID.

Dr. Charles B. Kelsey, Surgeon to St. Paul's Infirmary for Treatment of the Rectum, New York, recently opened a discussion on the treatment of hemorrhoids, at a meeting of the New York Clinical Society, by reading a paper on the treatment by injections of carbolic acid. The paper, which appears in the August number of the *New York Medical Journal* opens with condensed histories of a number of cases, after

which he remarks that, beginning this plan of treatment without very much confidence in it, and with the fear of causing great pain, and, perhaps, dangerous sloughing, constantly before him, the method is constantly growing in favor with him, and the more he practices it the more confidence he gains in it. With solutions of proper strength the danger of causing sloughing of the tumors is very slight. There are no objections to this method which do not apply equally to others. He has once seen considerable ulceration result from it in the hands of another; but he has seen an equal amount follow the application of the ligature; and he does not consider this as a danger greatly to be feared when injections of proper strength are introduced in the proper way. It is applicable to all cases; is especially adapted to bad cases; and may be used where a cutting operation is inadmissible. It acts by setting up an amount of irritation within the tumor which results in an increase of connective tissue, a closure of the vascular loops, and a consequent hardening and decrease in the size of the hemorrhoid. Except when sloughing occurs, the tumors are not, therefore, removed, but are rendered inert, so that they no longer either bleed or come down outside of the body. In cases in which the sphincter has become weakened by distension, the injections will also have a decided effect in contracting the anal orifice, as injections of ergot or strychnine do in cases of prolapsus. He has used this method of treatment now many times, and has never, except in one case, had reason to regret using it or to be dissatisfied with its results, so far as he has been able to follow them. Although slow to advocate any one treatment of this affection to the exclusion of all others, he now generally adopts this from the outset in each case, reserving Allingham's operation for any in which the injections may fail. As yet he has met with no such case. Its advantages over all other methods, provided its results prove equally satisfactory, are manifest. The patient is not terrified at the outset by the prospect of a surgical operation, is not confined to his bed, and is not subjected to any suffering. The cure goes on painlessly, and almost without his consciousness. The method requires some practice and some skill in manipulation, in getting a good view of the point to be injected, and in making the injection properly; but this is soon acquired; and he is more and more convinced that the fear of producing ulceration is an exaggerated one, and that when ulceration is produced it is a result either of a solution of too great strength, or of one improperly administered.

MENIERE'S DISEASE.

The following case may be of interest, as in many points resembling the one reported by Dr. Mackenzie, in the *Journal* of April 29th, and also from its having been twice brought forward, in the House of Commons.

On October 21st last, a court of inquiry was held, at Kells, as to an alleged charge of drunkenness preferred against Subconstable Forbes. The charge arose from the head-constable and sergeant observing Forbes to stagger and reel while on duty. Concluding he was slightly under the influence of drink, they brought him back to barracks, when, the transient attack of giddiness having passed away, he appeared to his comrades to be, as he really was, perfectly sober. I saw him in about two hours, and found him suffering from the well-marked symptoms of Meniere's disease; noise and

hissing in his left ear; numbness behind the ears and down the left arm; depression; occasional vomiting; giddiness; objects going to the left side; the drum of the ear inflamed, and the left Eustachian tube plugged; and no symptom of recent slight intoxication.

At the inquiry, the head-constable and sergeant swore that, in their opinion, Subconstable Forbes was drunk while on duty. Four policemen, who were with him, said that he was perfectly sober. Dr. Sparrow, of this town, agreed with my evidence, that he was sober, and that the giddiness was the result of illness, not of intoxication. I explained that the giddiness and feeling had resulted from an attack of ear-vertigo, and that this might easily be mistaken for the staggering caused by slight intoxication. The court decided that the charge was proved, and fined Subconstable Forbes three pounds, which fine has since been confirmed by the House of Commons.

That disease of the ear could give rise to reeling and giddiness, is evidently looked on with the greatest scepticism by the general public. The court refused to accept my explanation; and the idea was received in the House of Commons with loud laughter; and the general press, in their comments on the subject, have looked on the idea as a rather good Irish medical joke.

That my explanation was the correct one, is clearly proved by the subsequent history of the case. Subconstable Forbes continuing to suffer from symptoms, which were too protracted for those of drunkenness, was summoned before a medical board in Dublin, and sent on afterwards to St. Mark's Eye and Ear Hospital, where he remained for some time under treatment for the identical disease for suffering from one of the symptoms of which he had been already fined.

There is no doubt that, in this case, ignorance of the effects of ear-disease has led to unmerited punishment; and is another proof of the ill-results of ignoring medical evidence in such investigations. As in Dr. Mackenzie's case, improvement followed inflation with the Eustachian catheter.—JOHN RINGWOOD in *Brit. Med. Jour.*

FORMULARY AND POINTS IN PRACTICE.

TO PROMOTE EXPECTORATION IN EARLY STAGE OF PHTHISIS.

R Ammon. muriat. 3 ss
Opil pulv. grs. x
Digitalis pulv.
Scilla pulv. ad ʒj

M. Div. in pil. xxx Et. Sig. One every six hours.

SLEEPLESSNESS OF HYPOCHONDRIA AND HYSTERIA.

R Assafoetide. ʒ j
Morphiæ sulph. grs. ii j

M. Ft. pil. xxx Et. Sig. One or two at bed hour.

NEURALGIA OF THE STOMACH.

R Bicarb. potassæ. 3 j
Acid. hydrocyanici. gtts. xxiv
Sal. sulph. morph. gtts. xxiv
Aquæ camphoræ. ʒ iv

M. Ft. Mist. Et. Sig. Teaspoonful as required.

TO REDUCE VASCULAR ACTION IN HYPERTROPHY OF THE HEART.

R Potass. iodidi..... 3 ij ss
 Tinct. hyoscyami.....
 Tinct. digitalisaa 3 ss
 Syr. sarsa. co..... 3 v

Ft. Mist. Et. Sig. Teaspoonful when required.

HABITUAL CONSTIPATION.

R Ext. belladon.....grs. v
 Rhei pulv.....
 Extract. aloes.....aa grs. xvj

M. Ft. Mass. in pil xii div. Et. Sig. One or two every second night at bed hour.

MEDICAL NOTES AND NEWS.

Dr. Traill Green, of Easton, Pa., one of the most scholarly and practical physicians in our country, has been saying some very sensible things on the subject of the "Eruptive Diseases of Childhood," in which he calls attention especially to the generally mild character of most of these diseases in the country, where the children are usually in a condition of health and vigor, and contrasting their cases with those which occur in the crowded tenement houses of cities, where the constitutions are already impaired by overcrowding, poor food, and probably by the long inhalation of sewer gas. In the latter case, as Dr. Barker said to the Academy, these diseases were complicated and made fatal by the system having been previously poisoned and prepared by sewer gas, but Dr. Barker's observations were made especially among the more wealthy class of citizens, with whom sewer gas proved to be the chief fertilizer for the human soil, rendering it fit for the reception and intensification of the eruptive diseases of childhood.

Accidental Death from Morphine.—A Dr. Miller, of Wisconsin, gave a dose of morphine, supposing it to be quinine, to a lady, from which, notwithstanding the early discovery of the mistake and the use of the stomach pump, she died

Penny Wise and Pound Foolish.—Dr. Fereol, of Paris, has published an account of a "miraculous cure," in which he declares he has no faith as a miracle. A girl was afflicted with a hysterical cough which he found himself unable to cure, but discovering that she believed in the efficacy of the water of a certain holy well in the Pyrenees, he sent her there and she was cured. Although he knows the cure was effected by natural causes, he justifies his advice given to the parents on the ground that he thus "retained the confidence and control of the patient."

No doubt the parents were in good circumstances, and to retain control of the patient and family was very desirable. For the present the deception to which he lent himself was advantageous to all parties, but suppose, as a result of this experience, the family conclude hereafter to take a shorter road to recovery than they have hitherto, and instead of employing Dr. Fereol they go at once to the holy well! Suppose, also, all of his other patrons, who are certain to hear of

his failure and the success of the waters, conclude to do so also. What then? Has the doctor looked at the other side of the picture? It is our opinion that in the long run honest dealing with our patrons pays the best.

Dr. George A. Turner, for twelve years a medical missionary in the Samoan Islands, has published in the "*Medical Abstract*," a report of 138 cases of amputation of the scrotum made by himself, for elephantiasis Arabum; of which number only two died. There is nothing about his mode of operating which can be regarded as new, except his use of a large clamp to restrain the hæmorrhage during the operation. His success was, however, remarkable.

Ready Method of Preparing Fomentations.

—Take your flannel, folded to the required thickness and size, dampened quite perceptibly with water, but not enough to drip, and place it between the folds of a large newspaper, having the edges of the paper lap well over the cloth so as to give vent to the steam. Thus prepared, lay it on the heated surface of the stove or register, and in a moment steam is generated from the under surface and has permeated the whole cloth sufficiently to heat it to the required temperature. This method is often very convenient and efficient where there is no opportunity to heat much water at a time.—*Michigan Medical News*.

"Is there a 'Field' for Battey's operation?" is a question asked in the last volume of Transactions of the American Gynæcological Society. The London *Lancet* replies in the affirmative, but wishes to remind its readers that a "field" is not a *prairie*.—*Ohio Med. Journal*.

Cesspools.—From the *Sanatarian* we take the following very pertinent remarks: Cesspools and privy vaults are the bane of the country; the perennial hot-house of scarlet fever, measles, typhoid fever, diarrhoea and dysentery, and the exciting cause of many other diseases. But country house privies, odious as they are, are insignificant as compared with what Professor Frank H. Hamilton, in his paper before the New York Academy of Medicine, so significantly designates, "Dangers of Æstheticism," if applied to hidden city vaults, school-house cesspools, æsthetic *new* villages, villas and fashionable country resorts "for health." For the old-fashioned country-house vault, light and air, aided by the sense of smell, do something toward lessening dangers. But the æsthetic vaults and cesspools common to fashionable new villages, schools and summer resorts, are hidden away in dark corners, or excavated and carefully covered, even turfed over, lest the beauty of the lawn be marred. Carefully hidden, as the viper or the sneaking assassin, and supplied with all the conditions of potency—darkness, warmth, moisture and ferment—the conditions are complete for the development and self-multiplying of disease poisons, call them germs or what you may, to an illimitable extent. For the *old* country-house privy there may be some excuse for its construction, but in the light of present knowledge, those who tolerate them might learn wisdom from the cats; but no time should be lost on the obtuseness of those who will not learn.

All such sources of disease should be indicted and removed as common nuisances, and to build one be made a criminal offence.—*Med. and Surg. Reporter.*

On Iodoform Wound Dressings.—Sampson Gamgee, F.R.S.E., writes, in *The Lancet*: For efficiency and safety I give preference to a solution of iodoform in absolute alcohol (one to ten, after Es-march), and a similar proportion of iodoform and collodion (Georges). The latter is a hæmostatic and antiseptic preparation of special value in the management of tracheotomy wounds during diphtheria, and of operations on the rectum and vagina. The eagerness with which different absorbent materials, variously treated with antiseptics, have been adopted by particular surgeons, offers a noteworthy contrast to the comparative indifference with which the general principles underlying simple and efficient wound dressing have been apprehended. Immobility and perfect drainage, elastic compression, and infrequent dressings are the essentials. These secured, the dynamics of the circulation are so perfectly under control, innervation is so little interfered with, that nutrition and repair proceed with a minimum of stasis and effusion, and practically without any decomposition. But the reception of any discharge that does occur, in powerfully absorbent and antiseptic pads, is obviously conducive to purity, and opposed to infection.

Charcoal for Diarrhœa.—M. Guerin does well to remind physicians of the value of charcoal, mixed with the milk, is a remedy for diarrhœa in children. It is far more reliable than opiates or astringents, and is never injurious.

Cure for Corns.—Dr. Traill Green, of Easton, Pa., who was the first to recommend salicylic acid as a cure for corns, in 1876 (*Trans. Med. Soc. Pa.*), now recommends the following formula, suggested recently by Gezou:—

R Salicylic acid..... 30 parts or grs. xxx.
Ext. cannabis indica... 5 parts or grs. v.
Collodion 240 parts or f 3 ss.

The remedy is applied with a camel's hair pencil, and if the corn is not well cured, the application may be repeated. In four or five days the patient should use a warm foot-bath and rub off the collodion. If any portion of the corn remains the acid should be applied again, and the treatment continued until the whole of the corn has disappeared. The skin will be soft and smooth, as in the healthy state.

The mixture dries immediately, and does not prevent for a moment the use of the stocking.—*Med. and Surg. Reporter.*

The Dangers of Chloroform.—M. Vulpian has been experimenting on animals with chloroform, and has stated to the French Academy of Medicine that it is liable to cause death at the beginning of its exhibition, during the exhibition, and at its close; and that it occasionally causes death immediately after, or after the lapse of some hours or days. It acts either upon the respiratory centres, or upon the motor ganglia of the heart. In the latter case resuscitation is rarely accomplished. His experiments also confirm the opinion that ether is much less dangerous to life.

The war upon Pasteur predicted by a German pa-

thologist has fairly commenced. According to a Cincinnati doctor who has lately visited the laboratory of Klein, near London, the bacillus anthrax has no protective influence on rats, guinea pigs, mice, etc., as has been affirmed by Pasteur. Indeed he declares that he has conclusively demonstrated this fact.

Pasteur is said to be a Spiritualist. Possibly, therefore, he is able to "see things which are not to be seen."

STAUNTON VA., MAY 30, 1882.

To the Editor of the Sanitary Engineer:

Please tell me through your paper if there is an instrument made to tell if there is sewer gas in a room, if so, where can they be had and what is the cost.

Respectfully yours, C. BARGAMIN.

[We know of no instrument for this purpose.] "*Sanitary Engineer.*"

To which reply we wish to add—except the nose, and this is by no means always reliable. Sewer gas has no definite and uniform qualities or proportions and therefore its presence or absence cannot be determined by an instrument.

A MARVEL OF SURGERY.—Dr. Roswell Park writes from Prague: "I have had the pleasure of a rather extended interview with a patient whose larynx and epiglottis Professor Gussenbauer removed over a year ago. Six weeks after the operation, he began to wear part of the artificial larynx, and, after accustoming himself to this, he gradually learned how to introduce and use the reed which takes the place of the vocal cords. This apparatus was made for him by Rothe, who has also done some work for the Reese Hospital. The patient is a riding teacher, is reputed the best rider in Prague, is busy from morning to night, talking all day, and suffers not the slightest inconvenience or pain. His voice is, of course, very monotonous, but his enunciation is excellent, his speech perfectly intelligible, and he eats and drinks with perfect facility. Three intralaryngeal operations had been previously made, before Gussenbauer attempted his feat. This case is said to be the best living example of what the art of the surgeon and the mechanic can accomplish for such a terrible disease as cancer of the larynx.—*Brit. Med. Journal.*

ANECDOTE OF CLOT BEY.—The following anecdote is related of this French surgeon, who attained eminence in the service of Mehemet Ali, and died in 1868: For about 1700 years there been no public lectures on anatomy delivered in Alexandria, the very birthplace of human anatomy; and so strong were Mussulman fanaticism and prejudice that although he had the authority of the Pasha to institute a school and commence demonstrations, when, forceps and scalpel in hand, he opened the thorax of a body, a student rushed upon him with a poignard. The blade slid over the ribs, and Clot Bey, perceiving that he was not seriously hurt, took a piece of plaster from his dressing-case and, applying it to the wound, coolly observed to the class, "We were speaking, gentlemen, of the disposition of the ribs and sternum, and I now have the opportunity of showing how a blow directed from above has so little chance of penetrating the thorax," and went calmly on with his lecture. This piece of sang-froid gave him an incontestible moral ascendancy over his pupils, and he continued his instructions, meeting with success and turning out some skillful surgeons.—*Maryland Med. Jour.*

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VARICOSE VEINS.

A CLINICAL LECTURE DELIVERED AT THE NEW YORK HOSPITAL.

BY

T. M. MARKOE, M. D.,

Professor of the Principles of Surgery at the College of Physicians and Surgeons, New York.

I now bring before you another case which will present some points of considerable interest in the treatment of varicose veins of the lower extremities. In this disease there are dilatations, thickening and elongation of the veins, which then form a congeries of folds and loops which much resemble in shape the convolutions of the intestines. The vessels become three or four times as long as they should be. But this is due to a simple hypertrophy, and not to any inflammatory action; the cause is mechanical in fact. The effect of these enlarged veins is to give great discomfort to the patient and to produce eczema and varicose ulcers of the limb and finally, perhaps, rupture of the veins in an ulcer, with great loss of blood and it may be death. It is therefore a formidable disease, and hence surgeons have devised various means for its relief and cure. If the disease is not very severe I would recommend that no operation should be performed, but that means of supporting the veins should be provided. This may be accomplished by simply

bandaging the limb, or by causing the patient to wear an elastic stocking, thus compressing the veins so that they cannot dilate.

The cause of varicose veins is a mechanical one. The veins of the lower extremities would have to bear the pressure caused by the weight of the whole column of blood above, were it not for the valves in the veins, each of which bears its share of the weight. But if from long continued standing these valves finally become insufficient, then the pressure of the whole column comes directly upon the walls of the veins, which are unable to sustain it, and so they dilate and become varicose.

In severe cases the only operation that gives any hope for a cure is one which has for its object the obliteration of the veins. Various means have been employed for accomplishing this. Hare lip pins have been passed under the veins at various points, and sutures have been twisted about these, thus by compression causing thrombosis. Caustic potash has been used for the purpose of exciting inflammation in the veins. And the veins have been tied with ligatures. But all of these means are dangerous and liable to produce death. For a phlebitis is liable to follow, which may spread far and wide and finally prove fatal. Now that we have learned to believe in Listerism we venture to do operations which we never dared to do before. Hence in view of the danger of the disease spreading farther, I feel that I ought to give this man the benefit of what I now regard as a safe remedy for this condition. This operation consists in cutting down and removing a small piece of the main venous trunk at various points, and so obliterating the channel at these locations. There is but little loss of blood, and the results are usually satisfactory.

Operation.—A fillet is first tied around the thigh at about its middle, in order to make the veins of the leg stand out still more prominently. The varicosities being chiefly in the branches of the external saphenous vein, this is the only one operated upon. The middle and internal veins are little affected here. The first incision is made a short distance above the knee over the point where the main venous trunk first becomes prominent. The cut is made by first transfixing the skin and then cutting upward so as not to wound the vessel. The vein is then exposed, and a piece of soft silk ligature is passed around it and left for the present with the ends hanging outside of the wound. The same operation was next performed just above the patella, and then about two and a half inches below the knee on the inside of the leg, and finally on the outside of the knee. These four incisions would include all the most prominent veins. The fillet was now removed from the thigh so that the veins could partially empty themselves. Then each vein in succession was lifted up out of the wound by the piece of silk thread, and a piece half an inch in length was

snipped out by the scissors, cutting each side of the thread. The leg had previously been slightly elevated, so the operation was attended by practically no hemorrhage. Each wound was then sponged off with carbolized water, and a small compress of antiseptic gauze was placed over it, so as to concentrate pressure over the cut end of the veins. These were retained in place by strips of adhesive plaster one and a half inches wide and passing around the leg. The whole leg was then bound up in a roller bandage so as to keep the veins empty, and the operation was completed.

Gentlemen: I will now explain in a few words the justification of this operation. It is not a new one and I do not claim the credit of its introduction. But it is I think peculiarly a New York Hospital operation, and it originated here. It was first performed here in 1839 upon a serious case, but was unsuccessful, for the trouble returned. In the same year I performed it successfully. In the years '41 and '42 it was done in nine cases, all of which did well and were permanently cured. In '42-'43 Dr. Rogers operated three times with success, and Drs. Hoffman and Cheesman once each. In all there were some fifteen successful and satisfactory operations in succession. But with the sixteenth case there was disaster. A colored woman, who at the same time was suffering from phthisis and a uterine inflammation, persuaded the doctor to perform this operation, which he did in the usual way. But lymphangitis followed, and she died in four or five days. The next case operated on proved fatal in twenty-one days, from a lymphangitis which affected the glands, or what we would now call septicæmia. It has never been done since then in the New York Hospital until now. I at that time saw the fitness of the operation and I believe now, by the aid of Listerism and with the light of experience, that we can do this operation with perfect safety, and so we are justified in reintroducing it. A similar operation has been repeated in other places. In Guy's Hospital, London, it was done by tying two ligatures round the vein at a short distance apart, and these were left on and the intervening portion allowed to slough off. Mr. Marshall, of the University Hospital, tied a ligature above and below the swelling in a vein, and then cut the piece between them out. These are bold operations. If the limb is kept elevated there is no danger of hæmorrhage, and so no need of ligatures around the veins. I believe this operation which I have performed to day will be successful. And I should like to see it tried a hundred times, and then I believe it would be universally adopted.

Two weeks later Dr. Markoe remarked: Gentlemen: The first patient whom I will show you to day is the man on whom you saw me operate two weeks ago for varicose veins. I am considerably interested in this matter as you have probably inferred from what I have already said on the subject. But I want you to have a distinct idea of what is, and has been, the attitude of surgeons toward this disease. It is always a troublesome and inveterate, and sometimes an alarming or even fatal malady. And so it has always been worth while for surgeons to investigate and see if anything can be done for its cure. You all know that much relief can be obtained by wearing an elastic stocking to support the veins, and this is satisfactory as a palliative treatment, but it is not a means of cure. It not only provides a mechanical support for the veins but it also supplies another defect, namely the non closure of the valves of the veins and the consequent settling back of the blood into the leg. The pressure

produced by the stocking prevents the veins from growing larger, and also lessens the distress and discomfort and the liability to the production of eczema and ulceration of the skin, and when ulcers have already occurred this often proves a means of cure for them. But a good many patients can not afford to buy a silk stocking which costs from eight to sixteen dollars, and there is no reduction in the price for those who need two. So it becomes quite an important matter to seek for some safe means of obtaining a radical cure. The condition of the parts here is very analogous to that which exists in varicocele, where the veins are also enlarged and distended. And you know there are two methods of dealing with varicocele, one is by supporting, and the other by obliterating the veins. In like manner it is desirable to carry out the same idea here, and thus obtain if possible a permanent cure. I can not now describe the numerous methods which have been devised for the accomplishment of this end, such as running needles through the veins, injecting them with irritating fluids, enclosing them in ligatures, and passing ligatures around them subcutaneously, and applying a figure-of-8 ligature, and so on. It has been the object of surgeons for hundreds of years past to obtain some method of radical cure which will be safe. But it has been found, as you know, that veins are susceptible of inflammatory action, and so in making these trials a number of deaths have occurred; and this resulted in discouraging surgeons from operating before they knew about antiseptics. But it occurred to me, when I found that antiseptics offered such immunity from inflammation after operation, that special advantages were afforded for the radical cure of varicose veins. And in accordance with this belief I did the operation which you saw the other day. The result was perfect, and the healing was rapid and attended by no bad symptoms. All operators have been agreed that obliteration of the trunks of the veins would cure the disease, and this has been the object sought by all the different methods of operating. But you will acknowledge that there could be no more perfect obliteration of veins than you see in this man after the operation two weeks ago. When I first took off the bandage a week ago I did not find the obliteration as perfect as I expected, and so felt a little disappointed. But the first effect of the operation is to cause the formation of a clot in the veins, which does not get washed away by the blood entering the veins from the venules of the collateral circulation. This clot fills the veins, and then by the pressure of the bandage union takes place between the walls of the veins and this thrombus, and shrinkage and contraction gradually take place until the vein is entirely obliterated. So I at first thought the operation had failed because the veins were still large, but this was because they were still filled with the coagulated blood. Those above the knee have now entirely disappeared, as you see. But there are still some over the knee and below it, which are yet distended with the coagulated blood which can not be pressed out, and there are some which have not yet gone through the stage of thrombosis, out of which the blood can be forced by the pressure of the band. To complete the cure I want to make one or two more excisions about the knee, which will control branches not reached by the former operation. But as the patient is not now in very good condition generally, we will let him go out and recuperate for a while, and then when he has improved he can return and have the operation completed.

AN INTERESTING CASE OF PHTHISIS.

BY

J. M. DACOSTA,

Professor of Medicine in Jefferson Medical College, Phila.

The attack began in this case, that of a sailor twenty-four years of age, with a slight dry, hacking cough, some two years and a half ago. Six months after that date, when at work on shore, he had a severe hemorrhage, and lost a pint of blood. The hemorrhage was followed by fever and an increase of the cough, which, however, soon subsided, and he returned to his work. Six months later he had another hemorrhage larger than the first. Again the same improvement occurred, to be again followed, after another six months, by a third hemorrhage. One month ago he had a fourth hemorrhage, and later still he has had two or three slighter ones. *Throughout these two years and a half the mucous secretion has been scanty and the cough dry.* There has been but little loss of flesh. Epistaxis has occurred several times. The patient exhibits no cardiac nor gastric symptoms. The pulse is 96 and the temperature normal, with the daily fluctuations of half a degree. There is thick, tenacious mucus on the posterior wall of the pharynx, the mucous membrane is congested and the tonsils enlarged. Physical examination shows a symmetrical non-phthical chest with good expansion, though there is a little less motion at the left apex than at the right. There is no contraction and no increased vocal fremitus. Percussion is healthy on both sides, with the exception of a very slight elevation of pitch and a little less volume at the left apex. Auscultation shows a slightly weaker expiratory murmur, with prolongation of expiration at the left apex. There is evidently a disposition to hemorrhage from the mucous surface. It is impossible that such large hemorrhages as he has had should have come from the fauces or larynx. They may, however, have come from the bronchial mucous membrane, and have been due to acute congestion of the left apex. The diagnosis must be considered finally, not only as regards the pre-existence of local lesions, but also as regards vital tendencies, and the significance of such lesions. In this respect we may conclude that our patient has a very slight degree of condensation of a portion of the left apex, due to repeated congestions, and some degree of subacute inflammatory action, but without true tubercular formation as yet. It is in just such cases as this that exact diagnosis is of vital importance, although it is attended with difficulties that are absent when the disease has advanced to the later and less curable stages. There is no doubt that even large hemorrhages may occur from the mucous membrane of the bronchial tubes, without pre-existence of any disease of the lung tissue. In some cases, too, it appears that the occurrence of such a hemorrhage seems to excite an irritative process in the lungs, which, in subjects who are predisposed to phthisis, may result in chronic destructive lung disease. In such instances, of course the initial symptom would be the hemorrhage taking place, perhaps accidentally, in the midst of ordinary health. That there is needed a constitutional or local predisposition to disease in addition to the hemorrhage, may be learned from the numerous cases where even large and repeated hemorrhages occur without the supervention of phthisis. Thus I believe that the importance of hemorrhage as a cause of phthisis is much exaggerated by a certain class of pathologists; on the other hand, with the existence of even a very small amount of lung disease, hemorrhages are very

apt to occur, probably as the result of severe congestion. Thus, in the present case, it is for us to consider whether there has been a small amount of subacute local disease all along, and that the hemorrhages have occurred are temporary broncho-pulmonary hemorrhages, or whether the hemorrhage was its first phenomenon, and the local disease was induced by it, and has been increased by each subsequent hemorrhage. In view of the history of dry cough, preceding the first hemorrhage for six months, and of the rapid return to the previous condition which followed each hemorrhage, I am inclined to take the former view. In like manner, cough deserves careful study, as an early symptom of phthisis, although, owing to the frequency with which chronic cough is due to fancied laryngeal or bronchial irritation, much care is needed to determine its true significance. The cough in incipient phthisis is usually short, hacking and painful, and is at first dry, and continues thus without expectation, for a variable time, weeks or even months. Expectoration, when it begins, is apt to be at first of glairy mucus, later of whitish and thicker mucus; and then of whitish, yellow, muco-purulent matter. True, solid purulent sputa rather belong to a later stage. These symptoms we have thus alluded to, and even the detection of physical signs of slight localized change at one apex, can only have their true value given them when viewed in connection with general constitutional symptoms. In the present case both the local and general symptoms are exceedingly slight. The local signs are usually found at the upper part of one lung. They depend on the development of little centres of disease-tubercles, a peculiar type of lymphoid tissue, growing from either the connective tissue elements, or the alveolar epithelium of the minute bronchioles. Each tubercle cuts off partially the supply of air from a colony of air-vesicles, and thus impairs expansion. On auscultation this same cutting off of air makes the inspiration feeble. The inspiration may be not only weak, but also jerky. The air has the same difficulty in getting out, so expiration is more prolonged. Percussion ought to show less resonance over the affected spot, but this frequently amounts only to a slight elevation of pitch and loss of volume which, when at the left apex, as in this case, is with difficulty appreciated on account of the light natural difference between the right and left apex. Among general constitutional symptoms which afford means of diagnosis may be mentioned, loss of flesh, debility, increase in rapidity of pulse, and elevation of temperature. Marked general emaciation always means that something serious is the matter. It may be the result of impaired digestion, but if the patient eats heartily and still loses flesh, there is something vitally wrong going on. If flesh keeps up even when other decided symptoms show themselves, there is more reason to hope that the local lesion may not be of truly tubercular nature. Loss of muscular strength, unless it be very marked, is not so important as a symptom, as loss of weight, for muscular weakness may come on from temporary causes. Getting out of breath easily may be merely a symptom of debility, or a symptom of organic lung trouble. Rapidity of pulse is exceedingly valuable as a rational sign. The normal pulse is 72, but it may vary from 54 to 86 with perfect health. Persistent and sustained increase in pulse rate, however, without cardiac disease, is apt to indicate serious constitutional irritation due to some local lesion. Elevation of temperature always means increased tissue-change. It may, in the earliest stage, not be greater than half a degree. There is no more important symp-

tom than this last, and it usually sets in long before the physical signs become evident. Temperature differs much in different people with the same amount of lung disease. We must, therefore, always take into consideration the individual idiosyncrasies of the case under treatment, before reaching a final conclusion. The treatment of such cases as the one now under consideration, where there is slight impairment of one apex, and an accompanying liability to chronic, but not tubercular phthisis may be entered into and carried on with great hopes of permanent cure. Among the most important hygienic measures are good food, healthful out-door exercise, which will expand fully the chest; and an equable climate, such as may be found in the south of California, New Mexico, or the southern and western slopes of Colorado. Sea voyages, such as a cruise to some tropical ocean, and not sailing about in some inclement climate, as many consider the term to mean, are often most plainly beneficial. If these ways of regaining lost health be out of the question, and the patient be compelled to stay at home, inhalation of compressed air may be applied over the seat of disease, and cod liver oil, the syrup of the iodide of iron, arsenic, and the hypophosphites of lime, soda and iron administered internally.

A CASE OF DISPLACED LIVER DIAGNOSTICATED, AND OPERATED ON, AS A CASE OF HYDRONEPHROSIS — DISPLACEMENT OF ALL THE ABDOMINAL VISCERA.

A CLINICAL LECTURE DELIVERED AT THE NEW YORK HOSPITAL,

BY

GEORGE A. PETERS, M. D.,

Attending Surgeon.

The patient Mrs. S. R., is 27 years of age, and a native of Denmark. And as she does not speak English, her history is incomplete and not to be relied upon for accuracy. She applied in person for admission on Dec. 24th. She has never had syphilis, does not use alcohol, and has never had rheumatism. Her family history is good. She was married four years and a half ago, and before that she had always been healthy. Six months after marriage she manifested the usual signs of pregnancy, such as stoppage of menstruation, nausea, vomiting, enlargement of the breasts, etc. When she was about three months advanced in pregnancy she had a fall from a height of four feet, and she struck the right side of her abdomen against some prominent object. This was soon followed by pain at the injured point, and by nausea, vomiting and a bloody discharge from the vagina. Yet there were no evidences of a foetus having escaped, or of the expulsion of the membranes, and she had no later pains in the uterus. But probably she really did miscarry at that time. The abdominal pain gradually ceased. Two weeks later she had another similar attack of pain and vaginal hemorrhage which was less severe and of shorter duration. After this she was quite well for eight months and all signs of pregnancy had ceased. But then she noticed that her abdomen began to swell again, and soon after she could appreciate a hard mass upon her right side just above the crest of the ilium. This grew in size slowly, and she had periodic attacks of pain at each menstrual epoch, and this went on for more than two years. But eight months ago the pains

increased in frequency, and during the past month daily attacks of pain have occurred. The tumor, instead of growing smaller, has grown steadily larger and now it can be felt extending some distance towards the median line. She says she has not had any urinary symptoms, and that sexual intercourse is not painful. She does not complain of back-ache or headache, and there appears to be no œdema of the feet and no jaundice.

On admission her general condition was fair, but every afternoon and evening she was troubled by an attack of pain with nausea and vomiting. Yet there was no fever, and but little rise in the pulse rate. Upon physical examination an ill defined mass was made out in the ilio-lumbar region of the right side, and reaching forwards to within one inch of the umbilicus, and upwards to the free border of the ribs, and downward to the crest of the ilium, and the lower limit behind was just above the posterior iliac spinous process. Over the entire lumbar region there was dulness on percussion. The size of this tumor was calculated to be, from behind forward $6\frac{1}{2}$ inches, from above downward $4\frac{1}{2}$ inches, and the greatest swelling appeared to be on its anterior surface. Over this region there was pain and tenderness upon pressure, and a doubtful sense of fluctuation on palpation. The mass appeared to be movable, and when she would lie upon her right side it would sink down more to that side. The percussion note in front was tympanitic from the overlying gut. The pains have continued since her admission and she has vomited some blood. Her bowels are regular; and the urine is acid, with a specific gravity of 1016, amber colored, is free from albumen, and contains a slight amount of mucus, and she passes 37 ounces daily.

Gentlemen; from this history you will recognize the probable existence of the disease called hydronephrosis, which is characterized by the accumulation of urine in some portion of the kidney. This condition may be developed by anything which will cause an obstruction to the passage of the urine in any part of the urinary passages, from the kidney itself to the mouth of the urethra. This obstruction may be congenital or acquired. If congenital it is apt to be associated with other malformations such as club foot, hare lip, and the like. If acquired a common cause is some malnutrition in the walls of the ureters, leading to contraction or closure of its channel. Or an impacted calculus in the ureter may form an obstacle to the free passage of urine through it. Sometimes it is caused by pressure upon the ureter by the supra-renal or renal artery which may take an abnormal course. Or there may be obstruction from ulceration, inflammation, or abscess in the bladder at the mouth of the ureters. Or fibrous bands resulting from an inflammation of the peritoneum may bind down and occlude some portion of the ureter. Various mal-positions of the uterus may cause it by pressing upon the ureter, and so interfering with the passage of the urine. And so also ovarian and other pelvic tumors may press upon the ureter, or by causing a cellulitis or peritonitis become attached to it and drag it out of its course and constrict its channel.

When a case presents itself to you, you will usually find a swelling in one side of the abdominal cavity which will vary in size according to the amount of urine retained and according to the previous duration of the disease. And the size will also depend upon whether the swelling involves the pelvis of the kidney alone, or the pelvis and calices both, or whether it has extended so far as to involve the ureter besides the pelvis and the

kidney itself. In this case you will be able to detect the presence of a tumor by palpation. In the higher grades of the disease the entire kidney is involved, and then it is easily detected.

The walls of the sac containing the fluid are thick or thin, according to the duration of the disease and the extent of the inflammation, and they are lobulated upon the outside by reason of bands of connective tissue upon the inside which form trabeculae and draw the sac down in places so as to form pouches.

The contents of the sac are usually modified urine containing mucus, epithelium, pus, and blood cells, with more or less urea, uric acid, and oxalate of lime. This fluid has a disagreeable odor, a moderately alkaline reaction generally, and it is of a low specific gravity. Its color varies from a yellow to a greenish yellow or a reddish hue, according to the proportions of pus and blood which it contains. In rare cases the sac is filled with a thick fatty fluid or a caseous material, or with a gelatinous colloid mass. Generally the affected kidney is flattened, and the healthy one has become enlarged by a compensatory hypertrophy.

The symptoms of this disease are at first slight and not well marked, and so they do not attract the patient's attention, and even when the tumor has reached the size of this one it sometimes creates but very little trouble beyond the occurrence of periodic attacks of pain and vomiting. But pressure of the tumor upon neighboring structures may cause other corresponding symptoms, and the general health will finally be impaired.

There are two methods of treating this condition. One consists in letting it alone until the tumor reaches a sufficient size to cause great distress, and then tapping it. And this is to be repeated as often as the increase in size returns. But frequent tapping is objectionable because the fluid constantly forms, and after some one of the operations it is liable to leak into the peritoneal cavity and set up a fatal peritonitis. However, a few cases have been treated in this way successfully. A second method of treatment is by an operation which I performed with success in a case at St. Luke's hospital one year ago. In that case I cut down upon the tumor in the lumbar region until I exposed the sac, which I opened and emptied, and then I stitched its edges to the edges of the skin. The wound healed well and the patient went out of the hospital apparently cured, except for a little hole which remained unclosed and discharged about a teaspoonful of fluid every twenty-four hours. I can tell you her subsequent history, for this morning she appeared again at my office. And now, after the lapse of a year, she still has a urinary fistula, and a fluid which I suppose to be urine runs from it in considerable quantities. I retained some of the fluid for examination and sent her home again. Dr. Weir informs me that he saw a similar operation performed three years ago, but in that case the surgeon did not stitch the sides of the sac to the skin. To-day I propose to repeat the operation which I did a year ago. My incision will extend from just below the inferior border of the twelfth rib downward towards the crest of the ilium at a point midway between the anterior and posterior superior spinous process. This line will be about three inches to the right side of the spinous processes of the lumbar vertebrae, and it will cross the centre of the quadratus lumborum muscle diagonally. After cutting down through the muscles and fascia, and before making any incision into the sac, I will aspirate it to see if I can get any fluid, and thus establish the diagnosis. Another aid in making the diagnosis is to introduce the

hand into the rectum and so satisfy yourself more definitely as to the origin of the tumor. But I will not do this here because her pelvis is small, and the walls of the sac are probably thin, and this procedure is not unattended with danger, and besides I feel pretty sure of the diagnosis in this case already. So I am not willing to take the risks of a rectal examination. In my other case there was a good deal of hemorrhage after the sac was opened. First several quarts of fluid escaped from the sac, and this was followed by a large amount of blood, which was probably a passive hemorrhage due to the sudden diminution of pressure upon the vessels.

Operation.—The patient was placed upon her left side, and after a thorough physical examination had been made by the surgeons assisting, who concurred in the diagnosis already made, the abdomen was opened in the right lumbar region, as in the operation for lumbar colotomy, and in such a way as not to wound the peritoneum. In this way a dark solid mass was exposed at the point where it was expected to find the hydronephritic sac, but on puncturing it with a hypodermic needle no fluid was obtained. The wound was then enlarged, and this presenting mass was dissected about so that the surgeon's hand could be introduced, and after patient investigation and exploration it was determined that it was really a portion of the liver and not of the kidney which presented. After this unexpected condition had been made out it was thought best not to proceed any farther, but to close the wound. The whole operation was performed under carbolic acid spray, and with antiseptic precautions, and the wound was closed and drained by the through drainage method, and dressed after the method of Lister.

At the clinic held four days later, Dr. Peters said:

GENTLEMEN: You will be interested to know about the case which you saw last Saturday. I told you at that time what we found was a tumor of the liver, and I had no doubt that it would be fatal, and so it was within twelve hours. The *post-mortem* investigation revealed a condition of things such as I, nor any of the others who saw this case, had ever seen before. There was complete displacement of the liver and stomach, and of all the abdominal viscera. The liver was with its long diameter up and down, instead of transversely, and the large right lobe was lowest down and was what had presented at the lumbar opening, while there was very little if any of the left lobe extending to the left of the median line. The lower border of the right lobe was found at the anterior superior spinous process, and the liver had taken up the position of the kidney, which had been pushed forwards so that it could not be seen from the lumbar opening, as it could have been if it had occupied its natural position. The stomach was found in the position which it normally occupies in infants, that is lying in an up and down direction. The colon and the small intestines were also displaced and they occupied the anterior and lower portion of the abdominal cavity, most of them being crowded together in the hollow of the left side of the pelvis. It has been suggested that this unusual displacement of all of the abdominal viscera might have been due to tight lacing. But we have no means of knowing this. It was in fact a very unique case, such as I have never seen before, and do not want to see again.

All who examined her before the operation were sure that they got a slight sense of fluctuation over the tumor, yet no sac containing fluid to produce this fluctuation was found at the autopsy. Even if the suggestion which I offered, of making a rectal examin-

ation had been adopted, I do not think that much light would have been thrown upon the condition of affairs; for the hand would have seized upon this presenting tumor of the liver, the character of which would not have been recognized, and it would not have prevented the attempt to remove it. This is one of those mishaps which will occasionally occur in the practice of every surgeon of large practice, and the lesson which it teaches is hard to read.

SYME'S OPERATION

A CLINICAL LECTURE,

BY

STEPHEN SMITH, M. D.

This patient, gentlemen, has had chilled feet. Being of enfeebled constitution, he was reduced to such a low grade of vitality that the meta-tarsal and some phalangeal bones have necrosed. These have been removed. Now he has one foot in a state of gangrenous suppuration, the meta-tarsal bones being apparently all involved, with a discharge of offensive pus. The other foot is not quite as bad. Meantime he is looking pale, almost waxy. Urine contains a slight trace of albumen; is very dark, almost black like blood. This may be due to the fact that the sinuses have been injected with large quantities of strong carbolic acid to disinfect them. The patient may have a drunkard's liver. I prefer however to attribute this to the absorption of the stinking secretion from his foot which is more or less enclosed and probably absorbed, throwing itself off through the medium of the stomach. The only hope of preventing his rapidly sinking is to get rid of this mass, and the best way to do this is to perform Syme's amputation.

Syme removed the foot at the ankle joint, leaving the tibia and fibula in place. He made a flap from the heel enucleating the os calcis. This operation was afterwards modified by Pirogoff who instead of enucleating the os calcis entirely sliced it off. He took off the astragalus, os calcis and all the bones in front, left the extremity of the os calcis in the flap and turned the flap up. He left the os calcis in the stump and it was longer to the extent of the amount of bone left at the end. The disadvantages of Pirogoff's operation were the danger of the bone necrosing and besides the difficulty in adjusting an artificial limb. Instrument makers desire that the limb should not be lengthened in putting on an artificial stump because the lower the stump the nearer to the ground you bring the ankle joint. If there is no artificial foot Pirogoff makes a peg leg with a natural covering. We must do away nowadays with the distinction of poor man's leg and rich man's leg.

Syme's amputation is preferable because first, you are a great deal more likely to get immediate union, and secondly, you have no bone to necrose; thirdly, when thoroughly united you have the best leg for an artificial appliance and the best stump can be given to the person.

This is one of the simplest operations in surgery. When Syme first operated he made his incision almost directly downwards, supposing he must have great heel flap to cover the end of the bone. When he tried to enucleate the foot to get his flap back he found it quite impossible to get around the extremity of the bone. Subsequently on experimenting he found that he could make his incision very much farther

back. This incision should go as far back as the point where the swelling part of the heel begins. Another point very frequently overlooked is to get in between the os calcis and tibia and dissect backwards turning in the part in front. Turn the lower flap back first until you have got up to the point where the tendo Achillis is united; then make your dissection in front and you can enucleate the foot, and the vessels are necessarily all saved. Between thumb and knife you can protect the vessels from injury and in this way avoid sloughing of the flaps.

In applying Esmarch's bandage in a case of this sort be careful not to drive the pus up into the leg and create an abscess. In this case we have apparently very good tissue to work on. Syme's final instructions are to put the thumb and fingers on two opposite points the one resting on the external malleolus and the fingers resting directly opposite. Make your incision from this point down till you reach the bones; then make your incision from the bone around inclining backward. Then take the nails and the end of the scalpel or one of the periosteal knives and gradually enucleate the foot keeping the end of the knife always over the end of the bone so as not to divide the vessels. The joints fitting the nails should be a guide in the separation. Very frequently, especially when the leg has been inflamed you get the fingers along the periosteum and you can enucleate it. You can then carry the knife up till you get to the insertion of the tendo Achillis. Then drop the leg, and make the incision from one point to the other and finish the dissection from above.

Precaution must be taken against not cutting into the ankle-joint. The articulating with the astragalus seems at the moment of operation to be the ankle-joint which really lies higher up and does not move with these movements. The cup-like flap will contract upon itself so that in a few hours there will not be any cavity. The limb generally lies on the inside and drainage is very perfect.

A CLINICAL LECTURE.

BY

HERMAN KNAPP M.D.,

Professor of Ophthalmology in the Medical Department of the University of New York.

GENTLEMEN: I shall occupy your attention to-day with the anatomy and diseases of the optic nerve and then bring before you such cases as our clinical material will afford.

The inter-ocular portion of the optic nerve is generally known as the optic disc. It is a circle and is more or less at the level of the retina. The nasal part is covered with a denser layer of nerve-fibres and capillary vessels. The lamina cribrosa is a lenticulum of fibres which continue from the scleral border. Behind it thickens its calibre and then goes through the orbit. The inner sheath of the nerve is the continuation of the pia mater. The outer sheath is the continuation of the dura mater. Some anatomists have distinguished an arachnoidal sheath. Loose connective tissue lines the inner portion of the outer sheath. There is a lymph cavity visible, a sub-dural and sub-arachnoid space.

The diseases of the optic nerve are congestion and anæmia or ischæmia. Congestion of the optic nerve sometimes happens in general dilatation of the blood vessels.

Sometimes loss of blood will produce almost sudden blindness. The optic disc is almost completely bloodless. I have seen cases of this sort in general anæmia. Hemorrhages are connected in the eye with such conditions of anæmia. I have not infrequently seen it in nervous diseases where the sympathetic nerve is irritated. Choked disc shows swelling of the optic nerve. Quinine (?) blindness is marked by an atrophic condition of the optic nerve. Optic neuritis is limited only to the disc itself. In neuro-retinitis the disc assumes the same appearance but the inflammation goes on much farther within the retina. For instance in syphilis and Bright's disease. Intra-cranial diseases are the main causes of neuro-retinitis. Choked disc with constant headache is a positive sign of tumor. Choked disc without headache is doubtful. It may come from cranial syphilis, meningitis and other causes. You cannot produce inflammation by tying up a vein; you may produce congestion. So here we have a true inflammation of the nerve. It shows connective tissue, lymphoid cells, degeneration of the nerves and any quantity of hemorrhages. Intra-cranial liquid will go through the optic foramen along the inter vaginal space, compress the nerve and produce choked disc. I have seen orbital tumors compressing part of the vessel and not producing choked disc. Those tumors that spring from the periosteal sheath or inter-vaginal space produce choked disc.

CASE I.—Periostitis of the Face Complicated by Choking of the Optic Disc.—Boy, æt. 10 years; has a general periostitis over the left half of the face. I made an incision and evacuated a small quantity of pus.

This is a periostitis which extends to the walls of the orbit. Here we have in addition to the periostitis, choking of the optic disc, which is also an inflammation. The periosteum of the hard palate is swollen and there are some scars. This is probably of specific origin. Choked disc from intra-cranial causes is almost invariably double sided.

CASE II.—Lymphangiectasia.—This, gentlemen, is a case of dilatation of the lymphatics of the eyeball. The prognosis is entirely good. These cases commonly heal in a week or two. Sometimes there is quite a large cluster filling the whole sclera and cornea. If they irritate very much they should be removed. The blood-vessels also swell and are quite unsightly.

The removal of those lymphatics is very frequently followed by a good deal of irritation and you must be exceedingly careful when you remove such a little cluster to stitch the conjunctiva together, and during the operation be as clean as you can, so as not to let any dust get in. Afterward apply a compress bandage. The constant movement of the eyeball prevents union by first intention.

CASE III.—Staphyloma Corneæ.—Critchett's operation consists in passing needles through part of the sclerotic and removing the diseased cornea; then passing the needles through the flap so as to close the gap completely. The only disadvantage is that the operation passes sutures through the ciliary body, the most irritable and vulnerable part of the eyeball. Wounds in the ciliary body are very apt to produce sympathetic irritation in the other eye. This operation consequently came into discredit.

It was thought best to obviate internal sutures and nevertheless produce a closure of the eyeball as follows:

Pass a suture underneath the conjunctiva through the outer layers of the ciliary tissue. That will leave a long stump and will heal up by first intention. La-

ter, in Paris, Wecker found it best not to pass needles through the superficial layers of the sclerotic but simply on the lid of the conjunctiva.

ACUTE GRANULAR VAGINITIS—SENILE ATROPHY OF THE CERVIX AND VAGINA.

A LECTURE DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS.

BY

PAUL F. MUNDÉ, M. D.

CASE I.—Female, æt. 51, married 25 years; borne seven children, two miscarriages; last child born seven years ago. Has not been unwell for two years. Appetite and digestion poor. Constipated. Has had a discharge from the vagina for three months.

This patient, gentlemen, comes to consult us for a profuse greenish-yellow discharge and an itching sensation around the vulva. She has reached the menopause, has passed the childbearing period, and still has this profuse discharge at a period when we would not expect the pelvic organs to be hyperæmic.

I put the patient on the back, separated the thighs, and exposed the gaping vulva like that of a woman who had borne a number of children, and streaming from the vulva was a greenish-yellow discharge. The whole vulva was very much reddened, and in endeavoring to introduce the cylindrical speculum of medium size, I found little spots of the size of a pea scattered over the surface, from which blood oozed upon the slightest touch. The whole mucous membrane of the vagina was intensely red. This very profuse discharge, the enormous hyperæmia, and the evident desquamation of the epithelium all over the vagina was surprising.

We have here a congestion and enlargement of the papillæ which abound in the vagina, and the tips of these papillæ denuded of epithelium are the bright red spots seen through the speculum and the numerous tubercles felt by the examining finger. The feeling is similar to that of a nutmeg grater. And this is what is known as granular vaginitis.

I suspected that she had a gonorrhœal affection; that it probably came from her husband. This she denies, and I must therefore look for other reasons for this discharge. As regards the peculiar character of the flow, it is as near gonorrhœal as possible, but that is not pathognomonic. I have seen a discharge almost as profuse as this in young girls who were virgins.

If this is not gonorrhœal I do not know what the cause of it is. It may be due to excessive coition, to the use of pessaries or irritating injections, or to cold.

Exposure to cold may produce a catarrh of the vagina as well as of the lungs. We will give her the benefit of the doubt. If this woman lived in the country, the discharge might be accounted for by the fact that the water-closets there are not of modern construction, and a woman who has a vulva that naturally gaps would be exposed to a draft of cold air which, by producing an inflammation of the vaginal tract, would cause just such a discharge as is here present.

Treatment.—The treatment is not so very much different from that pursued in a similar condition of the rectum, which I pointed out to you some time ago. You have here an abraded mucous membrane, congested and highly hyperæmic, and you must treat it on the general principles of catarrh of the mucous membrane. It is useful to know the routine treatment in these cases.

Unless you have a very large surface which you want to contract, do not use the stick of nitrate of silver. It produces a slough, and the cicatrix is more tense than from any other caustic. I use the solution of the nitrate of silver very often in varying strengths, 5-60 grains to the ounce. Where I wish to apply fluid to the vagina, I use a cylindrical speculum. This I introduce into the vagina, expose the cervix, and apply my nitrate of silver. In a very acute case I use a drachm to the ounce. Here I shall use one-half drachm to the ounce, pour it in, swab out the vagina, and push it in again, and let the fluid run into a cup, and you will see that the vaginal wall is whitened. I then cover the tampon with vaseline, pass it up so as to keep the vaginal walls apart, and then withdraw the speculum.

A tampon here serves two purposes: first, to act as an emollient of the vaginal walls, and, secondly, to separate them.

I put a little pledget of cotton covered with vaseline over the labia to prevent them from rubbing. She is to use an injection of carbolic acid, sulphate of zinc and borax next day; a drachm of sulphate of zinc and borax each, and a half drachm of pure carbolic acid to the pint of tepid water, three times a day. After three days reapply the nitrate of silver, perhaps a little weaker solution. In a few days apply another solution still weaker. As soon as the mucous membrane has become pale, and the discharge is no longer yellow but only white, then stop the nitrate of silver and apply instead an astringent of tannin. Paint the whole vaginal wall through the speculum with the glycerol of tannin, 1:4. Pour it into the speculum, and with a stick of hard rubber with cotton wrapped around the end paint over the vaginal wall. Then withdraw the speculum and again introduce and apply the tampon soaked and squeezed dry, with the same solution every other day. In the course of three or four weeks you will cure your case.

CASE II.—Female æt. 57, married 35 years. Menopause 51. Has borne no children. Supposed to have had a miscarriage five months after marriage. She has some pain in her back; appetite and digestion good; defecation and urination normal. Has had a profuse yellowish vaginal discharge for several months past.

This, gentlemen, is another case of a type similar to the preceding one. She has also had a profuse yellowish discharge for three or four months past. There is, however, an essential difference between this case and the last. As I put in the speculum I found a senile contraction of the vaginal orifice. This patient has been a widow for nineteen years. As my speculum reached the vaginal cul-de-sac I found the cause of the discharge. There was a little erosion as large as a half dollar. It just filled the vaginal cul-de-sac. This was the source of the discharge. On rubbing it with cotton a little blood came away. I then examined the patient with the finger, and found senile atrophy of the cervix and vagina. In the upper portion of the vagina there were little concentric bands running toward the cervix, and in the centre nothing but a small dent, the part that was eroded; but there was no cervix at all. These apparently cicatricial bands are nothing but a shrinking of the vaginal vault in consequence of obliteration of the vaginal tissues through old age.

This peculiar erosion is the result of senile atrophy of the cervix and vagina. The epithelium becomes softened and perhaps more brittle, and anything like friction against this dry epithelium causes it to splinter and scale off. I have seen cases where the vaginitis extended away down to the vulva. I have seen several

cases where an atresia of the vagina took place simply from a gluing together of the two eroded spots. This condition may occur in younger women, and is then chiefly due to injuries to the vagina during parturition, by pessaries, injections of astringent substances, etc. In old women, when the vagina shrinks the two walls rubbed against each other become abraded, grow together, and you have atresia of the vagina.

Treatment.—The treatment is very much the same as that employed in the previous case, but much milder, as the disease is of a milder type. Apply nitrate of silver solutions to the cul-de-sac of the vagina. I repeat that for applications of this kind (fluids) I use a cylindrical speculum, and only for this purpose. Either a Ferguson (glass covered with tinfoil and varnish); or for both a good view and durability you may get a celluloid speculum, only do not pour alcohol or camphor into it, or bring it near the fire. They are made of gun-cotton, and they *might* explode in the vagina.

ORIGINAL ARTICLES.

PSYCHIATRIC DISCERNMENT.

BY

C. H. HUGHES, M. D.
St. Louis.

The *British Medical Journal* criticising Dr. Hammond's failure to class Guiteau's insanity to its satisfaction, concludes, therefore, that Guiteau was not insane, and makes, during its argument, the following remarkable and untenable assertions, all incorrect save one:

"There is a revealed order in the ravages of insanity (meaning the insanities) and system in its cycles." "It would doubtless be of advantage," as Prichard observed respecting delusion, "to have a criterion so decisive and intelligible and in general so easily brought into evidence. If it were only true in point of fact that insanity always involves that particular circumstance which is supposed to be characteristic of it. Unfortunately the reality is otherwise." This observation has been and is confirmed by every really extensive observer of distinction since.

"Anxiety about personal safety is proof of amenability to ordinary human motives." Therefore all lunatics ought to be willing to be injured or die at any time, without even an automatic display of self protection or fear. The facts of every day observation among the insane largely disprove this, especially among those who have a heaven-born mission to fill, though melancholics and demented are often indifferent to personal comfort or life.

"Self restraint, more than once exercised, betokens ample volitional power" in Guiteau and that "Guiteau's crime was not reckless nor motiveless, nor prompted by any delusive belief."

Such views would, if put in practice by those in authority, speedily empty the British asylums of most of their inmates and would have hung the recent insane assailant of "Her Majesty, the Queen."

No one on this side of the water among the many who believe Guiteau was insane, regarded his crime as the blindly motiveless act of a homicidal maniac, who destroys whatever comes in his way without discrimination, but as the promptings of an insane motive founded in delusion.

No one among the large number who, before he

confirmed his morbid faith in his insane folly on the scaffold, stoutly maintained his sanity, believed that the act was anything else but a *reckless* one.

The *British Medical Journal* also finds in the "shrewdness and perspicuity which Guiteau displayed in his running accompaniment of interruptions throughout his trial," an evidence that his intellect is not in any degree enfeebled, but sees no evidence of insanity in a person attempting to demonstrate his insanity in that way. Perversion, not merely feeble displays of intellect, usually characterizes insanity. Did ever a sane man attempt to play the insanity dodge so insanely? The history of the simulation of insanity affords no such parallel.

But Guiteau, while aiming to appear unusually smart and evidently under delusional exaltation at being the chief actor in the greatest case of his life, even though he was himself the despised, execrated, assaulted, and already condemned prisoner, not only prejudiced his case by his display of wit at times, but by his insane interruptions, objections, admissions and blunders as counsel, prisoner and witness. As a lawyer his experience, if he had been sane, would have taught him that to best play the insanity which the law accepts as an excuse for crime, he should have kept out of sight or simulated something like insanity—some of the marked and recognized forms of insanity. But he acted true to his morbid nature, his insane egoism and insane theory. He was not "crank" mad but "Abraham mad," hence "his counsel did not," as he often asserted in court, "have the right" theory, an assertion he would never have made except under the ingenuous promptings of insanity. *In mania veritas*. His insanity was "not insanity *in fact*," he often asserted "but legal insanity," because "he was inspired of God," and "if the jury believed" as he believed they would be led to believe, not according to the evidence, but through "God's ability to take care of His own," and on his own testimony, they would acquit him.

The sincerity of this insane conviction in his mind alone explains his confident, domineering, defiant, hopeful and otherwise inexplicable conduct, ending at the conclusion of the trial in "anathema's upon all concerned in the unrighteous verdict," a proclamation to the American people and the confident assurances expressed of reversal by the "Court in Banc."

The deluded second adventist letter-carrier of Pocasset, plunging the cruel blade into the heart of the child he dearly loved, in insane faith that the God of Abraham would reward his faithful trust by staying his hand before the heart of his child could be pierced by the descending knife, was not more confident than was Guiteau that God would take care of his cause before that jury, and when it brought in a verdict of conviction, again, like Freeman, waiting for the resurrection of his murdered offspring, he saw in delusive vision another salvation.

Freeman delivered his letters every day up to the fatal night of the tragedy, and, as in the case of Guiteau, it was charged that the influence of his fanatical surroundings and religious teaching led him to the murder, but he was sent to an insane asylum notwithstanding, where his insanity progressed to dementia and he died a confirmed and acknowledged lunatic.

If Guiteau's had been Freeman's crime he would have been committed, and justly, to an asylum. If Freeman's had been Guiteau's he would have been hung, because the *vox populi* demanded his blood. The very manner in which the murder of the president was accomplished makes the theorizing indulged in by those who maintain the love of notoriety and sanity

theory futile. His love of notoriety was an intensely insane egoism born of delusion that the act was approved of God and the American people. "The act would at once lift him up to the gaze of an admiring country" as its greatest "patriot and savior"; "the very pistol which he used would ever afterward be exhibited in the National library and gazed upon by unnumbered thousands" of his admirers, and "his name would go thundering down the ages as the man who by his inspiration had saved the grand old Republican party."

Guiteau's egoism was so boundless and groundless in the direction of his impulsions and feelings as to have been unmistakably morbid. No impression was made upon him by reason of others in conflict with his insane egoism. It is the unswervable egoism that allies itself to the "Firm of Jesus Christ & Co.," and is not rational. It is the egoism of the insane world which finds its exemplification in many types of insanity in the asylums, when it is *exalted* as in the case of Guiteau, in the religious delusional manias, general paresis and the affective insanities which include primary or congenital insanity, &c., when *depressed*, in religious and suicidal melancholia.

It is the self feeling that is first and chiefly touched in mental aberration generally.

It is through this derangement of the normal condition of the ego in relation to its surroundings that we are unable to formulate definitions at all approximative of the nature of insanity.

Guiteau's morbid egoism (and by the term I mean self feeling, not alone the exalted and consequential self assertiveness commonly recognized as *egotism*) was a delusion—the delusion of his life—a part of the psychical symptomatology of the mental disease that believed in its alliance with God in schemes and methods which only delusion could believe the Almighty would countenance. "The Jews crucified Christ for saying, 'I and the Father are one,'" this victim of egoistic delusion leaves the world in the insane belief that he and God are one respecting a crime which no sane man could believe God could approve; believing that a retribution similar to that which overtook those who crucified Christ will fall upon his executioners. The "total depravity" theory, though it answered well the government's purpose, and will suffice to hang any insane homicide, if public sentiment happens to be at the time favorable to its reception, does not wipe out the *facts* in this insane man's life history. His religious predilections and inclinations were morbidly real, sincere and earnest, though insanely misplaced and out of harmony with his surroundings and conduct often. To the faith of a fanatic he added the inconsistency of insanity, and was unable to discern wherein he departed in practice from the spirit and teachings of the Divine Master he claimed as his ally, defender and inspirer. Acting under the pressure of this God's unfolding inspiration, he prayerfully meditates the blackest deed in human history, the consummation of which, though it might well make a fiend shudder and tremble, fills *him* with peace, and he sleeps as sweetly and calmly, so far as the record tells us, on the day of his execution, as he slept during any time preceding his departure for "paradise," after the awful deed had been done, and the vengeance of the nation had been to him unexpectedly visited upon his "protected" head.

Theories of "pure cussedness" do not explain such phenomenal sanity as this. Posterity will say this "crowning crime" of the century was something more than "the culmination of uncontrolled wickedness," though it is not necessary that hearts should be puri-

fied and clean and free from all wickedness before the possibility of insanity can be conceded, notwithstanding the absurd theory was allowed to prevail in the court that tried Guiteau, through lack of true appreciation of the real nature of insanity on the part of his counsel, that if it could be shown that the deluded wretch had not been through life a consistently upright and moral character, square in his dealings with his fellows, making no promises he could not keep, contracting no debts he did not pay, committing no improprieties inconsistent with his religious professions, he was not insane.

To be insane this religious man, according to the theory of the prosecution, should have been consistent and harmonious in conduct with his speech. By a strange reversal of the usual tests, *consistency* is made the test of insanity and inconsistency of soundness of mind, and this man, consistent throughout his life only in his delusion and his inconsistencies of conduct, out of all harmony with the faith and nearness to God which he professed and did really feel, is pronounced a sane man by the very criterion that has filled the asylums of the world.

The conclusions reached are such as only such experts might consistently arrive at as believe that "all moral insanity is depravity, that dipsomania is drunkenness, and kleptomania is thieving," pure and simple.

With all our personal regard for experts who hold such clinically untenable views regarding certain undoubted phases of mental disease, if an insane friend of ours were arraigned for crime having neither dementia, acute raving mania, or pronounced melancholia, we should ask to have such expert testimony debarred from passing upon his case, on the ground that denying the existence of plainly observable and demonstrable morbid mental phenomena, they were only partly expert, and therefore incompetent. Why should a person who declares there is no such thing as a certain phase of disease, which so many others have observed and which all mankind may any day see in the asylums and out of them, sit in judgment upon a mental disease in which this very phase, declared to be *non-existent*, may be an essential factor. Experience to the man who cannot discern moral insanity when it exists, is only partial, and the expertness of such a person is incomplete and evidently unjust to certain insane persons when he sits in judgment on forms of insanity which he argues out of existence, but which, nevertheless, remain as facts of clinical observation.

SELECTIONS FROM JOURNALS.

GENITAL RENOVATION BY KOLPOSTENOTOMY AND KOLPOECPETASIS IN URINARY AND FECAL FISTULES. ABSTRACT OF A PAPER BY NATHAN BOZEMAN, M. D.

Genital renovation, or genital anakainosis, as opposed to genital kleisis, particularly by kolpostenotomy and kolpoecpetasis in urinary and fecal fistules, without interference with the functions of the organs involved, is the title in extenso of the paper which I now have the honor of reading before this Society.

The term genital kleisis is here used in a generic sense, and is intended to include all those operations employed to occlude or impair the vulvo-vaginal and uterine tract by interference with its functions. It was

first proposed, I believe, by Dr. Anatole Le Double, of Paris, in 1876, in a treatise entitled; "Du kleisis génital et principalement de l'occlusion vaginale et vulvaire dans les fistules urogénitales." The term genital anakainosis is also used in a generic sense, and is intended to include all those operations employed to restore or renew the vulvo-vaginal and uterine tract without interference with its functions. This word, now used, I believe, for the first time, is formed from the Greek *ana*, again, and *kainizo*, to renew or restore, and has a wide signification; not only as regards lesions of the bladder and rectum, which involve the vagina, but also some of the lesions of the uterus and its appendages. Another word for which I am partly responsible, and which I propose to use in this connection, is *ephelkosis*, *epi*, to, upon, and *elko*, to draw, pull, drag. It is intended by this to describe the process or act of pulling to or drawing down the uterus like a drawer to make it subservient to the closure of large defects in the vesico-vaginal and recto-vaginal septa. The operation itself is, therefore, called hystero-ephelkosis. Professor Horner, of Philadelphia, be it to the credit of American ingenuity, made the first systematic attempt in the Blockley Hospital to practice hystero-ephelkosis in a case presenting a very large vesico-utero-vaginal fistule, but he met with a disastrous failure.*

The umbrella-shaped instrument which he employed in performing the operation was evidently of French origin, as its name, *ephelcometre*, suggests. There is still another word of Greek origin which I wish to introduce in connection with the bladder, and that is *stellosis*, from *stello*, to contract, fold up, to confine, restrain. When this word is united with the Greek word *kustis*, bladder, we have *cystostellosis*, which is shorter than the phrase, contraction of the bladder, and preferable to the term atrophy of the bladder, which is not applicable to the condition of the organ after its collapse, or folding up; a condition almost always found associated with large urinary fistules. As a companion word, therefore, for *kolpostenosis*, cicatricial narrowing of the vagina, *cystostellosis* seems to be called for, and the two words I shall have occasion to use frequently in this paper. *Kolpoecpetasis* I have already described in a former communication read before this Society; and belonging to it, as part of the same procedure, we have *kolpostenotomy*, which is the surgical procedure of cutting into a cicatricially narrowed or distorted vagina. *Kolpoecpetasis* may be employed in simple, uncomplicated narrowing of the vagina from natural or morbid causes; but in complicated narrowing or obliteration of the vagina from sloughing, adhesions, cicatricial bands and bridles, tortuosities, distortions, etc., *kolpostenotomy* becomes an indispensable part of the procedure for gradually stretching open the organ, and maintaining its natural functions independently of those of neighboring organs. *Kolpoecpetasis* with *kolpostenotomy*, therefore, forms a very important part of the treatment of urinary and fecal fistules, and this is readily admitted when it is remembered that *kolpostenosis* in some form or other constitutes about one half of all the cases met with in practice. *Kolpostenosis* is almost always complicated by *cystostellosis* to a greater or less extent. *Kolpoecpetasis*, in addition to its special sphere of usefulness in opening up the vagina and restoring that organ to the normal dimensions, fulfills a most important indication as regards the lost function of the bladder, namely, the obturation or the stopping up of the fistulous opening, as does the lid when placed upon the

*. Am. J. M. Sc., vol. xxi., p. 109, 1837.

mouth of a modern milk jar, thus forcing the bladder to take on, to a certain extent, its function of retaining the urine, and afterwards of dilating *pari passu* with the expansion going on in the vagina. In this process the urine, notwithstanding the existence of the fistulous communication between the bladder and the vagina, is made mechanically to perform the part of a dilator, and the operation, properly speaking, is cystoecpetaisis, to stretch open the bladder, a companion word to kolpoecpetaisis.

These operations are all based solely on the idea of maintaining the genital tract intact, without hindrance or implication of neighboring organs, and are known to be in strict accordance with the highest aims of pathology, physiology, and therapeutics.

My object in calling attention to the subject of genital kleisis at the present time is threefold; first, to examine critically this system of practice together with some of the published statistics of the promoters of it, especially of the late Professor Simon, its most earnest advocate, and with the view of learning more definitely its limits, its application in practice, and its dangers, immediate and remote; second, to show how genital anakainosis or genital renovation has been brought to its present high state of perfection, and with the view to directing the attention of the profession more pointedly to the range of its usefulness, its application in practice, and the little danger, comparatively, attending its employment; and, thirdly, to present a comparative analysis of the results so far as the statistics which we have of the two methods will permit. The statistics used in support of genital anakainosis are those obtained from my own practice, amounting to one hundred and twenty cases, the last fourteen of which, excepting one, having been treated in the Woman's Hospital of the State of New York, since my appointment as surgeon in February, 1878.

GENITAL KLEISIS.

In 1832, when Vidal (de Cassis) first proposed to obliterate the vulva for the relief of incontinence of urine in vesico-vaginal fistules, thought to be otherwise incurable by the best resources of our art, he believed that no fistule situated in the *bas fond* of the bladder and attended with loss of tissue, had ever been cured. Notwithstanding the fact that up to 1845 no success by his method, not even in a single case, had been recorded, still Vidal continued to question the possibility of curing a fistule of large size in the *bas fond* of the bladder, and maintained his confidence in the utility of his genital kleisis. At this date however, August Bérard, an earnest follower of Vidal, made trial of the method in a case supposed to be suitable, and the result was an almost complete success, the woman being able to retain and pass naturally a considerable quantity of urine; but on the seventeenth day she was seized with peritonitis, and on the thirty-eighth day died. At the autopsy pleuro-pneumonia, in addition to slight peritonitis, was found to exist. It was also discovered that the line of union in the vulva was complete, excepting two small points. Bérard reported the case to the Academy of Medicine of Paris, on the 11th of February, 1845, when a very warm and excited discussion ensued, which was continued through two succeeding séances, Duboiss Blandin, Gerdy, Moreau, Roux, Velpeau, and others, participating. The result was that not only Bérard was censured for having caused the death of his patient; but the operative procedure itself was con-

demned as irrational and undeserving of confidence. After this the method fell into general disfavor. It was not long, however, before the principle of the method was revived by Jobert (de Lambelle), and was extended to the obliteration of the mouth of the uterus for the relief of incontinence of urine resulting from vesico-uterine fistules, and to the shutting up of the cervix uteri in the bladder for the same purpose in vesico-utero-vaginal fistules. Again the principle, after the lapse of eight or ten years, found an advocate in Professor Gustav Simon, then residing in Darmstadt, Germany. He extended it to the urethral portion of the vagina in the form of transverse obliteration. (*Quere Obliteration der Scheide.*)

In 1856 I finished the treatment of a case of vesico-utero-vaginal fistule by turning the cervix uteri into the bladder (hysteroecpetaisis), an operation which had been commenced by Dr. Sims, and left after two or three failures. The case was published in the "North American Medico-Chirurgical Review," for July and November, 1857. In another case, in 1859, after closing a large recto-vaginal fistule by uniting its borders, there remained a large urethro-utero-vesico-vaginal fistule, with only the lower half of the urethra intact. Coupled with the extensive perforations in the two walls of the vagina there was present also the complication of kolpostenosis to the extent of scarcely allowing the index finger to pass. Here it was only after the employment of kolpostenotomy and kolpoecpetaisis, and after the recto-vaginal fistule had been closed, that I found coaptation of the sides of the urinary fistule impossible, and thought of transverse obliteration of the vagina (kolpokleisis) below the chasm. This I did in March of the year named as an original procedure, not then having ever heard of Professor Simon or his peculiar views upon the subject. The result was a complete closure at the first operation. In 1856, just before or about the time Dr. Sims adopted the interrupted silver suture as a new method, he performed obliteration of the vagina in two cases of vesico-utero-vaginal fistules (kolpokleisis), but in these cases the urethral portion of the vagina was intact, a condition of the parts which even at that early day was regarded by me as contra-indicating such a line of practice. The credit, however, was due to Professor Simon for having first made the application of the principle. His first patient, Margaretha Hubert, was operated upon in May, 1855, in the presence of Drs. Orth, Eigenbrodt, and Hegar. The occasion of the operation was a vesico-utero-vaginal fistule, complicated just below by a kolpostenosis, the latter lesion opposing access to the former for treatment. The operation consisted in paring off the sides of the stenosis and uniting the front and posterior sides with double rows of silk sutures, a plan which Professor Simon only a short time before had perfected. After the fourth trial the opening was reduced to a point so small that the patient could retain a large part of her urine and pass it in the natural way.

From this success Professor Simon was led to conclude that the procedure was a great improvement on the method of Vidal. After this it became an established operation with him, and was soon adopted by other German surgeons. Among them were Roser, Wernher, Wilms, Ulrich, Bardeleben, Wagner, Esmarch, Spiegelberg, and Hegar. In 1867, Professor Simon states in his book on "Plastic Surgery," that he had obtained up to that date, twenty-eight successful closures of the vagina. Then, having so high an appreciation of the method, he called it kolpokleisis, and divided it into two forms; to wit: transverse and

oblique kolpokleisis. His indications for the procedure in these two forms were eight, namely: (a) Great loss of substance, making it impossible to bring the sides of the fistule together; (b) Inaccessibility of the fistule; (c) Loss of the infra-vaginal cervix uteri and danger to the peritoneum; (d) Hemorrhage into the bladder, if severe, after operation; (e) Incarceration of the cervix uteri in the bladder; (f) Atresia of the vagina above the fistule; (g) Atresia of the urethra with one fistule above and one below; (h) Uretero-vaginal, and uretero-uterine fistules?

This brings us to a study of the statistics of Professor Simon, statistics as completed and published by him in his letter addressed to me in the "Deutsche Klinik," 1868, which gives the best reflex of his practice to be found anywhere in his writings.

Fifty-eight cases were cured by uniting the borders of the fistule or direct operations with preservation of the vagina, 52.23 per cent.

Thirty-four cases were treated and ameliorated by kolpokleisis or indirect operations with sacrifice of the vagina, 32.38 per cent.

In five cases the fistules were closed except small openings, 4.76 per cent.

In two cases the patients were dismissed as incurable 1.90 per cent.

In six cases the patients died, 5.71 per cent.

(Dr. Bozeman concludes an analysis of the cases in which genital kleisis was resorted to by Dr. T. A. Emmet, J. Marion Sims and Mr. I. Baker Brown as follows):

It will be seen, therefore, from an average of the percentage of resorts to genital kleisis by the above three surgeons, that it differs widely from that of Professor Simon, being 23.82 per cent. less.

(Dr. Bozeman next presented an analysis of the dangers and causes of death in kolpokleisis and in Sims' method of operating for urinary fistules with illustrative cases.)

Next he examined the classification of the different forms of genital kleises.

He then continued: With the view therefore, of making prominent the procedures of thrusting the cervix uteri into the bladder and rectum, and of adding the folding and doubling of the separate walls of the vagina, regardless of the homogeneity of structures and the harmony of functions, I propose a new classification based on the divisional abridgement of the vulvo-vaginal and uterine tract and the sectional abridgment of the vaginal walls anteriorly and posteriorly. This accords better, it is believed, with the teachings sought to be enforced both as regards the permanent sacrifice and alteration of organs and of functions. The scheme is here presented in tabular form:—

GENITAL KLEISIS. DIVISIONAL ABRIDGMENT.

A. *Hystero*kleisis.

- | | |
|-----------------------------------|------------------------------------|
| Sectional Abridgment, Anteriorly. | Sectional Abridgment, Posteriorly. |
| 1. Hysteroecystokleisis. | 1. Hysteropectokleisis. |
| 2. Kolpocystokleisis. | 2. Kolpoproctokleisis. |
| 3. Kolpourethrokleisis. | |
| 4. Kolpourethrocystokleisis. | |

B. *Kolpo*kleisis.

- a. Transverse.
In urethral portion, body and arch of the vagina.
- b. Oblique.
In body and arch of the vagina.

C. *Episiokolpo*kleisis.

D. *Episiourethro*kleisis.

With rectal diverticulum.

E. *Episio*vulvokleisis.

With rectal diverticulum.

Such are my views upon the classification of genital kleisis, but from what I have previously said regarding the objections to this practice and its dangers it will not be inferred that I indorse and recommend this large class of operative procedures. On the contrary I condemn them all except one, and that is the divisional form of episiokolpokleisis.

With regard to kolpokleisis, the view that I take of it in any of its forms is that if there is tissue enough remaining for the operation there is enough remaining also for the coaptation of the borders of the fistule, and why then resort to the expedient? As to hysterokleisis, there is no necessity for it, since exposure of the vesico-uterine fistule by splitting the anterior lip of the cervix uteri and the cure of the same are entirely feasible with preservation of the normal uterine outlet.

Concerning the sectional forms of genital kleisis with distortion and shortening of the vulvo-vaginal tract, it is only a question of patience and perseverance with kolpostenotomy and kolpocetasis in order to entirely avoid these expedients and maintain intact the vulvo-vaginal contour.

I know it will be said that my picture of genital kleisis is overdrawn, being based mainly upon my individual experience and observation. Granting this to be true, it is of but little consequence as affecting the many facts which I have endeavored, in these remarks, to place before the reader.

My percentage of genital kleisis out of one hundred and twenty cases is only 1.66 per cent., the smallest that has ever been recorded by any operator of equal experience, and from this fact alone I assume to speak authoritatively upon the points above presented. In this connection I will tabulate the percentage of genital kleisis by the four other prominent surgeons to whose labors I have previously referred, in order to place their results side by side with my own, which may be stated thus:—

Simon, 34 cases treated by genital kleisis out of 105 presented, 32.38 per cent.

Sims, 30 cases by genital kleisis out of 312 presented, 9.62 per cent.

Emmet, 7 cases by genital kleisis out of 75 presented, 9.33 per cent.

Baker Brown, 6 cases treated by genital kleisis out of 89 presented, 6.74 per cent.

Bozeman, 2 cases treated by genital kleisis out of 120 presented, 1.66 per cent.

As further support of all that has been said condemnatory of genital kleisis, and of the possibility of avoiding the practice entirely, the writer introduced here an epitome of his last fourteen cases of urinary fistules, treated in the Woman's Hospital, twelve of the number having been complicated with kolpostenosis, and a large proportion of them answering to Professor Simon's indications for kolpokleisis.

TABULAR STATEMENT OF RESULTS.

For 14 fistules which existed in 14 patients there were 18 operations performed.

Thirteen fistules which existed in 13 patients were cured with preservation of vagina.

One fistule which existed in 1 patient left after preparatory work.

Percentage of cures and of operations for each cure and each fistulous closure:—

There were 13 cures out of 14 cases . . . 92.85 per cent.

Operations for each cure 1.38 per cent.

Operations for each fistulous closure . . . 1.38 per cent.

—*Trans. Amer. Gynec. Soc.* 1881.

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NEURALGIA.

BY

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We give the name neuralgia to pain of an excruciating nature extending along the course of a nerve. This pain is paroxysmal in character, and returns with renewed violence after a longer or shorter period of temporary remission. Neuralgia, like diarrhoea and dropsy, is a symptom of a general or special disorder, rather than a disease proper. The causes of this condition are various. Among them may be mentioned local disease of the neurilemma, such as hyperæmia and œdema, irregular menstruation, impaired general health, extremes of heat or cold, or pressure of a clot or tumor upon the nerve-trunk. Neuralgia also frequently occurs during the progress of recovery from arsenical poisoning. The nervous system is generally in a state of profound depression, or nutritive inactivity, in this condition. For purposes of convenience, we may divide neuralgia into two great classes, each class composed of several varieties. In the first class are all those forms of neuralgia in which the paroxysms of pain come on regularly, but at distant intervals. These forms are mostly symptomatic of several varieties of cachexia. First. There is the malarial form. This can generally be distinguished by the great regularity of the intervals between the paroxysms. The pain

which is usually felt at the supra-orbital foramen on one side of the face, comes on at a certain time every day. The history of malarial taint will aid in the diagnosis. The best treatment by large doses of quinia, thirty grains at a time, will determine conclusively the malarial origin. Secondly. We meet frequently with cases of megrim or migraine, the so-called, hemicrania. This morbid condition is generally either connected with disturbed menstruation, or is hereditary in its nature. Where the menstruation is at fault the pain is commonly gastric. Hereditary megrim usually attacks the first branch of the fifth pair of nerves. The pain, which centres in the eye or brow, the supra-orbital or temporal fossa, is very acute. There is nearly always nausea or vomiting, which passes off in the course of a few hours. This form of neuralgia, commonly known as "nervous headache," can be easily recognized by the long intervals between the attacks, the location of the pain, the history of menstrual disorder or hereditary disease, and the occurrence of sick stomach after the pain comes on. The third variety is the anæmic, chlorotic, or syphilitic, and is due to an impoverished diseased state of the blood, anæmia, syphilis, or chlorosis. Sometimes the pain is localized in one of the branches of the trigeminus, sometimes in other nerve-trunks. The cause of this neuralgia is quite frequently, perhaps, over-exertion. Fourth. Rheumatic neuritis, or face-ache, is to be distinguished from periostitis by the locality of the pain. In some cases exploration will show that the periostitis is limited to some one tooth, which feels longer than the others, and has in fact been pushed bodily upwards above the level of its fellows by the inflammation at its roots. By tapping all the teeth in succession with a key, or the blade of your knife, you will finally strike a tender tooth. Local swelling, too, will usually be noticed in periostitis. The existence of rheumatic pains in other parts of the body will usually strengthen the diagnosis. There will in most cases be a well authenticated history of exposure. The fifth variety is due to toxic causes, such as lead or arsenic poisoning. The blue line on the gums or the characteristic signs of arsenical poison will easily separate this variety from the others. Under the second group of neuralgias, are those coming on in sharp paroxysms at short intervals, and generally as reflex inductions of peripheral irritation or centric pressure. We find two separate forms: tic douloureux, anæsthesia dolorosa. These forms usually go by the name of trigeminal neuralgias. The trigeminal is a nerve of both sensation and motion. By a smaller root, the gustatory, it also becomes a nerve of special sense. Therefore, either the sensation or motion, or both the sensation and motion of one side of the face may be affected through the branches of a right or left trigeminal nerve. The branches of this nerve are most exposed to neuralgic influences by reason of their pas-

sage through narrow canals or openings in bones, where they are readily compressed; and from the distribution of the nerve over a large cutaneous surface, more exposed to cold and changes of the weather than any other part of the body. In trigeminal neuralgias the three special points of pain are the supra-orbital foramen, the infra-orbital foramen, and the mental foramen. These three are in one straight line in the face. If the neuralgia be limited to the first branch of the fifth pair, the pain spreads over the brow, eyebrows, and eyelids, and sometimes the eyes are attacked. In tic-douloureux there is both pain and spasm. The causes of this form of facial neuralgia are usually peripheral in their origin, a decayed tooth, the pressure of a cicatrix upon one of the superficial nerve branches, or local inflammation of the neurilemma. In some cases, however, the lesion may be centric, the pressure of a neighboring clot or tumor upon the nerve-trunk. In this form (tic-douloureux) the paroxysms are repeated at very short intervals; in some cases as many as five or six in the course of fifteen minutes, or even still more frequently. The sufferer will jump up and run round the room in his momentary agony. The late Dr. Pemberton, of England, is said to have stamped the bottom out of his carriage during one of these paroxysms of pain. Another doctor was caught making deep incisions in his face and applying the actual cautery. Frequent have been the attempts at suicide by sufferers from this dreadful agony; an agony which finally kills by wearing out the strength. The effect is generally limited to the nerve itself. In severer cases the mouth is drawn to one side, so that the saliva flows over the chin and neck. This saliva is altered in quality. In other cases the teeth chatter, the conjunctiva is injected, the tears flow freely, and a constant discharge from the nose is maintained. In very severe cases the course of the afflicted nerve is marked by a red line. The spasms may occur as often as once in every few seconds. I bring before you, to-day, a typical case of tic-douloureux, whose history I will give you. I. B., aged fifty. Six months ago he first noticed a jerking and twitching, beginning at the left mastoid process, and gradually involving all the muscles of the left side of the face and neck. At first, and throughout the spasm, there was pain felt in the left auriculo-maxillary fossa. The pain and spasm were both violent for the space of one minute, the pain grew less, and entirely ceased at the end of another minute; in the course of several following minutes the twitching had also disappeared. When the attack first came on he had paroxysms at intervals of several days, but within the past month there have been very many paroxysms in very close succession—a dozen or more every hour. The patient, according to his own allowing, has been a moderate drinker. About twenty years ago he had an attack of gonorrhœa, which he thinks was entirely (?) cured. A year and a half ago he had an attack of rheumatism. He has had frequent twitches of this since. There is no cardiac trouble; no sore points on pressure over any part of the body, and no spinal tenderness. Deep and hard pressure in the auriculo-maxillary fossa fails to cause pain. Once in a while the patient has only spasm without pain, and *vice versa*. His teeth are very imperfect. He states that the twitching and pain in his face cause, at times, an unusually large secretion of saliva, which is very tenacious, and exceedingly hard to expel from the mouth. The above history illustrates nearly all the symptoms of tic-douloureux, to which I have called your attention. It remains for us to determine whether this case of trigeminal neuralgia be centric

or peripheral in its origin. The patient has been most carefully examined for a peripheral cause of the trouble. A local disease point, but without any result. I want to lay stress upon the absolute necessity of a most painstaking and minute examination of the surface of the face and of the mouth in cases of this kind before giving a decision in favor of centric pressure. I remember the case of a woman who was brought to this city for treatment. She suffered the most excruciating paroxysmal pains about her jaws and round her head—it seemed at times as if her head were being bodily crushed in. The most minute examinations were made by various surgeons of this city for some obscure local point of disease, but without success. At last a minute orifice was discovered near a tooth. An incision was made disclosing an opening into the antrum highmorianum. This incision was enlarged with the discovery that two nerves usually smaller than the finest hair had become swollen to the size of large bristles. Section of the two trunks was made above the point of swelling, and the pain disappeared at once to return no more. No local disease spot can be found in the present case. This fact joined with the observation that the *spasm usually comes on before the pain* point quite conclusively to some centric point of pressure. The patient is an old man, and very probably there has been atheroma of the coats of his arteries leading to aneurism or rupture, and the formation of a clot near the origin of the left trigeminal nerve. As regards the treatment of tic-douloureux—of course any peripheral cause of irritation may and should at once be relieved or removed. On the other hand where the lesion or pressure is centric, the prognosis is far less favorable. Trousseau considers these cases epileptiform in character, and incurable. The treatment, which has been tried, has been that by a weak, interrupted current with the positive pole to the cervical spine and the negative pole to the auriculo-maxillary fossa, and *vice versa*. The patient says that he slept more easily after this treatment, but it did not relieve the pain. Belladonna ointment and the application of the actual cautery upon two occasions have both failed. The patient has been put upon a routine treatment of iodide of potassium and the chloride of mercury, with the possibility of a syphilitic origin of the disease. Everything has signally failed to do him any good. Our only recourse is opium which must be given in doses continuous and large enough, to dull the agonizing pain. So much for tic-douloureux. Anæsthesia dolorosa is a form of trigeminal neuralgia where there is *pain but no spasm*. This form is usually caused by a central tumor or clot pressing upon the sensory fibres of the nerve near its origin, and producing at one and the same time pain at the nerve-centre or brain, and anæsthesia or loss of feeling at the periphery. Hence the name anæsthesia dolorosa. Accompanying these conditions is generally found a palsy of one or both of the limbs on the side of the body opposite to the anæsthesia; that is, the clot, or tumor, or aneurism being on the right side of the body at the base of the brain, the anæsthesia would be felt and the pain referred to the same side of the face, and there would be palsy of the left arm or leg, or both left arm and leg. All sensations of pain are generally referred to the periphery; this explains the peripheral sensation of pain in anæsthesia dolorosa. Some time ago a very interesting case of anæsthesia came to this hospital for treatment. A history was taken of the man at that time, which I will now read to you.

CASE II.—G. B. C., aged sixty-two; married; of temperate habits. About two years ago, immediately upon

rising one morning, he had a severe attack of vertigo, attended with partial loss of power in the left leg. There was, however, no loss of consciousness. Under the use of a mustard foot-bath, etc., he got so much better that he was able to walk without much difficulty. At two P. M., on the same day he was cognizant of a very strange feeling in his left leg, and in a few minutes suddenly lost all power in that limb. The left hand was also slightly affected. With the loss of power of motion there was also a loss of sensation in the left leg, so that it could be immersed in boiling hot water without giving rise to any pain. The next day the patient had a very severe headache, with throbbing and a sense of bursting. Free venesection gave relief to this at once. During the next few weeks he regained power in his leg and could walk quite comfortably with the assistance of a cane. At present there is distinct, but not perfect anæsthesia upon the upper surface of the foot and also upon the leg. Shortly after being bled, as afore mentioned, he began to suffer from pain in the right side of the head. This pain has continued ever since with more or less severity. It interferes greatly with sleep at night. The pain is of a burning character. There are pain points in the eye-ball and in front of the ear. The pain does not change with changes in the weather. The man's general health is good. He feels sometimes as if there were a twitching of the muscles of the face but there is no external, apparent spasm of these parts. The heart's action is slightly irregular, one beat in every twenty being dropped. This case was evidently the result of a clot which had been thrown out in a former attack of apoplexy, pressing on the roots of the right trigeminal nerve, just below the pons. This clot pressed on the sensory fibres of the nerve after decussation in the floor of the fourth ventricle, causing anæsthesia and pain referable to the right side of the face, but loss of power and sensation in the left arm and leg, since the motor fibres of the cord upon which it presses decussate below the point of pressure.

The treatment of Case II, was by the continuous current. This was applied for from twenty-five to forty-five minutes at a sitting and three times a week. This electrical treatment was temporarily successful only. The application of a blister to the ear also relieved for a short time, but afforded no permanent cure. A fluid drachm of a mixture containing half a drachm of croton chloral and six drachms of syrup was then ordered to be taken every night at bed-time. Phosphorus was prescribed in continuous doses, but still there was no permanent respite from the pain. The electric brush was applied frequently to the left leg and twenty drops of chloroform were injected into the right side of the face. Still nothing but ephemeral relief could be had. The patient has returned several times to the dispensary, but no real improvement has yet shown itself in the case. You see how utterly powerless we are, with all our present knowledge put into practice, in hindering the regular course of this dreadful and obscure affection. I have called your attention to the states known as *tic-douloureux* and *anæsthesia dolorosa*, and endeavored to illustrate for you by cases these two forms of trigeminal neuralgia. Simple tic, where there is spasm but no pain, is an exceedingly rare affection. No decided case of tic has lately come before our notice. The causes which may produce this abnormal condition are in general the same as those of *anæsthesia dolorosa*.

INTERNAL URETHROTOMY—REAMPUTATION OF BOTH LEGS—NECROSIS OF FACIAL BONES.

A CLINIC HELD AT THE NEW YORK HOSPITAL.

BY

T. M. MARROE, M. D.,

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GENTLEMEN:—The first patient I will show you presents some points of interest. He is a young man 28 years of age. He says he had a chancroid five years ago. One year ago he had a gonorrhœa which discharged freely for eight days. He had no further trouble until a month ago, when he began to be troubled with difficult micturition and a loss of propulsive force and a pain in his back. The painful and difficult micturition increased until the urine only dribbled away in drops, and at last there was complete retention, so that none at all was passed. He then came into the hospital with this retention of urine, and he said that just before, while walking rapidly, he noticed a sudden severe pain somewhat grinding in character in the perineum. This was followed by the formation of a lump in that region, which was not very painful. This swelling was due to an extravasation of urine into the areolar tissue of the perineum, caused by a rupture of urethra behind the constricted portion. To relieve this condition a number of deep incisions were made in the œdematous perineum and scrotum, through which the extravasated urine mingled with purulent matter and sloughs, was discharged. Then a free opening was made through the prostatic portion of the urethra into the bladder, and through this a large amount of urine was drawn off and the bladder was thus relieved. A female catheter was left in the bladder for twelve hours, so that no further retention occurred, and the sloughs and discharges gradually disappeared and a process of repair was begun. The perineum is now taking care of itself and needs no further treatment at present. After providing for the immediate relief of the retention of the urine, I next investigated the urethral stricture. On trying to pass an instrument I found a stricture two or three inches within the urethra by which I could not pass. I then tried a small conical bougie, but I could not force this through the stricture, and so lest I should tear the urethra by further efforts I let it alone for the present.

The question now is whether there is another stricture beyond the one which we can feel at about three-and-a-half inches within the urethra. So I propose now to search for the first stricture and to test its calibre, and then after dividing it, to search for a second one, and I find there is none, a large instrument can then be passed into the bladder. I will try to introduce a Maissoneuve instrument into the urethra, and with the cutting blade make several incisions through the constricted portion, and after this I can dilate it and explore the parts beyond.

The condition of things as you now see them about the perineum and scrotum, gives you little idea of their appearance two or three weeks ago, though you can see the incisions still.

Operation.—As the meatus was itself very small, an incision was first made into it. A small capillary guide was then passed into the urethra, but it was immediately stopped and became entangled at the point of stricture. After several attempts, it was at last forced by the stricture and through the posterior

portion of the urethra, and it emerged through one of the openings in the perineum. Along this guide was passed a bulb-pointed bougie, which, after considerable difficulty, was forced through the constricted portion. This was then withdrawn. A larger olive-pointed instrument was next passed, so as to still further dilate the stricture. Maissonneuve's urethrotome was discarded, and Otis's instrument was preferred for cutting into and further dilating the stricture. It was passed along the capillary guide to the point of constriction, which was then dilated by turning the screw-head in the handle of the instrument. The knife-blade, which was carried in the cylindrical body of the instrument, was then moved up and down a few times by means of the handle, thus making several incisions from before backward through the stricture. The instrument was now withdrawn, and through the enlarged passage a sound of considerable size was with some difficulty passed, which entered the bladder, where it could be felt by the finger in the perineum.

The after-treatment of such a case, gentlemen, is to occasionally pass an instrument into the bladder. But it should not be left in. For the first three or four days after the operation, I usually do not pass any. But after that, I pass a little larger one each day, until after a week or ten days I can get the largest instrument to pass without difficulty.

REAMPUTATION OF BOTH LEGS.

I now show you another case, gentlemen, of a man of middle age, who, five or six years ago, had both legs amputated a few inches above the ankle, because of a compound fracture received in a railroad accident. He did very well after the operation until he began to wear artificial limbs, which soon caused such irritation and tenderness in the stumps that he had to keep putting them on and off. He comes now with a condition of the stumps which suggests to me the propriety of a reamputation. They are red and tender, and there is only a thin cicatrix over the end of the bones, and an excoriated, indolent, irritable ulcer has formed in the stump of the right leg. If he could keep the leg quiet and elevated, it would get well of itself; but the moment he begins to go about on an artificial limb, it irritates it so, that it becomes very sore and causes great suffering. The action which has caused this condition is, that the artificial leg is fastened to the stump by straps in such a way that the weight is supported by the tissues, several inches above the extremity of the stump, so that traction is made upward on the skin and muscles beneath, which makes that part covering the ends of the bones tense, and walking irritates this part, and causes absorption of the muscular tissues and ulceration of the skin. If the bone had been covered with thick fleshy flaps, they would have been able to withstand this continual traction, and the present condition would not have been brought about. But the covering of this bone was too scanty to serve the purpose for which it was intended. I am not impugning the excellence of the first operation in this case, for a good stump will sometimes atrophy and the muscles and skin recede, by reason of the constant pulling upwards of the skin, until this condition of affairs is brought about. And again, during the process of healing after an operation, there is sometimes a sloughing off of a portion of the flaps, which necessitates the putting up with thinner and scantier ones than was expected. These stumps were probably good at first, but they have gradually come into this condition.

I now propose to reamputate, and cut off about one inch of the projecting tibia and also a little of the

fibula. Both bones seem to be united together by new cicatricial tissue. I hardly think it will be necessary to put on any apparatus for the purpose of arresting hemorrhage, for here we are dealing with terminal arteries which have probably become contracted and atrophied, and so they can easily be controlled, and besides the man is in good condition, so a slight loss of blood will be of no consequence.

Operation.—Two diagonal incisions were made with a scalpel from above downwards, including the cicatrix over the end of the bone between them. The skin and tissues surrounding the bone were then carefully dissected back until about an inch of the bone was exposed. The flaps were then held back by an assistant, and the exposed portion of the bone was cut off by a large pair of bone forceps. If the bone had been healthy and not softened and atrophied this could not have been done. The ends of both the tibia and fibula came away together, because they were united by cicatricial tissue. The rough extremities of the bones were then trimmed and rounded off by small forceps, and the flaps were then pulled down, and they were found to cover the bone so accurately that they would almost keep themselves in place without any stitches to hold them. A small sponge was now left within the wound to absorb the discharges, while the same operation was repeated on the left leg. There had been almost no hemorrhage during the operation.

The condition of the left leg was not so bad as the right, but as it at times gave the man a good deal of trouble it was thought best to remove a portion of it too, and if for no other reason, at least for the sake of uniformity. The incisions were the same as before, but as these bones were harder, the lower three-quarters of an inch was taken off by the saw, while an assistant retracted the flaps by means of a folded towel wound about the bone. The edges of the bone were then trimmed off and the wound sponged out and left for the present. The flaps on the right stump were now brought together and closed with silk sutures, and all was washed with carbolyzed water. A very symmetrical and nice stump was left, and any retained fluid could easily be squeezed out between the sutures. It was not thought necessary to leave in a drainage tube, because the wound was so small and the discharges so slight and compression so easy. The left leg was treated in a similar manner, and then both were dressed with antiseptic gauze and cotton, which was held in place by a carbolyzed roller bandage. The pieces of bone which had been removed were passed around for inspection. The piece from the right leg was larger and more cartilaginous in consistency than the left, and it showed how the two bones had been united by the formation of new semicartilaginous tissue between them.

NECROSIS OF FACIAL BONES.

The interesting feature in the next case I show you, gentlemen, is the existence of a syphilitic necrosis of some of the facial bones. This man had syphilis fourteen years ago, which was followed by an ulcerative sore throat, and as a result there was some destruction of the palate and nasal bones. He comes now to the hospital because of a secondary necrosis, and an ulceration of the bone and soft tissues which does not heal, and sequestra of dead bone can be seen projecting through an opening in the side of the right nostril. The question now is, how extensive is this destruction and how large the sequestra, and next how can they be extracted. There are two ways of remov-

ing a sequestrum, first, by breaking it up and extracting it piecemeal with the forceps, and, second, by making incisions and cutting down to it, and letting it come out through the opening thus made. I usually prefer the first way.

I hope in this case that the moment the sequestrum is removed the process of healing will go on perfectly, for there will no longer be anything acting as a foreign body and keeping up irritation as this has done.

Operation.—There was an ulcerative opening about half an inch in diameter on the upper part of the right side of the nose, just inside the inner canthus of the eye. Through this the forceps were introduced and a few pieces of the crumbled bone were removed, and then a large dark-colored piece of sequestrum, about an inch long and a third of an inch wide, and irregular in shape, was pulled out, apparently coming from the upper jaw. The irritation of the Schneiderian membrane caused violent sneezing throughout the operation. The little finger of the operator was then introduced behind the palate bone, and there he felt another loose piece which he also took out through the opening. Profuse hemorrhage was caused by the laceration of the mucous membrane lining the nostrils. The nostril was next explored by the finger introduced from below through the natural opening, and a few small pieces were taken out with polypus forceps. The mouth was then held open by an instrument and a little dead bone removed through it. One quite large piece became lodged in the posterior part of the pharynx and caused much coughing and gagging, but it was finally removed by the forceps. Thus all the dead and loose portions of bone that could be found were removed, and the bleeding was stopped by cold water, and the wound dressed.

CANCER OF THE BREAST.—INTERNAL URETHROTOMY.

A CLINIC HELD AT THE NEW YORK HOSPITAL,

BY

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Attending Surgeon.

CANCER OF THE BREAST.

The first operation to day will be one for a cancer of the breast, which has been growing only three or four months. As the axillary glands are apparently not yet involved, this is a very favorable case for operation, and the woman will have a good chance for a long life. If the tumor recurs, the rule is to go on operating a second and third or a fifth and sixth time if necessary, or as often as it returns. I have now under observation several cases on which I operated five and six years ago, and they are now free from the disease; though on some of them I have had to operate two or three times. One is the case of a lady upon whom I operated for the first time two years ago last December, and at the end of the first year I removed a second mass from the same breast, and last December for the third time I removed two small cancerous nodules which had formed in the skin. She is now doing well and is probably cured.

The operation for the removal of a cancer of the breast is not an easy one. It consists in making two free elliptical incisions so as to include between them all the suspicious looking skin, and reaching down through the glandular tissues to the fascia covering

the pectoral muscles. Then the cancerous mass is to be dissected out, and if the fascia of the pectoral muscle is involved it should be dissected off, or the whole muscle should be removed, if it is included in the disease. Then the axilla should be carefully searched to see if some of its glands are not involved, even though an external examination revealed no hardened nodules, and if any are found they must be removed, even though they may be no larger than a shot. And a good rule is to tie the efferent vein going from the diseased gland; so as to remove some of the danger of absorption. The contamination may extend to the glands under the clavicle, and even to those in the cervical region, and you should be on the lookout for evidences of such contamination.

Operation.—First an incision was made transversely from near the median line outward for a distance of about six inches, its centre being just beneath the nipple. And then a second incision was made which began and ended at the same points, while its middle part was one inch beneath the middle of the first. Considerable hemorrhage followed this, but the larger vessels were caught between the blades of a couple of artery forceps, which were allowed to hang from the vessels, while the tumor was being dissected out with a scalpel. The dissection about the tumor was from below upwards on both the anterior and posterior surface, and after it had been thoroughly separated from the skin above and the fascia beneath, it was drawn outward and removed. After it had been taken out the tumor appeared to be about the size and shape of a small kidney. It was exceedingly vascular and a great deal of hemorrhage accompanied its removal, but the bleeding vessels were soon all secured by ligatures or by torsion. The hand was then introduced into the cavity of the wound and carried about, and forced up into the axilla in order to see if any more hard nodules could be found. But nothing suspicious was discovered in the axilla. So the cavity was sponged out with a one in forty solution of carbolic acid, and a through drainage tube was inserted, and the edges of the wound were united with sutures three-quarters of an inch apart. It was then again washed out with a carbolic acid solution injected into the tube which projected from both ends. Then a complete Lister dressing covering the whole chest was applied and confined in a place by a roller bandage. In order to get primary union the tube must be removed in two or three days, lest it act as a foreign body.

1 INTERNAL URETHROTOMY.

The next patient is 39 years of age, and was admitted to the hospital Jan. 14th. He came in person and applied for admission. He has had several attacks of gonorrhœa, the last one eight years ago, and he has had syphilis both locally and constitutionally. Seven years ago he noticed that the stream of urine passed was becoming narrower, and there was a loss of projectile force; and he complained of headache, and of pain in the loins and thighs. Six years ago there was almost complete retention of urine, and he was treated surgically for this and he thinks that internal urethrotomy was performed. After that he passed a good sized stream. But two years ago the stream began to grow smaller again, and all his previous symptoms returned and have increased up to the present time, and on admission to the hospital he could only pass a very small stream which came away almost drop by drop.

I will now put him on the table and explore the urethra, and then divide the strictures. I first try to pass

a No. 28 bougie à boule, but it will not enter the meatus. A No. 22 enters, but meets with an obstruction just within the meatus. A No. 20 after pushing with some force passed by this first obstruction, but meets another obstruction at $3\frac{1}{2}$ inches from the meatus. A No. 18 stops at this same point, but a No. 10 passes down $4\frac{1}{4}$ inches. No. 7 passes by all and into the bladder.

Operation.—A Maissonneuve instrument was passed down the urethra to the stricture at $4\frac{1}{4}$ inches, and then the stylet with the cutting blade was inserted and worked up and down until this stricture was divided. A No. 20 smooth steel sound could now be passed in $4\frac{3}{4}$ inches, and a 20 à boule brought up at the same point, but a No. 18 could not be forced on into the bladder. So the stricture had not all been relieved yet up to its full size.

An Otis instrument was therefore passed down $4\frac{3}{4}$ inches and the blade was driven home, and then the screw was turned until the dial plate pointed to 32, and on withdrawing the blade it divided the stricture. A No. 30 sound was then passed but still it met with another obstruction at 5 inches from the meatus. A flexible bougie however passed into the bladder. The Otis urethrotome was again introduced and this last stricture divided, and then it was found that a number 30 smooth steel sound could be passed into the bladder; and this was all that was desired.

The after treatment was to consist in putting the patient to bed and keeping him quiet for three days, and in drawing off the urine when necessary. After the third day a No. 30 steel sound was to be passed every day for a week, and then not so often during the second week, and after that only every three or four days for a few weeks. The patient may be taught to pass it upon himself at occasional intervals.

INTERNAL URETHROTOMY.

The next case is J. M., 27 years of age, a German and a sailor. He was brought to the hospital in an ambulance and admitted on Jan. 14th. He gives no history of gonorrhœa. Eleven years ago in jumping into a saddle he miscalculated and struck his left testicle with great violence upon the pommel. A hæmorrhage from the meatus and a swelling of the injured testicle followed this accident, but these symptoms disappeared after a short time. Eight years ago he began to pass but a small stream of urine, and the testicle again became swollen. Seven years ago he had to go to the hospital to have his water drawn off and the urethra dilated. And five years ago these measures were repeated and the stricture was stretched sufficiently to allow the passage of a No. 9 English bougie. Since then the urethra has gradually continued to narrow until the flow of urine finally ceased altogether, and at the time of his admission he had not passed any for seventeen hours. He was immediately aspirated, and 20 ounces of urine were drawn off, and he was then put upon constitutional treatment with the muriated tincture of iron.

Examination. A No. 30 bougie à boule was passed in two inches after the meatus had been slightly enlarged by an incision with a bistoury. A No. 24 was stopped at $2\frac{1}{2}$ inches, and a No. 22 at $3\frac{1}{4}$ inches, and a No. 20 at 4 inches, and a No. 14 at 4 inches, while a No. 6 was arrested at 5 inches from the meatus.

Operation.—This was the same as in the preceding case. A filiform guide was passed into the bladder, and on to this a Maissonneuve instrument was screwed, and passed by all the strictures which were then cut. Then an Otis instrument was introduced, and the

whole urethra stretched to a calibre of 34, and a 30 steel sound was passed.

ORIGINAL ARTICLES.

THE OPIUM HABIT

A PAPER READ BEFORE THE N. Y. CENTRAL MEDICAL ASSOCIATION AT ROCHESTER, MAY 16, 1882.

BY

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DeQuincey in his immortal "Confessions of an English Opium Eater" speaks of the "divine luxuries of opium," and has told a strange tale of pleasure and sorrow, of ecstasy and regret, of the sublimest imaginings of the soul, and the deepest horror of fear and remorse. His brilliant work was about the first revelation the luty had of the strange powers of this wonderful drug. It is true, traveler's stories and traditions had reached them of its use among Eastern nations, but its employment other than as a medicine was almost unknown until his time. Confessedly written as an expiation of his own excesses, and to warn others, its style of vivid imagery, and the wonderful visions of bliss he claims to have experienced, have done more to stimulate curiosity and a desire to taste these forbidden pleasures than it has ever done to overcome them. He has left us his legacy as a curse rather than as a blessing.

In speaking of the "Opium Habit," I shall include in the term the use of the drug itself and all of its preparations, they being practically the same in their effects when used habitually. Let us first define what we mean by habit. Habit, in this respect, is the establishment of a practice, or custom, which becomes necessary to our comfort, and which produces pain and distress if we abstain from it.

Those who become habituated to the use of opium may be divided into two classes. First, there are those who suffer from painful diseases of long continuance, and who use the drug to alleviate their suffering, the long use of it finally establishing the habit. The second class are those persons with neurotic temperaments who are prone to severe pain and nervousness from apparently trivial causes, and who are also prone to excesses of all kinds.

The latter class finding the drug relieves promptly their pain and nervousness, are loathe to give it up, and some will even feign a continuance of their troubles in order to obtain the desired boon of their physician. Some having once experienced the relief it affords will obtain the drug and use it in secret. The opium habitués are largely composed of this numerous and constantly increasing class of persons. The tremendous strife, the hurry and bustle of our present civilization with their constant demands upon our energies and nervous systems, are constantly augmenting this class of neurotics. These persons are prone to excesses, and are about as likely to form habits in regard to one kind of stimulant or narcotic as another. Their choice of opium, alcohol or chloral, apparently depending upon chance and opportunity, their systems seemingly being ready to adopt the use of any drug which for the time being relieves their nervous pains and cravings.

The following preparations are generally used:

Crude opium of variable strength.

Tr. of opium, 1 gr. to 25 drops or 13 m.

McMunn's Elixir, same strength as the tincture.

Paregoric, 1 gr. to $\frac{3}{4}$ i or 480 m.

Dover's powder, 1 gr. each opium and ipecac. to 10 grs. powder.

Morphia sulph., } 1 gr. of each equal to about 6
acetate. } grs. of gum opium.*

Of these the salts of morphia are most largely used, probably because of the smallness of the dose and the greater certainty of action. Dover's powder is very seldom used, the presence of the ipecac. causing nausea if used in large doses.

Dr. Charles W. Earle, of Chicago, in the *Chicago Medical Review* for October and November, 1880, analyses 235 cases, and finds—

Morphia	was used in	.....	120 cases
Tr. opium	"	.....	30 "
McMunn's Elixir	"	.....	2 "
Paregoric	"	.....	5 "
Gum opium	"	.....	50 "
Dover's powder	"	.....	1 "
Unknown	"	.....	27 "

235 "

The age at which habit is formed is, in the greatest number of cases, between 30 and 40, both in males and females. The proportion of females to males is about as three to one. Of the 235 cases of Dr. Earle's, 66 were males and 169 females, and one-third of the latter were prostitutes.

Females are more frequently the victims, because, undoubtedly, of their more nervous organization and tendency to hysterical and chronic diseases; and some perhaps use it in preference to alcohol because of its greater secrecy and less degrading effects. The victims are usually from the middle and higher classes, and are generally of superior culture and refinement.

Since the common use of the hypodermic syringe, many have fallen victims to the habit through the use of this potent little instrument. And I deeply regret to state that many physicians have fallen victims to this habit through its use. Many of the laity, having once experienced the wonderful relief this method affords, obtain the instrument and keep up the practice. Hence it seems to me very unwise for the physician, except under the most extraordinary circumstances, to instruct any patient in its use or leave the instrument in his hands.

He who would take opium experimentally in the hope of realizing all the bright visions of wonderful beauty, the strange expansions of the powers of the mind; or should he expect to rival the traditional luxurious sensations and mental visions of the Eastern voluptuary which are ascribed to its use, would find himself sadly disappointed, and his actual experience to fall far short of the ideal.

Persons will be affected differently, according to their temperaments, use of the powers of the imagination, habits of thought, education, &c. The effect upon the poet will differ greatly from that upon the dull plodding laborer, upon the matter of fact Anglo-Saxon from that of the imaginative races of the Orient.

As near as I can describe, my own experience of the effect of the drug is as follows: Some years ago I was subject to violent headaches and from which I could get no relief until I resorted to the use of morphia hypodermically. Soon after the insertion of the medi-

cine, a sensation of warmth began to spread from this point as a center. As it crept into the end of my fingers there was a slight tingling, and by the time the warmth had spread over my whole person the pain was vanquished and I was at ease. This took from five to ten minutes, according to the size of the dose and the severity of the pain. Instead of the racking pain there now supervened a sense of delicious repose and physical comfort. There was a rest and quiet which indisposed to exertion. The mind partook of the condition of the body. There was a state of mind which no word describes so well as comfort, a mental comfort, which was dreamy in its character yet did not fetter its action. All the baser passions such as anger, hatred and fear, were held in complete abeyance, and the gentler emotions had full sway. I was at peace with the whole world and ready to smile upon and forgive my worst enemy. There was a tranquillity and comfort about all the mental processes that was particularly pleasing. Only the bright side of things was presented to my mental vision. A fine sense of mental power seemed to give me control over all obstacles which reason seemed to faintly raise, and they vanished. Unimpeded, the mind flowed on like a calm and peaceful river. Obstacles were met only to be overwhelmed and covered out of sight in this all-pervading flood of comfort. Plans and projects which had hitherto seemed beset with grave difficulties and obligations were now easy of accomplishment and certain of success.

This was the tenor of my thoughts if alone, but if others were present and conversation were necessary, I joined in it readily, but as soon as the necessity was gone, I relapsed into my former condition, where, for the time being, all the dark shadows of life were banished, and where the bright sunlight of prosperity and success shone undimmed. This state of comfort continued for three or four hours, the mind becoming less active, a dreamy languor supervening which finally ended in a deep, quiet sleep, from which I waked refreshed and free from pain.

Through all of these pleasures there were no hallucinations of the senses. No visions of surpassing loveliness, no sights of architectural grandeur such as De Quincey saw, of unending corridors and rows of stately columns, nor the beautiful faces which he saw floating in the waves of the sea.

Under this plan of treatment the frequency of the headaches diminished from an attack every four or five weeks to not more than two or three a year.

The experience which I have given does not differ very materially from that of others with whom I have compared notes, and may, I think, be regarded as about an average experience for our matter-of-fact Anglo-Saxon race. Still, with my feeble powers to describe what was a prosaic experience enough compared with what De Quincey claims as his, I think any one can see how great would be the temptation of the sufferers from pain, nervousness or despair, after having been once transported from racking pain or consuming despair to perfect repose and tranquillity, to seek again and again the relief afforded by this wonder working drug.

To exchange distress and suffering for ease and comfort would seem just and lawful enough did we not know a fearful penalty was attached to the frequent repetition of the act.

Each repetition, if followed closely upon another, is less and less satisfactory unless larger and larger doses are employed. There is a limit even to the effect produced by increase of dose. What at first brought not only relief from pain but pleasure, will after a time only control pain. Soon to secure even this the dose

*Adapted from Dr. Kane's work on "Drugs that Enslave."

has either to be increased or administered more frequently.

Now begins the forging of a chain of habit whose links are stronger and more galling than links of steel. A habit is soon established which renders the miserable victim comfortable only while under the influence of the cursed drug.

To complete the picture I have given of the effects of the drug, I ought to give the shadows as well as the lights, but that I am not able to do of my own experience. I will, however, give some extracts from an article published in the *N. Y. Medical Record*, page 399, Vol. XIII, as "The Personal Experiences of an Ex-Opium Habitué."

"The morphia victim dwells, after the first exhilaration is gone, in a realm of phantoms and shadows. I saw nights more terrible than can be imagined. I felt pains which do not belong to any mortal lesion. I have shrieked my terror, but the shriek only woke a myriad of devils, who had been sleeping till then unseen by me. Four months of morphia addiction sufficed to bring me to this land of horrors where no hope came or has come since the making of the world. My days were spent in self-indulgences. Alone in my office, in my easy chair, I could, with poetry and interesting therapeutical works, manage quite comfortably to pass the hours away. But let a patient summon me away from home, and my gloom and despondency was almost insupportable. I was tormented by continual self conflict. Conscious of the weakness of my efforts to emancipate myself, I kept on planning some new mode of attack in the nerveless hope that I could defeat the Lethean devil whose thews were as strong as steel. And yet I knew as day followed day, and week followed week, in so far as all this mental warfare was concerned, it could bring me no help in my awful bondage.

"No dark imagery can paint the encompassing horrors of these nights of torment that belonged to the last two months of my twelve months morphia addiction. Not one hour that I passed in bed between midnight and noon did I know normal sleep. In dreams that seemed more vivid than reality, I entered gloomy caves and walked for hours over rotten cadavers, sometimes forced to step on them and be overwhelmed with loathsome odors. I saw faces in the ward darkness, sometimes a thousand at once, and each was made of blood red flame; they flashed and went out. My night-mare'd brain was chased and haunted by everything that can exist in a vast hell of phantoms."

There is a great difference in the progress of the cases. This writer reached in a few months what others do not reach in as many years. In the same way there is as great a difference in the rapidity with which the habit is formed. I remember a lady to whom I gave morphia hypodermically for over four months, three and four times daily, who had no trouble at stopping the use of the drug when the disease for which it was given disappeared, but another to whom I gave it seven times in three days urged quite strongly for its continuance.

The largest amount reported taken hypdermically is that of a physician in San Francisco who took daily for nearly three years seventy-two grains in *three doses of 24 grs. each*! I had a woman under my charge while connected with the Gov't Hospital for the Insane at Washington who took sixty grains daily, usually in three doses. Her manner of using it was rather unique. She would heap up a teaspoon full of the drug. Add all the water it would hold, place it over a lighted match until the morphia was dissolved, when she would draw it

up into her syringe and inject it into her groin. A case of a lawyer has been reported to me who takes two drams of morphia by the month daily. De Quincey is said to have taken 10,000 drops of laudanum daily. A good many cases have been reported of these extraordinary amounts.

THE EFFECTS OF THE HABIT.

The first few doses of opium generally cause more or less disturbance of the appetite, and food taken immediately before or after its administration is generally rejected. A tolerance is soon established, however, and there is often a slight increase of appetite. Some individuals take on flesh for a time, but it is only a temporary matter, however, for I believe all victims, almost without an exception, sooner or later lose flesh.

There is greater impairment of the appetite, generally, when the drug is taken by the mouth than when taken hypodermically or by the rectum. According to Dr. Kane, a slight catarrhal inflammation of the stomach and small intestine ensues, the openings of the bile ducts are partially occluded and different degrees of jaundice results. The bowels become constipated, often obstinately so, and in the latter stages the constipation frequently alternates with diarrhoea. The dejections are often clay colored from the absence of bile in the intestinal canal.

Dr. Kane states that in many instances as the appetite for food diminishes, a desire for alcoholic stimulants replaces it, and relates a case of a young lady who had used morphia subcutaneously for three years, who lost her appetite and subsisted for nearly eight months upon lager beer, a few crackers and a little toast. She would consume about a gallon of beer daily. During this time she diminished the amount of morphia, (from 8 to 6 grs.) and gained in weight and health. Severe gastric disturbances set in, however, and she lay for months in a precarious condition.

The skin generally presents a dirty, sallow, cadaveric appearance, due to the imperfect action of the liver. The eyelids and face sometimes look puffy and swollen from a dropsical effusion. In most cases the skin is dry and harsh, although at times there may be cold excreting sweats, the odor of which is sometimes very offensive.

In the case of a young man I broke of the habit last spring, there was a decided red color imparted to his linen when it came in close contact with his body, as at the neck, under the axillæ, and about the genitals. The lining of his hat, where it came in contact with his forehead, was also stained. He said that when he attempted to break the habit, on two or three occasions before, he had had this colored sweat. Another case was troubled with a very offensive sweat from the axillæ, although he bathed twice daily. The sensation of the skin is often perverted, there being hyperæsthesia often, with great sensitiveness to cold. The hair sometimes falls out, and change of color has been noted in some cases.

Upon the sexual organs the first effect is generally to increase sexual desire in both sexes, but this almost universally gives way to impotence and sterility as the habit progresses. Levenstein has noted the fact of the rarity of conception in the wives of habitués. Dr. Kane noted atrophy of the testicle in one case, and in two others he examined the seminal fluid when they had just been broken of the habit, and found evident deterioration, the zoosperms being small and in less than normal quantities.

The effects on women are more marked, if possible, than on men. The menses become irregular, scanty,

and finally cease altogether till the habit is broken. A curious fact is noted, that on a change from one form of administration to another, the menses may reappear for once or for a few times, and then stop again. Accompanying this amenorrhœa there is, of course, sterility. And women who form the habit during pregnancy generally abort. In instances where pregnancy has gone on, the children have been sadly deficient, mentally and physically. Levenstein conducted some experiments on dogs and rabbits, and found that the use of morphia continuously, invariably caused the animal to abort, the offspring being born dead.

The amount of urine secreted may be said to be generally diminished in quantity. Uric acid is increased in nearly all cases, and the urea lessened. The chlorides are also generally diminished. Albumen is quite frequently present, and casts rarely. Sugar is found occasionally. The albumen and sugar are present only temporarily, and disappear when the habit is broken. Morphia is also found in the urine, and Levenstein asserts if it is found six or eight days after its use is supposed to be stopped, the patient is using it clandestinely. Levenstein also finds that in acute poisoning of men and animals with morphia, sugar is always present in the urine.

The visual organs are not often affected. The pupils are generally contracted and sometimes irregular. The retina is usually slightly congested and indistinct, and double vision sometimes occurs.

There is quite frequently involuntary twitching of the muscles. The circulation is quite often disturbed, there being headache, flushing of the face, flashes of heat, &c.

In some of the advanced cases, a form of intermittent fever with chills occurs, for which quinine often affords relief.

The mind is generally affected, but not to the degree of insanity, for that seldom results directly from the habit. There is, however, a weakening of the will and a perversion of the morals which generally makes them unconscionable liars about their habit, and permits them to stoop to any means or deceit to get the drug which enslaves them. It is this weakening of the will and the moral force which causes so many relapses after the habit is once broken.

The wretched victim who at first found the potent drug such a faithful servant to relieve his pain and secure his comfort, now finds it transformed into a most inexorable master and his most malign enemy. He makes desperate rebellions, only to fall into most humiliating subjection again before the power which seems to control every nerve and fibre of his being.

Perhaps he took it to stimulate his flagging energies at first, or to make them brilliant and witty in society, and now he finds that without it he is a miserable wreck. An insatiable craving takes possession of him. Those he once loved are forgotten, the books he once enjoyed are unread, his business forsaken, family, friends, duty to God and society are all crowded to one side by this demon appetite. All of his thoughts are bent upon satisfying its insatiable demands. With bleared eyes, trembling and wasted hands, he strives to keep up the fires of this Moloch of appetite which grasps him in its horrid arms. No escape, no hope of escape.

While the effects of this habit are evil, and only evil, upon the vast majority of habitués, it must be admitted there are a few cases known where men have taken it years without apparent ill effects.

Treatment of the Habit.—The treatment of the habit has been receiving of late more of the attention

it deserves, and as a result marked improvement has been made. Three plans of treatment have been used with varying degrees of success.

1st. Gradual reduction.

2d. Sudden and complete reduction.

3d. Rapid reduction.

It is a curious fact, I think, that the quantity used may be very much reduced, and rapidly, too, without very much suffering. This encourages the victim, and he hopes soon to be free; but it is the last few grains of opium, or the last quarter of a grain of morphia, which strains his endurance beyond its powers, and he relapses, again resorting to the larger doses to overcome the effects of the disastrous fight against his master.

Very few persons have sufficient will power and determination to carry out any plan of treatment unaided, although instances of most heroic attempts have come to my knowledge; yet only a few, a very few, can carry them to a successful issue.

It is almost useless to attempt to carry out a plan of treatment for the cure of the habit in the patient's own home, or anywhere except in specially prepared and furnished "Homes" or asylums where the physician can have *absolute* control of the patient and all who come in contact with him. For not only has the patient to contend with a certain amount of suffering, but he has to endure it with a weakened will power and an impaired moral force; then, again, friends and relatives, with greatly mistaken kindness and sympathy, are apt to listen to the patient's appeals for the drug, and supply him clandestinely. While there are some, undoubtedly, who pass the ordeal without using the drug, even if it were within reach, it is better and safer to treat each patient as if totally irresponsible, taking away every instrument with which he could do harm, all money, and search everything he has for the drug, for some patients exercise great cunning to conceal it. Some have been known to sew it in the hems of their garments and chew them to get it out.

Having taken these precautions, and having the patient under our complete control, what plan of treatment shall we adopt?

The first mentioned or gradual reduction plan is the one generally adopted by the patient when he endeavors to break himself, and is the one De Quincey resorted to with success. It is also the one, I believe, generally adopted in our insane asylums and by physicians in general practice. Its disadvantages are the length of time required and the prolonged suffering it causes the patient. A few cases are reported, however, where the patient has been deprived of it without his knowledge, but such treatment takes many months.

The second in regard to priority of use is the *sudden and complete withdrawal plan*. The most recent and most able advocate of this plan is, undoubtedly, the German, Edward Levenstein, whose work on "Morbid Craving for Morphia" was published in 1877. I only mention this plan to condemn it, for it is too barbarous and attended with too much danger. If anyone will read the cases Levenstein has recorded so conscientiously in his work, I think he will come to the same conclusion I do in regard to it.

The third and what seems to me the best is the *rapid reduction plan*. This method has been most ably presented by my friend, Dr. H. H. Kane, of New York, in his work on "Drugs that Enslave," in which the effects of the opium habit and its treatment are very fully set forth. This author has placed this plan upon a scientific and practical footing; and I may say

my experience, as far as it goes, fully sustains and confirms it. By it the period of suffering is greatly shortened and the dangers of collapse nearly avoided. An average of 18 cases from Levenstein's book shows the period of suffering to be about 15 days, the shortest being 6 and the longest being 26 before the patient could be considered at all comfortable. According to the rapid reduction plan, the drug is withdrawn in from three to five days, seldom delayed so long as ten days. After the last dose is given, in some cases just before, a distressing nervousness sets in, accompanied with diarrhœa and prostration. This period of suffering lasts from twelve to twenty-four hours, seldom so long as forty-eight, when a steady and rapid improvement sets in, so that in two weeks' time from the beginning of treatment the patient may usually be considered entirely convalescent, but few patients are to be trusted to care for themselves so soon. They ought to be kept in custody or close observation for a month or six weeks at least.

The success of this plan seems to me largely due to the curious fact I have before mentioned, that the quantity used may be greatly reduced at once without causing much suffering. As an illustration, I may again refer to the woman patient of mine at Washington who was taking daily 65 grains of morphia hypodermically. I cut the amount down to about 4 grains with but little discomfort to the patient. Supposing a patient to be taking 20 grains of morphia daily, I would give him 8 grains the first day, 3 grains the second, 1 grain the third, and $\frac{1}{2}$ grain the fourth, when I would discontinue.

The symptoms of abstinence may be stated as follows: A nervous restlessness begins, which increases to an almost unsupportable degree, and is, if possible, harder to bear than severe pain. No position affords more than momentary relief. Marked insomnia accompanies this nervous condition, and in some cases a noisy active delirium, which Levenstein calls "delirium from narcotic poisoning." Other patients may have a quiet muttering delirium, especially at night. The secretions, which have long been scanty, seem to be all unlocked, and there is running from the eyes and nose; diarrhœa takes place, and there is sometimes a troublesome cough. Yawning and sneezing become annoyingly frequent. There are frequent and wandering neuralgic pains. There is oppression about the chest. The circulation is disturbed; there is fullness of the head; the face becomes of a dull red color; the pulse at first is hard, but may become suddenly weak and irregular, when great prostration ensues, with symptoms of collapse. In women who have been troubled with leucorrhœa the discharge returns, sometimes with severe labor-like pains. Double vision occurs in the majority of instances.

Surely this is not a pleasant train of symptoms, and any drug or plan of treatment which would do away with them is greatly to be desired. In a paper read by Dr. E. H. M. Sell before the State Med. Society at its last meeting, extravagant claims were made for a concentrated tincture of *avena sativa*, or common oats, as a complete substitute for opium. It is a little astounding that after having been eaten by so many generations of men, this common grain should be found to be such a wonderful "nerve stimulant" as Dr. Sell claims. In common language, "the story is too good to be true."

While there is yet no known drug, or combination of drugs, which can wholly release the opium habitué from the penalties of his transgression, much can be done to alleviate and shorten them. With the proper remedies at hand, the physician can bridge over these horrors,

and limit to a few hours or days the sufferings which would otherwise spread over weeks of time.

Among the first and most important of the remedies to be used, is plenty of good nutritious food. This should be given as freely as the stomach will allow, as soon as the treatment begins.

To alleviate the distressing nervousness, nothing is more potent than hot baths, as hot as they can be well borne, repeated three or four times daily if necessary. In strong hardy patients, these baths may be followed with a momentary application of the cold douche along the spine. This gives too great a shock to weak and delicate patients. Electricity may be used in connection with the baths, or applied directly, and is of considerable use. The neuralgic pains may be relieved by friction with hands or flesh-brush.

With the nervous restlessness in the majority of patients there comes an intense craving for the drug. Now come the greatest demands upon the fortitude of the patient and the vigilance of the physician. Until these symptoms, the physician, or a trained and experienced nurse, should be always within ready call. The pulse should be carefully watched, and should it suddenly become thready and irregular, stimulants should be freely given, and if the condition of collapse comes on in spite of them, a hypodermic injection of $\frac{1}{2}$ gr. of morphia or less should be promptly given, and repeated if necessary. Fortunately collapse is not at all frequent in this plan of treatment, but should be watched for and avoided if possible.

Of the medicines which have been found of most value we may mention stimulants, such as brandy, champagne, wine and capicum; such sedatives as the bromides, lupulin, cannabis indica, and cocoa; and the tonics quinine and strychnine, &c.; especially the bromides, cannabis indica, and alcoholic stimulants in large doses. These remedies, in allaying the nervous excitability, tend to ward off collapse and induce sleep. Generally the worst of the trial is over after the first good quiet sleep.

Chloral should be used with extreme caution, if at all, for in many cases it seems to increase excitement. Digitalis, in small and frequent doses, is useful to keep up the action of the heart.

The diarrhœa and vomiting, if excessive, may be combatted with bismuth, tr. kino, and mustard externally. After a period varying from 12 to 24 hours, the system seems to accept the new order of things, the nervousness subsides, sleep comes more regularly, the appetite begins to return, and the patient will report himself as feeling quite comfortable. He will have periods of greater or less frequency, when the nervousness will return with some severity. If accompanied with prostration, nothing seems to relieve so quickly as champagne; but as these attacks may recur at irregular intervals for some weeks, the use of stimulants should be suspended as soon as the absolute necessities for them cease, and that is when the appetite is fully established. Indeed, I cannot urge this caution too strongly. The condition of the patient is such as to cause it most readily to learn to depend on the stimulant in lieu of the withdrawn narcotic.

It is far better to build up a patient with good food than it is with stimulants. In one case, at least, these recurring attacks of nervousness, appeared to be due to need of food, for said the patient: "Food seems to relieve me as effectually and promptly as the morphia formerly would have done." I would recommend the regular and frequent administration of food, for the appetite becomes exceedingly vigorous, like that of one

recovering from a continued fever, and too long fast-ing causes such a degree of hunger as to lead to excess. Patients generally accumulate fat rapidly. As convalescence progresses, the diarrhœa becomes less troublesome; the yawning and sneezing may continue for some weeks, these reflex actions having almost entirely ceased during the addiction; the circulation may be easily disturbed for sometime, palpitation ensuing on unusual exertion, with flushing of the face and perspiration, in the male erections and involuntary seminal emissions occur, in women the amenorrhœa ceases and sexual power is re-established. All of these matters right themselves, and returning health and vigor make the world very bright when before all had been cheerless, gloom and despondency.

Although returning health and strength and a sense of freedom from a fearful bondage may make the future seem very bright and hopeful, the patient should be warned that he has still trials before him. He must remember that if over-fatigued, or heavy responsibilities are to be borne, he has to bear them for a time with a weakened body and will. At such times the temptation to renew the habit returns with redoubled vigor. If the patient is over-wearied, if he will only have patience, time and quiet will bring him the rest and refreshment which only the drug could give before. If the patient is a physician he ought to avoid night work, obstetric practice, indeed, any case involving great demand upon his mind or strength until he feels sure of his re-established health. After such a radical change in the physical economy, one ought to be as careful and watchful as during convalescence from typhoid fever.

The dangers of relapse are greatest in hysterical females and persons of naturally weak wills, or in those rendered so by this pernicious indulgence. Some of these persons will revert to the practice without any special reason, like a young man I broke about a year ago. For nine months he went on enjoying capital health, when he deliberately took up the habit again without even the paltry excuse of not feeling comfortable. It would be desirable to place such people in custody for at least a year, or send them to sea on long voyages where they could not obtain the drug.

Medical skill can do much to lessen and abbreviate the suffering caused by breaking the habit, but it cannot furnish the mental and moral power to resist.

I append some statistics extracted from Dr. Kane's work on "Drugs That Enslave," concerning the enormous increase of opium consumption in this country:

In 1871 there were imported	315,121 lbs.,	valued at	\$1,926,915
" 1880 " " "	533,451 " "	" "	2,786,606

An increase of.....218,330 " " " \$ 859,691

"Twenty-five years ago the amount used in a city of 57,000 inhabitants was 350 lbs. of opium and 375 oz. of morphia. Now it has 91,000 inhabitants, and uses 3,500 lbs. of opium and 5,500 oz. morphia. The population has increased 59 per cent. nearly, while that of opium is 900 per cent., and morphia 1,100 per cent. In addition to this there are sold from 400,000 to 500,000 morphia pills, making about 170 oz. more."

It is difficult to obtain correct information concerning the number of habitués because of the secrecy preserved, but inquiries instituted among druggists and physicians here in this city would lead one to the opinion that there are not far from 10 to 12 habitués per 1,000 of population.

FORMULARY AND POINTS IN PRACTICE.

FOR THE RELIEF OF AFTER PAINS COMING ON A FEW HOURS AFTER DELIVERY.

R Pulv. g. camphor..... }
Cretæ pp..... } aa ℥j.
Pulv. glycyrrh..... }
Morphiæ sulph..... grs. j
M. Sig. Dose—Ten grains, repeated if necessary in four or five hours.

TO CORRECT THE ODOR OF THE LOCHIA AFTER CHILDBIRTH.

R Acid. carboliciglacial..... ℥j
Glycerini..... ℥j
Aquæ puræ..... ℥viij
M. Sig. A tablespoonful in eight ounces of warm water twice a day as a vaginal injection.

TO ACCELERATE INVOLUTION OF THE UTERUS.

R Ext. ergot. fl. (Squibbs)..... }
Tr. nucis vomicæ..... } aa ℥j
Tr. ferri chlorid..... }
Tr. cinnamom. cort..... }
M. Sig. A teaspoonful in a wineglass of sugar and water four times a day.

IN HÆMORRHOIDS ASSOCIATED WITH AN IRRITABLE RECTUM DURING PREGNANCY.

R Ferri sulphas..... ℥j
Pulv. aloes soc..... }
Ext. opii aq..... } aa grs. x
Sapo cast..... }
Ft. pil. No. 20.
M. Sig. One morning and evening.

DIURETIC IN PUERPERAL ALBUMINURIA.

R Potass. citrat..... ℥j
Qyr. simp..... ℥j
Aq. puræ..... ℥viij
Sind. digitalis..... ℥iss
M. Sig. Tablespoonful in wineglass of water every three hours.

MEDICAL NOTES AND NEWS.

John T. Hodgen and John Hunter.—Dr. George Homan of St. Louis, read before the St. Louis Medico-Chirurgical Society, May 30th, 1882, a paper entitled "On some salient points of likeness in the lives and characters of John Hunter and John T. Hodgen." The paper has been published in the *St. Louis Courier of Medicine*, for August, 1882. Those who have studied carefully the life of Hunter, and who knew Dr. Hodgen well will not consider the comparison strained.

ERRATA.—*Editor MEDICAL GAZETTE:* DEAR SIR: I notice in the issue of the GAZETTE, Aug. 12th, 1882, two serious errors in the printing of my report, viz: in Case 436 Lichen Pilaris, under date May 15th, stands "a 50 per cent. ointment of thymol," and

again under date May 22nd, stands a "50 per cent. ointment of naphthol," in both cases it should read 5 per cent. I hope no one has taken the direction literally, and you would probably spare some patient and physician, and oblige me by noting the error in a future number of your Journal. Being sorry to trouble you.

I am yours,

GEO. THOS JACKSON, M. D.

The friends of free consultations will thank us for the additional argument in favor of their views, supplied by the following letter addressed to a physician in this city.

NEW HEBRON, Ill., July 12, 1882.

DEAR SIR: Had a case of typhoid fever two weeks ago, friends wished council, he prescribed xx grains of nitric acid in a little water three times a day. The point I wish to know is these symptoms in typhoid or another disease that xx drops of nitric acid will do good. Please reply immediately and let me know the effect it would have, whether kill or not, if so how quick. This patient died in two and a half days after first dose, some thinks it will or ought to kill. Hoping to hear from you soon.

Truly Yours,

And so this learned Pandit condescended to call "council;" and "council" responded to the call. What a noble and shining example, both on the part of the Pandit and the "council;" for they evidently did not belong to the same "school," the one preferring large doses and the other small. Yet they did not hesitate to unite their wisdom for the benefit of the patient, who died 2½ days after, under the large doses. The presumption is that the large doses were accepted as the only possible means of compromise, since the larger always includes the smaller, while the smaller can never include the larger.

An Institution for the Application of Euthanasia.—A singular law was recently left to the French Government by M. Giffard, the well-known Parisian inventor of balloons. He desires that his money shall be devoted to the establishment of national institutions, in which persons suffering from painful and incurable diseases may be allowed, by the use of chloroform and other anæsthetics, to put an end to themselves, under the direction of medical experts, and with the consent of their friends. M. Giffard, it is said, secured an euthanasia for himself by means of a special apparatus he invented for the inhalation of chloroform. M. Renaud is reported to be in favor of painless suicides in such cases, his only stipulation being that no man shall by law be entitled to take his own life until he has obtained the consent of his friends in a *conseil de famille*.

New Treatment for Chordee.—M. Combillard, recommends, in *Courier Medical*, to calm the pain induced in gonorrhœa, by nocturnal erections and chordee, injections containing bromide of potassium.

These injections, are not as a rule, in any degree irritating; they may be made four times daily, the last just before bedtime. The liquid should be allowed to remain one or two minutes in the urethra, in order to have the desired effect. The following is the most convenient formula.

R. Potas. bromid.,..... 3 iss
Tr. opii,..... ʒ ss
Glycerine..... ʒ iij
Aquæ..... ʒ v. M.

In fifteen out of eighteen cases there was rapid diminution, or complete suppression of the erections.

Bromide of potash gives these happy results, undoubtedly, owing to its anæsthetic influence on certain mucous membranes in moderating their reflex excitability.—*Med. and Surg. Reporter*.

Philadelphia Hospitals.—The superior skill of Philadelphia surgeons is attested in the following paragraph, which we extract from the *Chicago Medical Review*:

"According to a local paper, a man who had been carried to a Philadelphia hospital while suffering from the effects of a severe contusion, was asked if he had been treated kindly while there. 'Considering all things,' he answered, 'I have no right to complain. They amputated both my feet, removed my clavicle, cut off my right arm, trephined me, took out a piece of my inferior maxillary, sawed my left os innominatum in two, and were about to excise five or six ribs, when a fire broke out in the establishment, and the police got away with the rest of my body in safety.'"

This simple, straightforward and temperate statement of facts carries conviction with it, but had it been made by any other than a Chicago man we could scarcely have credited it. We have also learned that George Washington's hatchet and original cherry-tree are now in the possession of the victim, and will be sold cheap, for cash, for the benefit of his widow, should he die from the original contusion.—*Coll. and Clin. Rec.*

An Army in Blue Specs.—It is said that Arabi, the general of the Egyptian revolutionary forces, is going to be very circumspect and hold his ground quietly, expecting that the English army will soon be disabled by ophthalmia, without the need of fighting. The glare of the sun and the fine sand that floats in the air have been found to play the mischief with foreign soldiers. It is affirmed that during the Egyptian campaign of the great Napoleon two thirds of his men were at one time distressed with eye diseases. According to the English papers, every precaution is to be taken to save the British troops, now pouring into Egypt, from such misdeeds; and among other speculations, 25,000 pairs of blue spectacles have been purchased at five cents a pair. Probably Arabi will laugh at the spectacle of an army in specs; but blue glass is held to possess various healing virtues, and if the British expectations are realized, they will yet laugh at Arabi.

Sacred Well of Mecca.—Prof. Franklin gives an analysis of the water contained in the sacred well of Mecca. It contains 579 grains of solid matter to a gallon, or impurities about seven times greater than London sewage. The water is distributed among Mohammedans who drink it. Cholera and other diseases might be attributed to this cause did not their faith save them.

Dr. John B. Hamilton, Surgeon-General U. S. Marine Hospital Service, has been appointed to fill the temporary vacancy in the chair of surgery in the National Medical College, Washington, occasioned by the absence of Dr. Ford Thompson in Europe. Dr. Thompson may be absent one or two years.

Typhoid fever has broken out in the fashionable seaside Hotel "Bellevue," about one mile from Seabright. Most of the guests have left. The cause of the fever has not yet been determined.

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IODISM.

A CLINICAL LECTURE DELIVERED AT THE NEW YORK HOSPITAL.

BY

WILLIAM H. DRAPER, M. D.,

Professor of Clinical Medicine in the College of Physicians and Surgeons, New York, etc.

The patient, J. C., was admitted on Oct. 3d. He is single, and a laborer; age 39; a native of the U. S. Has been accustomed to drinking ale and beer, but not to excess. Twenty years ago he had a chancre, which was followed by a secondary eruption. He was successfully treated for this, and was well for a number of years. Five years ago he had an attack of rheumatism, affecting all the joints, which lasted for eight months. He also complained of pain in the cardiac region at the same time. Four years ago a rash broke out on his scrotum, anus, and thighs, which exuded a watery fluid which dried and formed crusts. Last August several ulcers appeared on his ankles, which he treated himself with black wash and other local applications. On his admission to the hospital, Aug. 3d, he presented an ulcer on the inner side of the left ankle, and another on the outer side of the right ankle. These were irregular in shape, and showed no tendency to heal. The ulcers were treated locally with iodoform, and he was put upon the mixed treatment for constitutional syphilis.

Oct. 20th. The ulcers are sluggish and not healing rapidly.

Nov. 3d. A Martin's rubber bandage was applied for the purpose of keeping up pressure on the neighboring vessels. On Oct. 28th, over two-thirds of the right leg, and on the anterior portion of the left, appeared an eruption of small red spots, attended by much itching. These continued to increase in extent and size, and they poured out an exudation which dried and formed crusts upon them.

Nov. 11th. The ulcers are much improved, but the eruption continues to spread.

Nov. 19th. Patient was put on liquor potassæ arsenitis 5 m. three times a day, to try its effect both upon the eruption and the ulcers. The mercury and potassium iodide were stopped.

Nov. 22d. The eruption has spread to the arms and thighs, where it is circumscribed and papular, and it has diffused over the legs, which the hardened exudation has coated with a thin scaly crust. Citrate of potash, 30 grs. three times a day, was added to the treatment.

Nov. 25th. Fowler's solution was discontinued. The ulcers are almost cured and are doing well.

Nov. 26th. The ulcers on the ankles are entirely healed. The dose of the citrate of potash has been increased to 40 grs. three times a day. Since the patient has been under observation his bowels have been regular and appetite good, and there have been no urinary symptoms. For seven and a half weeks he took $\frac{1}{2}$ gr. of the biniodide of mercury, and 10 grains of the iodide of potash, thrice daily; but eight days ago they were discontinued. He says that he had no cutaneous eruption in childhood. A plain rubber bandage was, later on in the treatment, substituted for the elastic bandage. On admission, his pulse, respiration and temperature were normal, and have continued so up to the present time.

The striking points in this man's history are, that previous to his admission he seems to have had a tendency to rheumatic affections for some years, and also that he underwent a course of treatment for a primary syphilis, contracted twenty years ago. And no constitutional syphilis has since manifested itself in any way, until he entered the hospital with two ulcers on the ankles. But these ulcers were described in such terms as to leave no doubt of their syphilitic character, for the features of a tertiary ulcer are very characteristic. Since he came into the hospital he has developed the condition of affairs which is now seen. It is an eruption upon the skin, of the legs chiefly, and reaching from his feet to his hips, and it also covers the arms to a considerable extent, but it is not much developed upon the rest of the body. This began as a disseminated eruption of papules, which grew into vesicles and pustules, and they increased in number until finally there was a general inflammation of the skin. But now below the knees the papules are no longer disseminated, but have grown together so as

to present only a general superficial dermatitis, and the hardened exudation has encrusted the whole leg with a dry scaly envelope. In former times, and even now also, this was called an eczema; by which was meant any lesion of the skin in which there was a pouring out of fluid upon the surface. But the meaning of the term has now become enlarged, and it is applied to any inflammatory disease of the skin which involves the superficial layer of the corium, and results as a consequence in the formation of vesicles, papules, and pustules, or scales. There are two varieties, the moist and the dry.

And this is a moist eczema which we have here, the serous exudation having become dried into these dirty grayish scales, which you see. These are very different from the scales of psoriasis, which are made up of the epidermis proper, and not formed by the desiccated exudations, as are these. When we come to examine the parts above the knee, we find a very different appearance, and such as was at first presented by the parts below the knee. Namely, a number of sparse and disseminated papules, vesicles, and pustules, with healthy integument filling up the spaces between them. Upon close examination, I find that some of these papules occur just at the orifice of the hair follicles; other papules however show no connection with any hair follicle; but still they have such a characteristic, individualized appearance, as to suggest that they have their origin in an inflammatory process which has taken place in the sebaceous follicles. The disease of this man is really a follicular eruption, principally involving the sebaceous follicles which open into hair follicles. This communication of sebaceous with hair follicles is very general over most of the body, but on the face and scalp they are mostly diffused and separated from the hair follicles. You see here the two stages of this eruption well illustrated. Beginning discreet, as on the thigh, and ending as on the leg, in an eczema. The same papular eruption, but less marked, is seen on the arms. But here there are no vesicles, and no pustules. So much for the character of the lesion.

But you should not be satisfied with the simple diagnosis of a follicular disease of the skin, with an eczema of the legs. In the olden times great stress used to be laid upon the importance of diagnosing the papular from the vesicular, and the vesicular from the pustular eruption; and each was supposed to represent a distinct variety of the disease, and he was a good diagnostician who could tell with certainty, the variety of disease from the character of the eruption alone. But there is no longer that degree of importance attached to the precise character of the lesion as there was formerly. For now we know that a cutaneous lesion is often not the whole of the disease, but simply a local manifestation of it.

The next important step in the study of this case is to find out the essential cause of this lesion which we see. The study of skin diseases is especially valuable to every student of medicine, because they suggest to him those methods of examination which every scientific physician follows in making the diagnosis of all diseases. For you have a lesion, and very varied symptoms to study in both. In many cases you have the whole process of inflammation most perfectly illustrated in the progress of a cutaneous eruption. And a lesion produced by a parasitic disease of the skin illustrates the course of the same class of maladies in other organs.

In fact the skin is a microcosm of pathology for the doctor; and therefore you should avail yourself of every opportunity for the study of cutaneous lesions. To find out the cause of the eruption is as I have said al-

ready, the principal thing in the diagnosis of a skin disease. And for convenience, we may divide the causes into two classes, namely, external and those which arise within the body. The external include atmospheric causes, and those which are material and all which operate directly upon the integument. There is nothing in the history of the patient to suggest that this eruption was caused by any material or external application to the skin, such as heat, cold or blisters, or by any peculiar atmospheric conditions. Therefore we are obliged to refer it to some internal cause. Possibly syphilis suggests itself to you as a cause. But you must remember that this man was under constitutional treatment for a syphilitic ulcer when this eruption appeared, and the ulcer healed. And it is not to be supposed that another syphilitic ulcer would appear, while one was healing under the influence of treatment. So we must exclude this as a possible cause. But you may ask whether or not the eruption had anything to do with the treatment itself of the syphilitic ulcer. And this would be an extremely pertinent question. You should always think of the fact that drugs are themselves often the cause of cutaneous eruptions. Belladonna for instance, sometimes causes a general erythematous eruption like that of scarlet fever, and copaiba an eruption which may easily be mistaken for syphilis. And in nervous and sensitive people, opium may produce a nervous irritation of the skin, which sometimes results in a troublesome eruption, and there are many drugs which cause neuroses in the way of hives. But there are two classes of remedies used very largely as medicines, which are responsible for a good deal of cutaneous irritation, and one of these we find has been used here. I refer to iodine and bromine. These are remedies which you know are very largely used, the one in rheumatic and syphilitic diseases, the other in a very large class of neuroses.

You will frequently in the use of iodine, and still more with bromine, have occasion to observe on the patient an eruption of an erythematous vesicular character, which sometimes results in an obstinate inflammation of the skin. And inasmuch as both of these remedies are employed to a large extent, it is important for you to bear this peculiar action in mind. Now I believe that this man has been suffering from iodism, and the form which it has assumed in him, is a dermatitis. But the commonest form in which iodism is manifested is not by an integumentary eruption, but by an irritation of the mucous membrane. Some people cannot take this remedy at all, without becoming afflicted with an intolerable naso-pharyngeal catarrh, while others will suffer not so much from inflammation of the mucous membrane, as from irritation of the external surface of the body. The form of eruption which iodine and bromine produce is a folliculitis, or an inflammation of the sebaceous follicles of the skin. And the commonest kind of lesion seen in persons taking iodine, but who are not very sensitive to its influence, is an eruption of acne, involving by preference the face, neck, and breast. In some instances the iodism will produce such an eruption as we have here, which you will remember was follicular at the beginning, and which is more acute on the limbs, than where the sebaceous follicles are more independent of the hair follicles. It is a vesicular and pustular eruption, with a tendency to run together and form a general inflammation of the integument. Sometimes it is a general eruption over the whole body, but as a rule it is confined to the extremities, and chiefly to the lower limbs.

I do not know why bromine and iodine should produce a sebaceous folliculitis, but it would seem that this is the particular channel by which nature seeks to rid the system of these substances. These medicines do not undergo any change in the circulation but they are eliminated just as they are taken, and they are found unchanged in the urine and the excretions. And a large proportion of the remedies used, are eliminated from the system by the kidneys, but some by the skin as well, and these latter cause cutaneous eruptions.

It is also of importance to bear in mind the possible means of preventing the irritation of the skin. From my personal experience, I have been led to think, that by giving potassium iodide in combination with some other salt as a diuretic, this effect may be prevented. I therefore give with it usually the citrate of potash or soda, or the bicarbonate of soda or potassium, or the muriate of ammonia; and I believe that the metal is thus more easily eliminated by the kidneys than when it is given alone.

The same may be true, though perhaps not to the same extent, of potassium bromide when given for nervous affections. This tendency to produce a cutaneous irritation, sometimes becomes a very serious obstacle in the treatment of such diseases as epilepsy for instance, where the remedy must be kept up for a long time. For some individuals are so sensitive to its action, that they cannot take it at all without its immediately provoking a more or less general folliculitis. And I have seen patients rendered so offensive by the exudations, and so helpless by reason of the superficial ulcerations which accompanied the eruption, as to make it almost impossible for others to take care of them, or for them to move about themselves.

Therefore as a means of preventing this condition from following the use of bromide of potassium, I would suggest the same manner of combining it with a diuretic salt as I use with the iodide.

It has been further suggested that arsenic given with the bromide will prevent this complication, but I have not had enough experience in this class of diseases to express an opinion on this plan of treatment. This man, however, has been taking Fowler's solution with the iodide of potassium, and it does not seem to have done him much, or any good.

Yet I should think that it ought to have as good an effect when administered with the iodide, as with the bromide of potash, while I also think that the diagnosis of this eruption as caused by the iodide, is justified by the history of the case, and by the appearance, development, and distribution of the eruption. And now having diagnosed the cause, we have, I believe, diagnosed the disease.

And the diagnosis of the cause which has brought about the changes involved in the lesion, is, I think, the only true basis for the rational treatment of the disease.

However, it is not always in your power, as it is in this case, to apply the rational treatment, which mainly consists in removing the cause. Yet in a large number of the cases of inflammatory disease of the skin, this rational treatment it is possible to apply.

In the case of parasitic eruptions, by removing the parasite we cure the lesion. And in the pathogenetic and autogenetic skin lesions, which are due to causes generated within the body, we can also apply the rational treatment in many cases, and remove the cause of the disease. In some individuals certain articles of diet, in the process of digestion, will cause a cutaneous irritation. You should know what these are, and with-

draw them from the patient's use. Again there are many eruptions which owe their origin to what is called the rheumatic habit of body, or to that peculiar condition of the system called gouty, which manifests itself in various forms of dyspeptic troubles. This class should be relieved by the same means that you would employ for the treatment of other rheumatic and gouty lesions. Again we know that syphilis produces certain integumentary lesions, and also that the syphilitic poison is to a remarkable degree under the control of certain medicines. Therefore, to cure the specific lesion, you should use the specific remedy. So you see that in a very large proportion of the maladies under observation, we have the ability to apply the rational principle of treatment, by removing the cause.

We have put this patient on a diuretic, the citrate of potash, and we are treating the parts locally with a protective ointment, for the purpose of allaying the severity of the inflammatory process, which was very active a few days ago. The diuretic is for the purpose of ridding the circulation of this irritable poison. But the most essential point in the treatment is to stop the iodide of potassium. In a week or ten days we will see what is the result of this treatment.

Dec. 1st.—The patient is improving, and the redness and swelling of the surface have subsided, and the eczema is healing rapidly, so that in a few days he will probably be entirely well. He is taking no medicine now except the citrate of potash to promote the elimination of the iodine by the kidneys, and an ointment is still used locally to allay the irritation of the skin.

Dec. 8th.—The same treatment has been kept up, and the patient is now almost entirely well of his cutaneous affection.

Two months later the patient was again exhibited, with the following remarks:

GENTLEMEN: This is the patient whom you saw some time ago suffering from an iodic acne, and eczema of the legs. He came into the hospital with the lesions of constitutional syphilis, for which he was successfully treated by the mixed treatment; and after the disappearance of the syphilitic lesions, the treatment with iodide of potash was continued until the specific physiological effects of the drug manifested themselves in the production of a cutaneous irruption. And I called your attention at that time to the fact that this was an illustration of the effect which iodine sometimes has upon the nutrition of the skin. He has been here ever since that time. Though he grew well of the eczema upon the withdrawal of the iodine, yet he remained here because of a furunculosis; which seems to have been another consequence of the iodism.

Last Saturday night, about five days ago, my attention was called to him, and I found him suffering intensely from a neuralgia, which he referred to the lower part of the right side of the chest and to the upper abdominal region. I found no lesion in the chest or abdomen to account for the pain, and so I looked upon it as a simple neuralgia, and gave him morphia to relieve it. The pain recurred on Sunday, and so, in addition to the morphia to relieve the neuralgia, applications of poultices and turpentine were made to the skin for the purpose of exciting counter-irritation. On Monday night I found that the amount of counter-irritation produced was in excess of what had been expected from the remedies, and so they were withdrawn. On Tuesday night I observed groups of vesicles over this region, which appeared more distinct than they are now, though they were partly concealed by the hyperæmic condition of the skin.

And at the same time the pain was so severe as to cause him to scream out when touched.

Yesterday it was less so, but still large quantities of opium were necessary to make him comfortable. The pains were of the characteristic neuralgic character, and were sharp, shooting, or lancinating, and were aggravated by movement, or by taking a long breath; so he held the right side of his chest almost perfectly still in breathing. Yet there was no sign of any lesion in the chest or abdomen. The neuralgia was, in fact, in the skin, and it is a neuralgia of the lower dorsal and upper lumbar nerves. This remarkable effect of counter-irritation in exciting an eruption upon the skin is one that is sometimes observed, and especially in that form of neuralgia of the trunk and extremities which is attended by a vesicular eruption, and which is called herpes zoster. This eruption is vulgarly called "shingles," from a corruption of the Latin word "singula," meaning a belt or girdle, and it is so named from the fact that the eruption sometimes forms a partial girdle around the body. But this does not often happen. Zoster is usually unilateral, but it occasionally occurs upon both sides; and in such cases the extremities may so nearly approach one another as to form a nearly complete girdle. It was said formerly that if the eruption was upon both sides, it was always a fatal disorder. But it is doubtful if, by itself alone, and uncomplicated, it is ever fatal. It is a very painful but, as a rule, I think a very benign disease. It is one of the more satisfactory illustrations of the trophic disturbances of the skin, which sometimes occur along with disturbances of the sensitive nerves, which we have. The cause of this disease is not well understood; some thinking that it is due to peripheric irritation, and others that it is the result of some central irritation. But that it is due to an irritation and congestion of the roots of the spinal nerve is, I think, the most generally adopted belief at the present day. This neuralgia may occur in many localities, such as in the head, and in the branches of the fifth nerve in all three of its distributions, and also in the distribution of the cervical nerves to the neck, shoulders, and lower part of the scalp, and also in the trunk and limbs. Pain is the prominent symptom at first, and is what especially attracts the attention. It is sometimes only of moderate severity; and this is the rule particularly in the young. In them and in healthy adults it is not apt to be very severe. But after middle life, and especially in old and feeble people it is one of the severest kinds of neuralgia that you will ever meet with. But the neuralgia itself does not always disappear after the eruption has disappeared; and even after every trace of the local disturbance has gone, the administration of opium is sometimes needed. The eruption is therefore only an incident of the disease, and not an essential of it; but the lesion itself is in the roots of the spinal nerves, and so the pain may persist long after the trophic disturbance of the skin has entirely subsided. Locally all trace of the eruption is apt to subside, in a young and vigorous patient, within a week or ten days; but in the old, and in feeble persons past middle life, it is not always so simple an affair. For in such patients I have seen the vesicles become filled with a sanious fluid, which underwent decomposition, and thus the parts affected become the seat of a gangrenous inflammation. But this is liable to occur only in debilitated and broken down patients, and you do not expect it in healthy adults. But the greatest suffering is from the neuralgia, which may precede the eruption, and continue while it lasts, and persist for weeks or months after it has disappeared. This case is not a good illustration of

zoster as you usually see it, for here we have in addition another dermal lesion, from the application of a vesicant to the skin, which obscures the proper lesion of the zoster. The disease is now subsiding, and the man is suffering less pain.

In regard to the treatment of this malady I regret to be obliged to say that it is for the most part palliative, and I do not know as you can do much except to relieve the pain. Quinine and opium, and all the measures which you would adopt in the treatment of any other case of neuralgia, should be tried. Occasionally I have seen belladonna to the skin seem to do some good, but I do not know as it does, because where I have used it, it has been in connection with opium or other anodynes. On the theory that this disease depends upon a congestion, or an inflammatory condition of the roots of the spinal nerves, it has been suggested that the pain might be relieved by the application of the thermo-cautery along the spinal column. And if this man's neuralgia continues, I shall advise such an application here. I have never tried it yet, for it is a comparatively recent suggestion, so I know nothing as to its efficiency. But in cases like this where medicines seem of little use, I think it is best to try any new method of treatment, which offers any hope of success.

CYSTOCELE AND RECTOCELE.

A CLINICAL LECTURE

BY

WM. GOODELL, M.D.

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CASE I.—Cystocele.—This patient was operated upon five weeks since for rectocele. You will remember I removed an elliptical portion of the posterior vaginal wall, that portion of the tissue just in front of the recto-vaginal septum. The longer axis of the ellipse was about two inches, and the transverse about an inch and a quarter. Instead of dissecting away this substance, as is usually done, I crushed it partially with the *écraseur*, enough to make mechanical thromboses in the vessels; formerly I would have cut off this redundant tissue with the scissors or knife, but latterly I have preferred to burn away such structures with the thermo-cautery, because it *ought to prevent* (and usually does) any possibility of hemorrhage, and I have never seen any sepsis follow the actual cautery. Yet, notwithstanding *écrasement* and cauterization, she had a slight hemorrhage after she had been removed from the amphitheatre. The bleeding was from the upper margin of the wound, and when I examined the distal extremity of the *écraseur* I discovered that its blades were sprung; they did not come up even, and this explained why the bleeding ensued after crushing by *écrasement* was incomplete. You may now very pertinently ask why it followed the actual cautery. I can only explain it from the fact that the platinum tip was too hot; it was at a white heat, instead of a dull red. It cut through, instead of frying the tissues. I was not as careful to have it at a red heat as I would have been had I known that the blades of the instrument were sprung, because I assumed that the crushing of the structures had caused retraction of the vessels and mechanical thromboses in them. The hemorrhage, however, was easily controlled by the introduction of stitches, every alternate end of which was tied to its opposite, thereby *pursing* the wound

and approximating its slightly gaping upper extremity. I hoped that the cystocele would have been cured in consequence of the contraction in the size of the vagina, usually following an operation of this nature for rectocele. I find to-day upon examination, that the vagina has been considerably diminished in size. Her perinæum—entirely reconstructed—is very long; preternaturally long. The posterior wall of the vagina is perfectly healthy looking except where, in its centre, the cicatrix left by my operation remains. Has the operation for rectocele cured the cystocele? In cystocele, you know, the bladder most frequently drops down in consequence of the giving way of the sustaining power of the vagina. I find that but very little cystocele is left—it is, in fact, scarcely larger than a hickory nut. I will, upon a future occasion, remove more of the vagina anteriorly. The cervix uteri is much smaller and there is but slight retroflexion of the uterus. This is one of the best results I have seen following an operation on the posterior wall of the vagina. The result is much better than it would have been had I dissected out a portion and simply closed it with stitches without using the cautery. The burning out of the superabundant tissues leaves an inelastic cicatricial band, forming a better support than the mere mucous membrane. The perineal body proper has been reestablished. The tissues between the mucous membrane of the vagina and the anterior wall of the rectum have been filled up, producing a much better perineum than before. In overcoming the retroversion the symmetry of relationship between the uterus and vagina may cure the cystocele and so cause it to disappear without any farther operation. The result has been somewhat remarkable also as regards another point, viz., the wound in the wall of the vagina has healed by granulation, and not by the primary adhesion process. The woman will be ordered a properly adjusted pessary, *to be fitted after the uterus has been placed in the proper position.* This replacement of the uterus is to be accomplished as much by the woman as by the physician. The woman is put in the genupectoral position whereby the intestines roll forward, and when the perineum is retracted the air rushes into the vagina and balloons it out, supplying a *vis-a-tergo*, and the womb is brought into its proper position. If, however, it is imprisoned by the muscular striæ of the sacro-uterine ligaments, it will be necessary to force it forward by pressing upon it below the cul-de-sac of Douglass. Failing in this, it becomes necessary to balloon the rectum by means of the Sims' speculum, when the womb will usually fall into place. After the uterus is properly in place, a pessary should be introduced. If you get a pessary in the shops you will probably find that it is either too small or too large, the average pessary being the most unanatomically constructed instrument that I can imagine; you will never find a woman's pelvis which will correspond with the pessaries made in the shops. The india rubber companies, in particular, manufacture a most impossible pessary. In fitting a pessary measure first the length of the vaginal canal. From the pubis to the posterior fornix the average length is three inches. What will be the result if we introduce a pessary such as we see in the shops? It will press the posterior wall of the vagina against the rectum or the anterior wall against the urethra, so that if it does not prevent micturition, it at least is a bar to the faecal matter from escaping. Again, such a pessary compresses the blood-vessels, causing hyperæmia of the vagina, and leucorrhœa, by increasing the action of the follicles.

Besides all these things, we do not, after all, get the good results which we wish, since the uterus becomes to a certain extent independent of the vagina owing to the widening of the walls of the upper part of this canal, which follows the use of such a pessary. Therefore I say always measure the length of the vagina first, and then map out the shape of the sub-pubic space. Then grease a vulcanite ring well and mould it in the flame of the alcoholic lamp to fit the vagina just as the hatter moulds his hats to the customer's heads. This is a matter of very great importance. The best men often fail to fit a patient with a pessary, simply because they fail to map out the vagina. No pessary will do the least good unless we first get the uterus into proper position.

CASE II—Rectocele.—The patient has been suffering from subinvolution of the womb for the past eleven months. Five months ago she had a miscarriage. We gave her hot water injections and general tonics and she left off coming to the clinic feeling much better. She returns to us to-day again complaining of pain in her back and abdomen, which is worse after exertion. She is just thirty years of age. She thinks that she may be pregnant and wishes to get a definite opinion in the matter from me. There has been no menstrual flow for seven months, and she suspects another pregnancy, but on the other hand she has felt no life. If there were a fœtus within the uterine cavity it certainly has made no appreciable movements. It may be a case of retention of menses. You know that there is a very decided difference between retention and suppression of menses. The cell action of the ovary may go so far as to develop a Graafian vesicle, but may stop short of menstruation, or there may be no action of the ovaries whatever; or should there be retention, the neck of the womb may be closed or there may be atresia of the vaginal canal. In suppression of the menses there is no secretion whatever, in retention the exit of the flow is impeded in consequence of obstruction. What is the condition here? Are the menses suppressed or retained? How are we to exclude the possibility of pregnancy? Here, as in pregnancy, the menses stop, the breasts grow larger, the abdomen increases in size. All these are, however, but presumptive evidences, and there is but one absolute, positive, actual symptom, the sounds of the fœtal heart. The gynæcologist does not *know* that the fœtus is there until he hears this sound. The best men have mistaken ovarian tumors and uterine fibroids and polypi for pregnancy. The late Prof. Bedford, of this University, tells the story of a woman whose abdomen increased in size, who was shunned by polite society as an outcast, who was examined by physicians and pronounced to be pregnant; who finally came to America and saw Dr. Bedford, who, after the poor dying girl's mind had been destroyed by her woes, discovered the case to be undoubtedly one of fibroid tumor. The hymen and uterus were both virginal. In the case before us, upon deep pressure, I feel a peculiar, hard body in the neighborhood of the uterus which may possibly be a fœtal head, or breech, or on the other hand it may be something entirely different. The vagina does not feel hypertrophied as in pregnancy, nor has the cervix that spongy, elastic feeling. The abdomen is enlarged, indeed, but not as much as we should expect were it to contain a seventh month fœtus. By lifting up this large mass of fat in the abdominal walls, and pressing my hand well down into the pelvic cavity, I am unable to make out any uterus at all. I am disposed to believe that the case is not one of pregnancy. Many of the most common symptoms of pregnancy are absent,

although others are present. I fail to find that hypertrophy in the labia minora and in the vaginal walls, which usually attends the seventh month of pregnancy. There is no spongy feel to the cervix, which no tumor can imitate. The abdomen may be enlarged owing to the relaxed condition of its walls, and the deposits of fat in the omentum. What is my conclusion? I cannot make as careful and thorough an examination as I could desire, for the woman will not lie quiet, and the more deeply I press down into the region of the uterus the more pain she suffers. If I were to introduce a sound I might produce abortion. My diagnosis, however, is presumably at least against pregnancy. I think there is some mass lying on the left part of the pelvis which ought not to be there. It is a globular body not like the head or breech of a child. If it were a child I ought to be able to distinguish its outline through the abdominal walls. It will probably turn out to be a case of œdema, or something of a similar nature between the folds of the left broad ligament. Whether it is a result of the obstruction to the return of blood, or to cellulitis I know not; one thing I am quite sure about, and that is that there has been an effusion into the left broad ligament which divides the left part of the pelvis into two cavities. The suppression of menses is owing to some pathogenesis in the left broad ligament.

EMPHYEMA.—HYDROCELE.—AMPUTATION OF THIGH.

A CASE, REID AT THE NEW YORK HOSPITAL

BY

GEO. A. PETERS, M.D.

Attending Surgeon.

EMPHYEMA.

The first case to-day is one of empyema, resulting from a stab in the chest.

The patient is a boy 18 years of age, and he was born in the U. S. He was admitted December 25th, and was brought to the hospital in an ambulance one hour after receiving the injury. During an altercation he had been stabbed in the left chest. On admission he was well nourished, and in fair general condition, but he was suffering much from dyspnoea and pain in the left side. His pulse was rapid, and he did not have any hæmoptysis after coming into the hospital, although he did have before. His surface was moist and cold, and he was in a condition of partial shock, but stimulants were administered until he improved. An examination showed an incised wound in the left chest, half an inch in length, and located between the fifth and sixth ribs, and one inch to the inside of the axillary line. Friction rales could be heard all over the upper part of the chest in front, and sonorous rales behind; and at the angle of the scapula was obtained bronchial voice and bronchial breathing, and there was dulness on percussion at the same point.

Dec. 26th.—Patient has slight fever, but the pulse and respirations are good, though rather rapid.

Dec. 28th.—To-day he has no fever, but the respirations are very rapid, ranging from 38 to 55 per minute. His pulse is good. Last night he could not get any refreshing sleep.

Dec. 29th.—To-day his respiration is 28, pulse 88, and temperature 99°. Since the last examination the left chest has become very prominently distended below the angle of the scapula. There is bronchial voice and breathing over the upper portion of the chest, and

dulness or percussion, and there is flatness below the angle of the scapula.

Dec. 31st.—Percussion elicited a boardy note in the subclavicular region to-day. The left chest was aspirated just below the angle of the scapula, and blood alone came away.

Jan. 3d.—The cardiac pulsation shows that the heart is displaced to the right, and the signs of compression of the thoracic viscera are well marked.

Jan. 5th.—To-day he has had a slight degree of fever. Early this morning his temperature was 101°.4, but it fell later on to 100°.4, with a pulse of 90, and respiration 36.

Jan. 9th.—To-day his respirations were labored and 34 to the minute, with a pulse at 112. The chest was punctured with a hypodermic needle below the angle of the scapula and pus and blood were drawn off.

Jan. 12th.—The chest was again punctured to-day, and pus of a purer character than that obtained at the last aspiration was drawn off.

Jan. 13th.—The difficulty in breathing was very great to-day, and his general condition was worse. So he was aspirated, and seven ounces of pus were drawn off. This gave him great relief from the distressing pain and dyspnoea from which he was suffering.

Gentlemen:—I think that the time has now arrived for establishing permanent drainage in the left side of the chest, and I will now proceed to do this after the method of Lister. I have collected in the pleural cavity in sufficient quantity to displace the heart so that the apex pulsates at the right of the median line, and the lung is pushed upward and forward. I shall probably open the chest in the space between the sixth and seventh rib, at a point a little posterior to the axillary line. I shall select a place as low down as possible, so as to give more complete drainage through the wound, as he lies upon his back or side. This operation is not so serious as one as it was formerly, for it is now attended by better success than before the Lister spray and dressings were used. There is one thing to be avoided in puncturing the chest, and that is the wounding of the intercostal artery which lies in a groove on the under border of the rib. So, to escape hemorrhage, you must keep near the border of the next rib below, or in the middle of the space between the two ribs.

Operation.—The chest was first punctured by a hypodermic needle in the sixth intercostal space just behind the axillary line, and pus was obtained. With this point as its centre, an incision was made with a small scalpel, one inch in length and in the line of the ribs, and by repeated strokes of the knife the muscles were divided until the pleura was nearly reached. Then the finger of the left hand was inserted, so as to feel the pleura, while the dissection was continued more carefully until the pleura was reached, when a free incision was made into it. Immediately pus and blood gushed out, but a drainage-tube was quickly introduced, and through this the muddy colored pus came away in jets, the flow being momentarily increased at each inspiration. In this way sixteen ounces of pus were drawn off. After the flow had ceased, the drainage-tube was secured in the wound by sutures, and about two inches of it were left projecting. A clamp was now placed at the extremity of the tube to prevent its leaking while the dressing was being applied. These consisted of carbolic gauze, borated cotton, and oakum moistened by the carbolic acid spray, and confined by a roller bondage. The drainage-tube was allowed to project through all. Carbolic spray was kept playing upon the parts throughout the whole operation.

HYDROCELE.

The next patient is W. M., a farmer, 46 years of age, and a native of New York State. He applied in person for admission five days ago. He gives no syphilitic or alcoholic history, and his family history is good. Three years ago he strained himself by lifting a heavy weight, and one month after he noticed that his scrotum was becoming swollen. The scrotum has become more swollen and painful up to the present date. The growth of the swelling was from below upwards, and within the last three months the scrotum has become very tense. On examination of the parts, on his admission, showed the presence of a large, tense, fluctuating mass, which gave a flat percussion note and was translucent except at its posterior inferior part.

Gentlemen:—This condition of hydrocele is sometimes seen in very early life. For, before birth and during foetal life, as the testicle descends into the inguinal canal two folds of peritoneum are brought down with it and are carried through the canal into the scrotum. But at birth the communication with the main cavity of the peritoneum is supposed to close by the adhesion of the two serous surfaces in the cord together. But this obliteration does not always take place, and then the conditions are such as give rise to congenital hydrocele of the cord, or the free passage of a fold of intestines into the scrotum.

In this case the examination showed the presence of a translucent fluid in the sack, which was one-third larger on his admission than it is now. This diminution in size has resulted, as is usually the case, from the simple puncture of the sac with a hypodermic needle which was introduced to see what the contents really were. I have seen a great reduction in the size of the scrotum follow this simple procedure, but the swelling always recurs again. On admission this tumor was the size of a child's head and very tense; but it is not now at all tense, and I presume that if left alone for a few days longer there would be still more absorption of the fluid. But as it is sure to recur, it is desirable to obtain a radical cure if possible. So I will puncture this sack and empty it, and then inject two drachms of strong tincture of iodine, and let as much of it as will remain in the sac, in order to set up a sufficient amount of plastic inflammation to cause its obliteration.

There are two precautions to be observed in performing this operation. One is, to be sure that you thrust the trocar well into the cavity, and not merely between the muscular layers of the scrotum; and the second is, to be sure to keep the canula well into the sac while it is being emptied, so that none of the fluid can get into the cellular tissue.

Operation:—The lower and posterior portion of the scrotum was firmly grasped by the left hand of the operator and compressed so as to make the anterior part tense, then with the right hand a trocar and canula were plunged into the anterior portion of the sac at the lower part of its middle third, and a little to the left of the median line. The instrument was first directed inward and then upward, and care was taken to avoid wounding the testicle or any large veins. The trocar was then withdrawn and the fluid was discharged through the canula, which was firmly held in place lest it should slip out as the scrotum contracted during the process of emptying. After the flow had ceased 23 of the tincture of iodine were injected through the canula into the cavity of the tunica vaginalis, and the scrotum was then kneaded thoroughly with the hand so as to bring the fluid in contact with every part of the sack, and all the iodine solution was

allowed to remain which would. The canula was then withdrawn, and the scrotum was sponged off, and the point of puncture was closed with a strip of adhesive plaster. Sixteen ounces of fluid were drawn off at this tapping.

To-morrow or next day the scrotum will probably be found to be as large as it was before this operation, for it will become filled with an inflammatory effusion set up by the irritation of the iodine. But this will soon be absorbed again, and in all probability there will be no return of the effusion.

There are other methods of operating which are sometimes employed to bring about this same end. Thus wine, or a solution of the sulphate of zinc, or other stimulating fluid is sometimes injected instead of iodine. Or a small seton may be passed into the tunica vaginalis so as to set up an adhesive inflammation which will result in obliteration of the sack. Another proceeding is to cut out a portion of the wall of the sac, and then return it to its place, and treat it with a dressing of carbolized cotton. But all of these operations are based upon the same idea, which is to set up a different kind of inflammation in the sac which will make such a change in the secreting surface that hydrocele fluid can no longer be formed, or else the sac itself will become obliterated by the glueing together of its walls. The method of injecting the undiluted tincture of iodine, which you have just seen, is, I think, attended with the best results.

AMPUTATION OF THIGH.

The next patient is a boy, J. B., six years of age and unmarried. He was admitted Dec. 10th, 1881, and was brought to the hospital in an ambulance a short time after the occurrence of the accident. His right leg had been run over by a railroad car. He appeared to be well nourished and his surface was warm. His temperature was 100° and his pulse feeble and rapid, and he was suffering great pain. An examination showed a lacerated wound of the right leg, extending from the internal condyle of the femur to the lower part of the leg. Anteriorly the laceration extended along the crest of the tibia up to three-quarters of an inch from the knee-joint, and the bone was laid bare below. There was a fracture of the tibia, but there was no displacement. A sort of pocket had formed over the crest of the tibia. The deep muscles upon the inner side of the leg were bruised and lacerated. The tarsus was much contused. There was a fracture of the fibula in its upper third, but it was not compound. The foot was cold, and the dorsalis pedis artery could not be felt. His pulse became weaker and weaker, and so it was not thought best to perform any operation at the time. Soon after this I saw him, and contrary to my judgment, I tried with the advantages which the Lister dressing offers, to save the limb. I have done this several times in apparently hopeless cases, with good success. But often I have been able to save the limb. The dressings were applied in this cases; but after three or four days he began to lose ground rapidly, and so I determined that the best thing to do was to amputate. I tried to save as much of the limb as possible, and I therefore made a knee-joint amputation. Besides I thought this would leave a better stump and be attended with less shock than an operation higher up. I made the best flaps I could under the circumstances, but they were necessarily short and fitted over the end of the bone rather tightly. All went on favorably for a day or two, but soon the pressure of the bone and the contraction of the flaps cut off their nutrition and they sloughed away. But then

new granulations sprang up over the eroded end of the stump, and these are now in a healthy condition, but they have no covering of skin. It is possible that if left to themselves, these granulations might become covered with cicatricial tissue. But this would be of no use as a point of support for an artificial limb. So I think it is best that I should now amputate this limb higher up, say at the junction of the middle with the lower third of the thigh; and I will make antero-posterior flaps, of skin and superficial tissue only, and the anterior will be longer than the posterior flap.

Operation.—An Esmarch's bandage was applied, in order to force the blood out of the limb, and then a tourniquet was placed over the femoral artery and the bandage was taken off. The anterior flap was then made by cutting through the integument with a scalpel, and by making the incision in a curved direction from a point upon the inside of the thigh just below its middle, downwards and outwards to a corresponding point upon the outside of the thigh. This anterior flap was then dissected back about two inches, in such a way as only to include the skin and superficial areolar-tissue. The lower border of the flap came to within half an inch of the eroded granulating tissue, and it was about three inches above the end of the stump. A similar flap, but shorter, was now cut out upon the posterior aspect of the limb. Then while these flaps were strongly retracted by an assistant, a long amputating knife was carried with a single sweep around and through all the muscles down to the bone. Then all the muscles were retracted while the bone was sawn through at as high a point as possible, and the soft parts were cleared away with a scalpel. The femoral and profunda arteries were now secured by catgut ligatures tied in three knots: An assistant then controlled the femoral artery with his thumb while the tourniquet was removed, and all the remaining bleeding points were secured by torsion or ligatures. All irregularities in the flaps were then trimmed off and the whole stump was sponged and douched with carbolized water. A drainage tube was next inserted crosswise and beneath the bone, and the flaps were brought into a position over it and the edges united by interrupted sutures placed one-third of an inch apart. The drainage tube was cut off so that about one inch projected from each corner of the wound, and over all a Lister dressing was applied.

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK.

SERVICE OF

DR T. M. MARKOE.

LIPOMA ON THE BACK.

The first case I present to you, gentlemen, is one, the diagnosis of which is not absolutely certain, though there is not much doubt about it. This man has an almost flat tumor on his back, at about its centre, but a little to the right of the spinal column. It resembles an inverted saucer in size and shape, and presents on its surface the puckered appearance which is quite characteristic of fatty growths. He says he first noticed it a few months ago, and then he found it of the same size as now. It caused him no inconvenience,

and so he was not aware of its presence, though it had already been there a very long time, probably, when he discovered it. It is therefore one of the slow-growing tumors, and in my judgment, belongs to the class of fatty growths. Its peculiar features are its flattened appearance, and the fact that it adheres closely to the integuments above it. But probably his lying on it for years, has prevented its taking a globular form, and has caused its flat appearance, and the pressure brought thus to bear upon it, has caused its firm adherence to the skin. It is now becoming painful, and so I have advised its removal.

I begin by making a diagonal incision across the whole tumor from below upward. This direction will give a better opportunity for drawing the wound than if it were made longitudinal or transverse. After getting through the skin, I find the tissues very tough, and adherent to the capsule. All fatty tumors have more or less of a capsule, and my aim is not to cut this if possible, but to pass around it and separate it from the surrounding tissues. But these are so adherent to the capsule, by reason of the trabeculae which it sends off, and which cause the puckered appearance, that I find this very difficult. It is often difficult to follow the line of demarkation between the capsule of the tumor and the surrounding fatty tissue with which some portions of it seem be continuous. So I find it here, and I must therefore come as near to this line as possible. I have removed these tumors where I did not know whether I was cutting the diseased or the normal tissue. But in these cases, if all that looks like the tumor is removed, it does not usually return. A soft, fatty tumor of irregular shape, with its capsule, were thus taken out, and the wound washed with carbolized water and dressed antiseptically.

In dressing a wound after operation, the rule followed in this hospital is, to ligature every bleeding point with silk. But I am less solicitous about tying small arteries, where I can bring pressure to bear in checking hæmorrhage so favorably as in this case. I adopt the method of drainage here, which I am accustomed to. The new idea about sepsis and antiseptics is now accepted throughout the world. Mr. Lister introduced the antiseptic method to our notice, and he is therefore deserving of great credit. But we have learned by experience that some of the details of his elaborate method may be dispensed with. The carbolized spray was the first to be given up, and it is now rarely used. The frequent application of antiseptic fluid to the part answers every purpose. Many surgeons now cover the wound with only a light dressing of carbolized gauze, and it has not been proved yet that this modified dressing is not as successful as the bulky applications of Lister. A modification for cleansing and draining the wound, which I have adopted is, to leave in the wound a rubber drainage tube, with three holes cut into it near its centre. Both ends are left projecting for some distance, and the wound is closed over the tube with sutures. When I wish to cleanse the wound I simply attach a common Davidson's syringe to the upper end of the tube, and inject a one in forty solution of carbolized water, which passes through the three holes in the tube into the wound and then passes out at the lower end of the tube. To cleanse the wound more thoroughly, by simply stopping up the lower mouth of the tube with my finger the water is forced through the three openings and thus reaches every part of the wound, and when I remove my finger the wound is drained again. This method I call "through drainage," and it keeps the wound thoroughly drain-

ed and cleansed from all decomposing and septic materials. I, myself, am far from sure that the antiseptic properties of carbolic acid cover the whole ground in explaining its action in preventing inflammation and suppuration in wounds. I am inclined to think that it has more than an antiseptic action, and that it prevents inflammation by a direct local action on the tissue of the part. My reasons for believing this are because carbolic acid when applied directly to a nerve is found to paralyze it, and applied in non-caustic doses to the skin it destroys it rapidly, a one part in twenty solution accomplishing this in one night. These facts seem to show that it has some local effect upon the tissues, probably through the medium of the nerves, which diminishes the activity of the vital processes. And for this reason the tissues do not take on an inflammatory action when moderate non-caustic applications of carbolic acid are made. And I think that much of the good that carbolized applications do is because of this secondary action. I have found nothing which will keep down inflammation better. Though thymol is a better antiseptic yet it has no such effect as this, and so its use has been given up. I believe in keeping carbolic acid in contact with the wound during all that early period when it is liable to inflammation. It is the first few days after an operation that we dread. I do not think it necessary to make use of all the extensive coverings which Mr. Lister applies, for the purpose, as he says, of preventing the bacteria from crawling up under the edges of the dressing, and thus gaining access to the wound. This may prevent them, but I prefer to kill them by injecting a little carbolized water into the wound about every three hours. My object is not to exclude, but to destroy the bacteria. So I simply leave a drainage tube in the wound, and then apply a thin dressing of antiseptic gauze which is held in place by a roller bandage.

STONE IN THE BLADDER.

GENTLEMEN:—I show you to day a little boy about eight years old who presents the symptoms of stone in the bladder. These symptoms run back about one year and are those which ordinarily indicate the presence of a stone. He has had frequent desires to micturate, and passes bloody urine, and there is a tendency to pull at the prepuce. He has prolapse of the anus from straining at stool. His appetite is fair, but his general health has deteriorated. These symptoms seem to indicate some source of irritation in the bladder, but they are not in any case to be positively relied upon. The final test is to pass a sound into the bladder and search for the stone; and then when found its size, shape, hardness, and position should be determined, and also whether it is loose or attached to the walls of the bladder.

On passing the sound on this boy the other day I seemed to touch a strong or roughened surface at the right anterior aspect of the bladder but on moving the sound about I found no indications of a stone elsewhere. So I conclude that this one is fixed to the walls. A stone may become lodged and fixed in the folds or interstices of the mucous membrane of the bladder, which from irritation may become so thickened as to surround and conceal the stone, or the concretion may be so soft that it can not easily be appreciated by the sound. I am not quite certain of the condition in this case, so I will pass another instrument and make a new examination before I proceed to perform the operation for lithotomy. I take a small abruptly curved instrument, and on passing it carefully into the bladder I touch almost immediately what gives

to my hand the impression of a stone, but it is not very distinct.*

Dr. Sands then passes the sound, and he also feels a roughened surface, and it gives a very doubtful sensation of a stone. Each surgeon then makes a careful bimanual examination through the anus and bladder, and by pressing down the anterior abdominal wall. But nothing more definite could be discovered.

Gentlemen, I do not find sufficient evidence of a stone here, to warrant me in opening the bladder at present. I feel a roughness, which I am not sure is not due to a foreign body, but it may be due to some independent circumstance. The only way to proceed in such a case is to wait, and watch for any circumstance which will clear up the diagnosis. If there is a stone it will increase in size, so that it may be appreciated and removed. Such doubtful cases often present themselves to the surgeon, and some men of reputation, it is reported, have operated, and then found no stone. On the other hand eminent surgeons have allowed a stone to pass by unnoticed, and have referred the symptoms to cystitis. I myself once found a stone which had thus been overlooked by other surgeons; but it was merely because the conditions had changed meanwhile. So I will conclude by giving you two suggestions to be observed in cases like this. First. Never come to a hasty conclusion as to the presence or absence of a stone. Second. Never operate when there is the least doubt as to the diagnosis.

SELECTIONS FROM JOURNALS.

BEETZ ON THE TREATMENT OF SUBCUTANEOUS SUPPURATION AND OF GLANDULAR INFLAMMATIONS.*

As the inflammations of glands, especially those of a scrofulous nature, their chronicity, caseation, and tendency to induce tuberculosis, are at present occasioning much discussion, it is here unnecessary to dwell on the pathological significance of these processes.

If we inquire which method of treatment is the most correct, we find, on consulting the handbooks, that a healthy atmosphere, good nourishment, and constitutional treatment generally, are most usually prescribed. Sometimes we cannot treat the indications at all, as the patients may be only brought to us when already glandular inflammations, diseases of the joints and bones, and skin affections, are well developed, or other troubles are in the way. The scrofulous habit has been described frequently as consisting in thickened upper lips and nose, sodden appearance of the face, and swelling of the neck; but these are really symptoms of the disease, of obstruction in the lymphatics and of venous obstruction. If we consider the time that an opened suppurating gland continues discharging a watery sanious pus, and after how long a period only a tendency to cicatrization is evident, or caseous metamorphosis has begun, we can certainly not condemn a method of treatment which is calculated to bring about the early resolution of the inflammations in question. It is now four years since Kappesser (an army surgeon in Darmstadt) described his method in the *Berl. Klin. Woch.*, No. 6, 1878. It seemed to meet all moderate requirements; and he begged of his colleagues to publish the results which they obtained by using his line of treatment. Numerous corroborations by Hausmann, Klingelhofer, and Kolhman, soon appeared,

* *Aerztliches Intelligenz Blatt*, No. 27, 1882, July 4.

Kappesser himself extending the indications in a more recent publication.

One of the first observations he made was in the case of a badly-nourished, scrofulous little girl, whose neck, especially on the right side, was immensely swollen, and discharged copiously foetid pus from six or eight fistulous openings, there being also corneal ulceration, and no improvement by previous treatment. Recollecting a case in which, by ordering the inunction of soft soap for scabies, the phenomena of scrofulosis disappeared together with the scabies, Kappesser adopted this method once more; and with such success that in four weeks the unsightly swellings had been reduced to a few small easily movable glands about the neck, and the inflammation of the eye had subsided, leaving only slight haziness of the cornea. That this was no accidental result, was proved by the fact that the child returned to its bad condition during a period in which the physician had to be absent, and the foster-parents discontinued the inunction; and also that the moment it was resumed, improvement followed rapidly. When seen two years afterwards, the child was healthy and fresh in appearance, the happiness of the cornea was reduced to minimum and only perceptible on one eye, sight being scarcely influenced; the cicatrices on the neck were smooth and firmly healed, with little contraction. Recently Kappesser has gone a step further, and treated phthisical patients with pleuritic exudations, hæmoptysis, night-sweating, etc., in a similar manner, with the result that there was cessation of the pathological processes, increase of body-weight and return of the capacity for work (*Berl. Clin. Woch.*, 1882, No. 5.) He particularly wishes it to be understood that he has not invented a cure for phthisis; but that he has only found his method useful in certain chronic exudative and ulcerative processes.

Beetz has been able to give some results which have been achieved in von Ziemssen's clinic at Erlangen since 1873, in the treatment of swellings of glands with soft soap. In that year, he ordered a very scrofulous child to be rubbed several times with soft soap, as in no other way could cleanliness be kept up; and as he observed that the hard masses of glands vanished very rapidly under this method, he has used it very often since, and can corroborate Kappesser's observations. In addition to scrofulous tumors as well as inflammation in children, he has also used it in the lymphadenitis of adults; and, finally in every case of subcutaneous inflammation, using different preparations of soap as the case required. To illustrate the method, a case is related. In February 1881, he was called to a child a few weeks old, which had high fever, and was covered with abscesses in various stages of development. In the left axilla an abscess had already burst; and the skin over this part of the thorax was so infiltrated, that the child hardly dared to breathe with this side. She was kept very clean, and had been properly nourished, but for three days there had been diarrhoea and loss of appetite. Without much hope, as the prognosis was undoubtedly bad, warm stupes, to be applied to the left thorax, were ordered, moistened with spiritus saponis kalinus. On the following day it was found that all the larger abscesses had disappeared, the skin-infiltration after this was not to be found anywhere, and of the abscesses in the course of development there was nothing to be seen except little pustules, which had either discharged their contents or showed a small apex about the rupture. Breathing had become normal and three days later it was not necessary to see the child any more. It is now perfectly healthy. The author does not imagine that he saved this child's life by his

treatment; it might he says, have recovered without any medication whatever, but it certainly would not have done so in as short a period of time. A whitlow, if not already too far advanced, yields very promptly to the influence of warm applications of spiritus saponis kalinus.* But one of the most satisfactory of affections to treat is bubo; and since Beetz has introduced his treatment, he has never found it necessary to treat buboes otherwise.

For the last nine years his treatment in certain affections has been as follows. For chronic glandular indurations or abscesses in places in which it is difficult to apply dressings, he uses inunction in the evening with green soap, which is washed away the next morning, and repeated during three or four days with a subsequent interval of a day or more, according to the sensitiveness of the skin.

For acute glandular inflammations, whitlows, and abscesses in easily accessible positions, linen rags are steeped in spirit of soap, applied to the part, and covered with gutta percha paper. These dressings must be accurately applied, if they are to fulfil their object. For example, in inflammation of the inguinal glands, a good result can be expected only if the surgeon himself fixes the dressing with a spica bandage and safety-pins, not leaving it to the skill of the patient himself. There will be, not a tedious suppuration, but a very small abscess, with little or no trouble in walking (as there will be no infiltration). If we have to deal with a very delicate skin, or wish to avoid the unpleasant odor of the spirit of soap, the use of fluid glycerine soap is indicated, or sapo kalinus albus may be used, or even the creme d'amandes ameres. An elegant preparation may be made by using white soap instead of green in the manufacture of the spiritus saponis kalinus, and adding a little carmine, previously dissolved in a drop or two of liquor ammoniæ, which makes it very attractive to the eyes of children.

Reference has been already made to Kappesser's results; and Hausmann comes to the conclusion that even in very old glandular tumors and diseases of the lungs, pleura, mediastine, or even meningeal glands, this treatment meets with success, in so far as these diseases are complications of the glandular affections of the neck. More astounding still are the results published by Kollmanns (who is surgeon to the female prison in Wurtzburg), which have particularly been obtained in the treatment of caries and periostitis. Some of these cases he showed to Professor von Bergmann, and amongst others published in the *Berl. Klin. Woch.*, 1881, No. 19, he relates a case of a bed-ridden patient, the subject of caries of the sternum and vertebrae and another of the tarsal bones, both of which were cured by inunction of soap, and were enabled to return to labor. Twice a week in the evening, 15 grammes of green soap was rubbed on, and washed off after half an hour; in some cases the patients were able to walk about whilst under treatment. The advantages of such a cheap method of treating diseases like scrofula, which exists for the greater part amongst the very poorest classes, are quite obvious.

If we now examine into the method of the operation of these soap inunctions, we find, first, that soap cleans the skin by being split up into acid and basic salts by abundance of water. The excess of alkali in these salts combines with the fat of the skin, forming soaps which can be washed off by water. The capability of

* This preparation is a solution of two ounces of green soap in an ounce of alcohol, to which, after filtration, is added two drachms of spirit of lavender. An elegant preparation is obtained by dissolving the soap in eau-de-cologne.

softening the cuticle rests with the alkali which is set free; and that this capability is possessed to a greater degree by potash than by soda, is known to us from microscopic observations, as well as from the fact that potash-lye is used in the process of tanning; hence it is best to use potash soaps only, and the potash soap-spirit.

The action of this inunction of soap on subcutaneous collections of pus can be readily explained by the softening which the caustic potash exerts on the skin; this is more energetic when the application is in a moist form (fomentation), as this brings about an increased local blood-supply. The tension in the parts around the purulent collection relaxes; blood-stasis does not go on to diapedesis of white cells, but these can circulate in the blood, the rate of which has been quickened. The spot in which there is most pus has not the tension around it as before, and the lessened amount can easily push through the softened corium.

Sinitzin's beautiful experiments also prove that, in addition to the softening of the skin, a dilatation of the vessels takes place, which acts as a check to inflammation. In Brücke's *Vorlesungen*, Band ii., p. 81, Sinitzin's method of treating an artificial hyperæmia is thus detailed. If, during an ophthalmia, the result of cutting the trigeminal nerve, the superior cervical ganglion of the sympathetic be torn out, the inflammation at once ceases if not already too far advanced. If, on the other hand, the ganglion be first removed and the trigeminus then cut, inflammation does not take place at all; and, if both eyes be irritated by burying very fine glass threads in them and the ganglion be removed on one side, the healthy side will much more easily become inflamed than the side deprived of its ganglion. Hyperæmia and inflammation are not convertible terms: in the former, a greater amount of blood collects in the vessels; in the latter, excluding all other processes, it is blood-cells which collect in the vessels. In the experiments we see an inflammation in process of development, and we perform an operation which induces hyperæmia by itself, and this operation is a remedy for the inflammation which is the result of another operation (Brücke).

The author has as yet no results to offer concerning cold abscesses. The reaction in inflamed and chronic indurated glands must be the same here; the relaxation of tension gives opportunity for decrease in size and absorption of the contents of the gland.

Caustic potash is capable of destroying the structure of the tissues and penetrating deeply, as no other chemical caustic can; and, under its influence, albuminous materials are dissolved and can be carried away by the blood or lymph-streams. It is probably in this way that a cure is brought about in suppuration of bone.

The reason why its influence should extend only to pathological products and not cause absorption in organs where it might not be desirable, is easily to be found in the fact that the action of the alkali can only be induced where there is not an abundant supply of blood to immediately dilute it; this condition being most easily fulfilled by abscesses and inflammations with stasis. According to this, it may be thought it would be better to use solution of potash at once; but Donders has proved that, although the elementary tissues are softened by strong solutions of caustic potash, yet they are not destroyed, whilst the weaker solutions have the power of attacking these; in any case, the fat of the soap acts as a protective to the skin, and perhaps prevents irritation.

Hausmann has very properly said that we should not

neglect to give most careful attention to even the very slightest scrofulous affection, especially of the lymphatic glands. We must, therefore, continue to use those remedies which have been found of service, as cod-liver oil, baths at Heilbrunn, Tölz, or Kreuznach and Kohlgrub; but we must also devote some attention to a line of treatment which has already a very good history in the treatment of scrofulous and tubercular affections, and which is without the danger of any pernicious after-effects; and this is the inunction of various preparations of soap.—*Lond. Med. Rec.*

KOCH ON DISINFECTANTS.

R. KOCH (*Mittheil. der Kais. Gesundh.*, 1881, Band x: *Rep. der Analyt. Chemie.*, 1882, No. 1) has tested the ordinary disinfectants in three ways. 1. To ascertain whether a particular disinfectant is capable of destroying the resting-spores of bacilli (the latter form the greater part of pathological bacteria), which are the most difficult of all forms of life to destroy. Every disinfectant is to be removed from the list of the disinfectants which may be generally used in infectious diseases, when it cannot destroy the developing power of the resting-spores. The resting spores of splenic fever were generally employed for experiment. 2. To ascertain how the disinfectant behaves with regard to more easily destructible fungi, yeast, bacteria, bacilli, and micrococci. 3. To ascertain whether the disinfectant is capable of arresting the development of micro-organisms in suitable alimentary beverages.

Carbolic Acid did not prove itself to be a sovereign disinfectant. A 5 per cent. solution only sufficed after two days to arrest the developing power of splenic fever spores; while a 1 per cent. solution destroyed in two minutes the bacilli themselves of splenic fever. A solution of 1 in 850 sufficed to check the development of the latter. A soaking, five to seven times repeated, in a 5 per cent. solution of phenol, was sufficient to only retard the development of the resting spores of splenic fever. The fact is very noticeable that carbolic acid in oil, or in alcoholic solution, is absolutely without effect on the bacilli and spores of splenic fever. The latter, after remaining 110 days and 70 days respectively, in a 5 per cent. solution of carbolic acid in oil and in alcohol, were repeatedly found intact. The same was the case with *Salicylic Acid* and *Thymol*. In the form of vapor, better results were obtained with carbolic acid, only at higher temperatures. But even the action of carbolic acid vapor at 75 deg. Cent. for two hours, failed to destroy the resting spores completely. Chemical combinations of carbolic acid with other bodies, or cheap raw products containing carbolic acid, were less efficacious than the pure preparation. A 5 per cent. solution of zinc sulpho-carbolate destroyed the resting spores of splenic fever in five days; a 5 per cent. solution of sodium phenate (carbolate) in ten days merely reduced their power of development, while sodium sulpho-carbolate failed to do this within the same period of time. Crude wood-spirit, and pyroligneous acid in a concentrated state, destroyed the resting spores in twenty and two days respectively; while wood and coal-tar, in a moderately-concentrated condition, had no effect.

Sulphurous Acid.—Even under such favourable conditions as are not attainable in practice, sulphurous acid fails to destroy all minute living organisms. The experimenter says this is a very uncertain disinfectant, as is also calcium bisulphite.

Zinc Chloride.—In spite of the prevalent opinion that a solution of 1 in 1000 of this agent is a safe disinfectant, it was found that even a 5 per cent. solution failed within a month to weaken the developing power of the splenic fever spores.

After testing various other substances, Koch concludes that the only certain disinfectants are chlorine, bromine, and corrosive sublimate; and that to arrest development, only corrosive sublimate, certain ethereal oils, thymol, and allyl-alcohol are available. Bromine vapors are recommended for confined spaces. Chlorine is a little less satisfactory, but more so than was formerly supposed. In all cases where neither gases nor heat are available, corrosive sublimate, and indeed all the mercurial salts are recommended. A solution of 1 per 1000 of the mercuric chloride, sulphate, or nitrate, killed the resting spores in ten minutes; and, indeed, simple moistening of the earth containing the spores with this solution is sufficient to arrest their power of development. Solutions of 1 in 1000, to 1 in 15,000, are sufficient to kill micro-organisms. The poisonous action of such diluted solutions may be disregarded. The cost alone is far below that of carbolic acid.—*Lon. Med. Rec.*

AUDHOUI ON CLEANSING OF THE DIGESTIVE CANAL AND WASHING OUT OF THE STOMACH.

DR. AUDHOUI, in his recently published work (Paris, Delahaye et Lecrosnier, 1882), proposes to demonstrate how cleansing the stomach and washing out of the intestines are indispensable to health, and become necessary for the prevention and cure of a number of diseases. In the first chapter of his treatise, Dr. Audhoui speaks of the cleansing of the digestive canal by defecation. He passes in review normal defecation, evacuation, assisted by laxatives, and especially by Cape aloes. On this remedy, he records the varying opinions of experts, some of whom assert that it stimulates and induces the flux of rectal mucus and brings on hemorrhage, whilst others maintain that it cures sanguineous congestion and hemorrhoidal flux and irritation. The conclusion drawn from these two opinions is, however, not apparent. The author admits both of them, applying them to different conditions. What M. Audhoui very characteristically terms the toilette of the intestines is of the first importance in apoplectic, hypochondriacal, and nervous patients, and in women suffering from uterine diseases; for their health is seriously compromised by the accumulation of fecal matter in the intestine.

In the second part he studies vomiting, a less natural process of cleansing than defecation, and often artificially induced by the medical attendant. Vomiting is indicated in what is termed "the gastric condition." The author quotes several examples of this gastric condition, cured by the administration of emetics, and studies it in its relations with variola and some other diseases.

The third chapter treats of the conditions which require, according to circumstances, the one or the other kind of cleansing. The author here studies indigestion and dyspepsia, and cites Professor See, who writes, in his treatise on dyspepsia, that it can be nought else but defective chemical operation; an opinion also agreed in by M. Audhoui, who then indicates the treatment for indigestion. When the pa-

tient revolts against liquid purges, he gives the following purgative pill: Powdered jalap, white magnesia powder, of each 86 centigrammes; volatile oil of cloves, 11 drops. This is divided into three masses, enclosed in medicated envelopes. These are taken at three intervals of a quarter of an hour each.

He then studies the stomach compounds, which he divides into three stages, those which prepare the stomach and put it in working order; those which support the stomach and steady its action; finally, those which complete the action of the gastric juice. The author places broth in the first place, and makes an interesting study of it; in the second, condiments, and natural and artificial mineral waters; in the third digestive ferments, brandy, acids, aromatics, and balsams.

In the third division of the work the author treats of washing out the stomach. He minutely describes its mechanism, and gives a very exact description of M. Colin's stomach-pump, of the stomach "deuto-siphon." He then proceeds to the study of the double-current gastric sound invented by him. This sound is composed of a tube to conduct the water and of a stomachic siphon united together; the siphon is larger than the tube which conducts the water. The sound is introduced, the tube is fixed on a reservoir of water, and the long arm of the siphon falls into a basin at the side of the patient. The tap of the reservoir is opened; the patient by a slight effort—the reflex action of coughing—charges the siphon, and the current is established. It is indispensable that the pressure should be powerful, on account of the smallness of the calibre of the small tube. The action of the sound is regulated in such a manner, that more water leaves the siphon than reaches it by the tube. In this way the stomach is not congested.

Dr. Audhoui afterwards studies the circumstances which indicate the necessity for washing out the stomach; poisoning, alcoholic gastritis, the dyspepsia of pregnancy, accumulation of decomposed matters in the stomach, dilatation of the stomach, in reference to which he quotes two well recorded cases of Dr. Balzer and M. L. Dericq. Finally, he studies the regimen suitable to cleansing the stomach by washing out, and gives the preference to animal food.—*Lon. Med. Rec.*

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CANCNUM ORIS.

Dr. C. J. McGuire, of this city, read before the Yorkville Medical Society, Sept. 2, a paper on Cancrum Oris, in which the Doctor claims to have discovered a specific for this terrible malady, in the local application of the sub-nitrate of bismuth. If this claim shall be sustained by future experience it will prove to be one of the most important discoveries in therapeutics.

The cases related by Dr. MacGuire were remarkable, both as regards numbers and results. As reported, the essential facts are as follows:

About the latter part of January last, 19 children were admitted to the Refuge in charge of the Sisters of St. Dominick at Sixty-third street and Second avenue, of which he is the medical officer. The children were in a weak and debilitated condition occasioned by the bad and insufficient food furnished them, and the polluted atmosphere in which they were confined in an institution in the lower part of the city, from which they were removed when the establishment was condemned by the Board of Health.

A few days after their admission into the Refuge four of them were attacked with the malady and three of these cases proved fatal.

After the lapse of a few weeks a number of new cases occurred. Dissatisfied with the results of his treatment in the four first cases, he determined to try the effects of sub-nitrate of bismuth applied externally to the affected parts. The result was the immediate

improvement in the appearance of the ulcers, and eventually a complete cure. From the first appearance of the disease in the institution up to the present time 24 cases were treated, including the 4 that proved fatal; out of 20 cases treated with the sub-nitrate of bismuth only 1 resulted fatally.

That the sub-nitrate of bismuth proved itself to be an excellent local application is sufficiently plain; and judging from the similarity in their action in cases of chronic diarrhœa and dysentery, it is probable that the sub-carbonate of bismuth would have had the same effect. Both of these agents have long enjoyed an excellent reputation in such cases; and their efficacy has probably been due in a great part to their absorbent and antiseptic properties, by virtue of which they neutralize or render unirritating certain acrid secretions. In the same manner they may be useful as applications to a sloughing ulcer. But we are hardly convinced that in the sub-nitrate of bismuth has been found a specific for this usually fatal malady, and especially because the existence of the malady depends primarily and essentially on constitutional causes. As in the cases related by Dr. MacGuire, it is almost invariably the result of a general anæmia induced by poor diet and a lack of pure air.

It may be proper to add that, while we admit without qualification its efficacy in these reported cases, as a local application, there remains in our minds a suspicion that in the case of the later examples, the children having already had the benefit of greatly improved hygienic conditions, their recovery was due quite as much to this condition as to the subnitrate of bismuth.

We trust that nothing we have said will be construed as an intimation that we do not appreciate Dr. MacGuire's valuable contribution. We congratulate him on his happy experiment; and if the opportunity is ever given us, we shall try the subnitrate of bismuth, and shall advise others to do the same. Indeed we think it may properly be tried in other more or less analogous ulcerations. Possibly it may prove even more useful than that other recent and excellent local application, iodoform.

OBSCENE LITERATURE.

We find no excuse for a most disgusting account of a case of masturbation in a female, contained in the last number of the *Buffalo Medical Journal*. Everything connected with the report of the case is in violation of good taste, and indeed,—we must speak plainly—in violation of common decency. The patient was a poor unprotected, diseased and half crazed girl, who, finding it impossible to cure herself of her diseased sensations, had attempted suicide; in consequence of which attempt she fell into the hands of a doctor, who secured her confidence, and obtained from her a private exhibition (or *seance*) of her peculiar mode of

procedure. After this private exhibition, he published the case in revolting detail and in glowing language; giving at the same time the initials of the name of the poor demented girl, her age and residence; so that hereafter, whether she recovers or not, she may be pointed at and shunned. She sought to bury herself by suicide, but she failed, and the doctor has burned the scarlet better into her bosom.

This is not the first time we have seen offences of this kind in medical journals, under the guise of science, but which have nothing to do with science; and really belong only to that class of literature which the law is seeking, through the aid of Mr. Comstock and others, to suppress.

We pray, for the sake of poor humanity, and of the reputation of medical science, that medical journals will cease the publication of all articles belonging to this class—the class of obscene literature.

LECTURES.

CEREBRO-SPINAL MENINGITIS.

BY

H. C. WOOD, M. D.

In treating the disease you have to remember what its real characters are. That it is at the same time a general disease, and that this general disease is attended with a characteristic local inflammation, and that as a result of this you have patients suffering from symptoms dependent upon two different causes. They suffer from the symptoms due to the general poison of the disease, and they suffer from the symptoms due to the local inflammation which accompanies the disease. So far as the general poison of the disease is concerned, our treatment is not of any particular efficacy. We do not know how to act upon the poison of cerebro-spinal meningitis, any more than we know how to act upon the poison of typhoid fever, or of typhus fever, or of small-pox, or of any of that class of diseases. For the local lesion, however, we can do something, and for the symptoms produced both by the local lesion and the general disease, we may also do something. In the first place, for the local lesion. The indications for the local lesion are the same as they are for an acute meningitis of an epidemic or idiopathic kind. Thus, at the very commencement of the disease we may usually employ local blood-letting and cold. Local blood-letting is only to be employed in persons who are strong and robust. You take the blood from the temples, or the nape of the neck, and from the upper part of the spine. You take the blood either by means of leeches or by wet cups. This, however, should only be done during the first three or four days of the disease. We should not do it after the fourth day of the disease. If you do not see the patient until after that time, there can be no object in local blood-letting. Cold is applied to the head and to the back of the neck by means of ice-bags, and the application of cold is kept up pretty continuously. It should be kept up as continuously as possible for the first days of the disease; I think we may say for the first week of the disease, in a considerable number of cases. These two means, the use of blood-letting and the use of cold, are the most efficient agents that we have for controlling the local inflammation. These agents I say are only efficient during the beginning of the disease, the blood-letting during the first week of

the disease. In addition to this local treatment, we have also to use measures to make the patient more comfortable. The symptoms which trouble the patient most are, usually, headache, restlessness, and delirium. These symptoms are generally best quieted by the bromide of potash. The bromide of potash given alone, or with chloral, or with hyoscyamus, or with one of the preparations of musk, or with the tincture of castor. There are very few patients with whom the bromide cannot be used. There are very few patients who are not tolerant of the bromide. You give this in doses of twenty or thirty grains every three hours. The bromide will often be rendered more efficient if you combine with it one or other of the drugs of which I have spoken. The chloral-hydrate is one of the best of these drugs. Unfortunately there are some patients who cannot take chloral, in whom it produces unpleasant symptoms. In patients who can take it, usually ten grains is a sufficient dose to be given, combined with the bromide. In patients who cannot take chloral, you will find the tincture of hyoscyamus often of very good service, and you give this in drachm doses with the bromide and the tincture of hyoscyamus, so that the patient takes twenty grains of the bromide and a drachm of the tincture of hyoscyamus, at each dose. Then, in patients, especially women, in whom the restlessness takes on the hysterical character, it has seemed to me that there is advantage in using the tincture of castor. You give this in the same doses as the tincture of hyoscyamus, that is in drachm doses every three hours. You give it, then, in considerable amount. Occasionally we have to resort to opium. You will find that neither the bromide, nor the other drugs will answer the purpose but, if possible, you use one or other of these rather than opium. Quinine is not, I think, indicated in this particular disease. Quinine is now given almost as a matter of routine for every disease from which patients suffer; but unless you give it as a matter of routine, I think there is no particular advantage in giving it in cerebro-spinal meningitis. The temperature usually requires no particular attention. It does, indeed, sometimes run pretty high; but this is usually only toward the close of the disease, when there is no particular advantage in any treatment; but during the ordinary course of the disease the temperature is not apt to run over 104° in adults, and 104° in adults is, in my opinion, at least a very harmless temperature. I think that adults bear a temperature of 104° for a considerable length of time without any danger whatever. If, however, you are disposed to attempt to lower the temperature, the best way to do this is by means either of cold effusions or of cold or tepid baths, or of the cold pack. Quinine has no effect whatever in reducing the temperature in this particular disease. In children, cerebro-spinal meningitis runs a little different course from what it does in adults. The diagnosis is by no means as easy, especially if the children are quite young. The invasion of the disease is as a rule acute, and the invasion is very apt indeed to occur with convulsions. The patients have a number of convulsions, and these convulsions may be repeated at intervals during the first twelve, or twenty-four hours, or forty-eight hours of the disease. The convulsions disappear, but the child continues dull, drowsy; you can hardly say, however, comatose; but it takes no notice, or very little notice, of what is going on around. The temperature runs up pretty high from the very commencement of the disease. It runs higher than it does in adults. The child will have a temperature of 104° by the end of

the first twelve or twenty-four hours, and the temperature will continue between 104° and 106° or 107° during the rest of the disease. In children, these may be the only symptoms that will present themselves to you in the majority of cases: the occurrence of repeated convulsions, followed by a peculiar condition of stupor, and with this well-marked febrile movement. These, I say, may be the only symptoms that these children will present, and in this stupid condition with well-marked febrile movement, the patients will continue until they die; or the stupor will gradually diminish, and the patient will get better. The disease, however, is much more fatal in these young children than it is in adults. And you will find a considerable number of these cases in young children in which it is impossible for you to tell whether the children are suffering from epidemic cerebro-spinal meningitis, or from acute idiopathic meningitis, or from acute meningitis secondary to suppurative inflammation of the ear, or tubercular meningitis. All these different forms of meningitis may give you symptoms which are exactly the same in these children. The indications for treatment in children are the same as in adults, only in these young children, you never think of local blood-letting.

A SERIES OF CASES PRESENTED AT THE CLINIC AT THE NEW YORK HOSPITAL.

BY

THOMAS M. MARKOE, M. D.,

Professor of the Principles of Surgery in the College of Physicians and Surgeons, New York.

NECROSIS OF THE FEMUR.

GENTLEMEN:—I have, as I suppose, a case of necrosis of the femur to present to you to-day, which presents several circumstances worthy of attention. Last June, I amputated the thigh of this patient at a point a little below the middle, for a compound fracture of the femur which had been received many months before, and which had failed to heal properly. At the time of the amputation, when I had cut down to the bone, I found that the upper and lower fragments of the fractured femur had failed to unite, but were held together by ligamentous bands, which filled up the space between the two ends of the bones. So my operation was to cut between the two fragments, and to leave the upper one for the bony end of the stump. Though the extremity of this bony stump was irregular, yet I thought it best not to saw it off, so I simply drew my flaps over it, and united them with sutures, and, having arranged for through drainage, I left it to heal. This operation, therefore, differed essentially from one where the bone is cut through by the saw. The case appeared to do well, until at the end of two weeks a small fistulous opening appeared on the stump, which seemed to connect with an abscess above. This did not heal up, and I have been watching the wound from that time to this. There seems to have been a failure on the part of the wound to repair and to undergo a complete healing process. Now there are two or three fistulous openings in the stump, which has been sore and tender and swollen for the last four months. On grasping the stump in my hand I appreciate a hard mass, which feels as if it might be the involucrum of the bone in its course of healing. On passing a probe through one of the fistulæ, I touch bare bone, and I think it is dead bone. The wound is in such a bad

condition that I propose now to open the stump and see what is the cause of the failure to heal. As the man is now in good general condition physically, I think the cause must be local, and I presume I shall find some necrosed bone which I can remove. As you can see now, the stump, which should have been well by this time, and, in fact, be wearing an artificial leg, is, instead, sore and tender, and exuding pus daily through several fistulous openings, while the end of the bone feels larger than it ought to.

I will simply apply a tourniquet here to the thigh, as there is no need of an Esmarch's bandage. In this case the femoral has shrivelled to a very small artery, and I put on the tourniquet not so much to avoid the loss of blood as to keep the parts on which I am to operate clean, so that I can easily see them. This is often a thing of great importance for nicety of observation when operating in deep parts.

After again probing the wound, and cleansing it with carbolyzed water, it was opened.

Operation.—An incision was first made through the skin and superficial tissues, on the outside of the stump and transversely to it, three inches long, and at a distance of about two inches from the end of the stump. Then with the fingers and scalpel the deeper tissues were torn away, or divided, until the bone was exposed. This opened up the abscess cavity, and the cause of the irritation was found to be carious and necrosed portions of the bony stump. These irregular dead pieces of bone were removed by the bone forceps and the elevator in several small fragments a half an inch or more in diameter. When all the diseased portions were removed, the end of the stump was made smooth and even by the scraper. The flaps were now held together over the stump while the tourniquet was removed. They were then held apart again, and the wound was sponged out. There was but slight hæmorrhage, which was controlled by one or two ligatures. The wound was then cleansed with carbolyzed water, a drainage tube introduced, and the flaps closed together and united by silk sutures, and finally carbolyzed dressings were applied.

As you have seen, I have cut away from the end of the bone all the small fragments which were partly carious or necrosed that I could find. These are the fragments that I left attached to the bony stump at the time of the amputation, thinking that they would further, rather than retard, the repair of the wound. The necrosed pieces were exceedingly small, and were on that side of the bone where the abscess was.

I believe I have showed the class before the method to which I am partial in the dressing of wounds, and which I call "through drainage." I pass through the wound, from one end to the other, a rubber tube, with two holes in it, which open into the interior of the wound. And now you will see how it works. I put the nozzle of a Davidson's syringe into one end of the tube, and then force carbolyzed water, of the strength of one part in forty, through it, with an intermittent stream. If I want to throw the fluid into the wound I simply press together the lower end of the tube. I now dress the wound by laying over the stump several folds of antiseptic gauze, saturated with a one in forty solution of carbolic acid. Holes are cut through this for the passage of the two ends of the drainage tube. The dressing is then retained in position by a roller-bandage. Care must be taken not to leave strong carbolyzed solutions in contact with the skin or other tissues, lest they should irritate them. The wound should be washed out with the carbolyzed fluid four or five times a day, and this not only cleanses it from the dis-

charges, but coming in contact with the different parts of the wound, thus prevents all decomposition. The limb must be left supported in such a position that the lower orifice of the drainage tube hangs down.

LIPOMA IN AXILLA.

The patient whom I am now about to show you, gentlemen, is a woman the history of whose disease runs back eight years. She knows no cause for the trouble. But eight years ago she first noticed that a small tumor was growing just below the axilla on the left side. The skin was freely movable over it, and it was movable over the deeper tissues beneath. It grew steadily and caused her no trouble until three years ago, when it had reached the size of a hen's egg. It then began to give her some pain which would start from the tumor and radiate to the shoulder and then down the chest. That is the history and the whole story. But from it we can deduce some pathological points of interest. In the first place, the swelling was not in a gland, nor was it connected with any organ in the region. It was located in the connective tissue, and it grew slowly but steadily until within the past two or three years from its size it has given pain, because of its pressure on the neighboring nerves. The tumor now appears to be deeply seated well down in the lower pocket of the axilla, and is somewhat firm to the feel, non-adherent, globular, and flattened in shape and uniform on the surface. None of the neighboring lymphatics are involved, and there is no general cachexia. The one question which overshadows every other is, is this a tumor which if removed will be likely to return. The history of the case will assist us somewhat in deciding this question. For if it were a carcinoma, it would have proved fatal in a less time than this has been growing. Eight years is a long time for malignant tumors to run, which usually prove fatal in from one to four years. The scirrhous growths last for forty-six or eight months, the encephaloid for from twenty-eight to thirty-two months, but the epithelial are irregular in period, and run a longer course, and life is sometimes prolonged for several years. But when a tumor has behaved as kindly as this one for eight years all we can say is, that we suppose it to be non-malignant.

As to treatment there is only one course to pursue. The tumor will not disappear under mere constitutional medication. Extirpation is the only thing, and this may be accomplished in several ways. I have used caustics extensively for this purpose. Patients have the impression that the surgeon can thus remove the tumor without the pain that the use of the knife would cause. But this tumor is too large and too deeply seated to be cauterized, while it is very susceptible of removal by the knife. So I consider this the best way to extirpate it.

What the nature of this tumor is, I can not certainly say. There are several varieties of these slow benign growths. There are the fatty tumors, and I hope this will prove to be one. But it may be a cystic tumor, or a soft fibromata. Whatever it is, it is attached well up in the axilla and is freely movable and apparently as large as her fist.

Operation.—An incision two and a half inches long was made over the tumor, in a diagonal direction from above downwards, and from within outwards, and carried directly down through the skin and adipose tissue until the surface of the tumor was exposed. It now became evident that it was a lipoma, and one of the most perfect of its kind, having a very distinct capsule. The knife was now laid aside, and with the fingers and

hand the tumor was separated from the surrounding areolar tissue, and the attempt was made to enucleate it without breaking into its capsule. On its deeper surface it was found to be connected to the parts beneath by numerous blood vessels and nerves which entered the tumor. These were cut across by a curved bistoury, and the tumor was then turned out from its bed.

Gentlemen: As you see, the tumor, when removed, proves to be larger than I at first supposed it to be. It is nearly as large as a saucer. It was free on its surface from the surrounding textures at every part except where the vessels entered and there formed a sort of pedicle. This is a perfect example of a fatty tumor in all respects from one end to the other. As I cut into it I find that it is composed of pure fat and nothing else, and there are no septa dividing it up into lobules.

The reason of my plan of getting at the tumor and of removing it without the aid of the knife, is in order to get as little bleeding as possible. There are no blood vessels crossing the point of my first incision; and when I have laid open the wound, with my hand I work my way around in the areolar texture between the tumor and the skin, and so I have encountered scarcely any bleeding. As you can see from your seats there is a large vein which courses directly across the bottom of the wound; but this I avoided by keeping close to the tumor. A drainage-tube will be left in the wound, and it will be dressed in the usual way. This slight operation which I have performed will give you a better idea of principles which you will have frequent occasion to apply, than if you had witnessed some great but unusual operation.

HERNIA.

Gentlemen, I present before you to-day a case of inguinal hernia, on which I propose to perform Heaton's operation for the radical cure. The theory of the operation is based upon the idea that, by putting certain agents upon the areolar textures of the body, we can excite an inflammation which will result in a permanent consolidation of that tissue. It is said that this result can be produced by injecting a few drops of the proper solution by a hypodermic needle into the inguinal canal. And this procedure will be followed by a permanent closure of the canal. This result is not unreasonable, but I have tried this method several times, and have not yet been very successful. The operation is usually performed with a magnified hypodermic syringe, containing a long slender needle which is thrust into the inguinal canal, and this fluid is deposited at various points around the spermatic cord, care being taken to avoid injuring neighboring vessels. In order to avoid the danger of wounding these structures, I have had a needle made with a blunt point, which I use. Heaton's prescription consists of one ounce of the watery extract of white oak bark, to which is added a half grain of morphia, and a few drops of this solution are injected. I find that the white oak bark is made more soluble by the addition of one drachm each of ether and absolute alcohol to an ounce of the solution.

This patient was operated upon two weeks ago, but unsuccessfully. I will now perform the operation again before you, and will make use of a more stimulating mixture than before. I first press my finger up into the external ring of the inguinal canal, and then make a prick in the skin with the point of a bistoury, and through this opening introduce my needle, and push it up into the canal, directing its course by the

finger. When I have pushed it far along into the canal, I make my first deposit of the fluid at a point about half an inch from the internal opening, on the outer wall of the canal. I then withdraw the needle and press out a little more fluid on the inner and outer walls both, and at a short distance from the first deposit. Then I leave a little more at about an inch from the external opening, and, withdrawing the needle still more, I leave the rest of the fluid just above the external orifice of the canal. This completes the operation. Heaton recommends the immediate application of a strong compress. But I see no need of it. The patient should be kept in a reclining position for a few days, to keep the hernia up. Then after the inflammation has subsided, he may put on a compress or truss. Meanwhile he should avoid coughing and all exertion as much as possible.

CANCER OF THE BREAST.

The next case presented was that of a woman with a new cancerous growth under the axilla, whence one had formerly been removed. But on examination this tumor was found to be so deeply attached to the surrounding tissues, and its growth was so rapid that an operation did not seem justifiable, and so the patient was dismissed.

OSTITIS OF THE TIBIA.

The next patient is a man 35 years old. Twenty years ago, he says, he received a gun-shot wound and a compound fracture of the right leg above the ankle. Fifteen months ago he received another bullet wound in the same leg, which he says was fractured this time also. Two months afterwards a portion of the bullet and some spiculæ of bone were removed from the wound, and this has now been healed up for thirteen months. During this time he has suffered much from attacks of pain and inflammation in the part, which may be due to irritation from the presence of pieces of broken bone, or a foreign body, such as a piece of the bullet, or of cloth from his pants. But if it were necrosed bone or a piece of his clothing it would have shown itself long since, and have been removed through a suppurative opening. But a piece of the bullet might have remained and have become encysted, so I am inclined to think that it is this which is irritating the part and causing the mischief. So it will be necessary to lay open the part and examine it for the cause, and remove it, whatever it is.

The point under consideration for operation is a small tumor in the center of the leg, just over the middle portion of the tibia. This tumor is hard, but seems to give a slight sensation of fluctuation to the fingers. It is about an inch and a half in diameter. The operation was as follows:—The tumor was first sponged over with a dilute solution of carbolic acid, and then a longitudinal incision was made through the skin and subcutaneous tissue, about three inches in length. Another small transverse incision one inch in length was then made over the tumor, crossing the first incision at its center. The four flaps thus formed were then carefully dissected back, chiefly by means of the handle of the scalpel and the fingers, until the surface of the tibia was exposed upon which was the tumor. This differed slightly from the surrounding bone, and it presented a small cavity, into which a probe was passed for a short distance. A layer of bone was then chiseled off from the most prominent part, and the supposed cavity was found to be very small, so it was concluded to chisel away all the dead bone. This was done, until sound semi-

cancellous structure was reached, after the tumor had been gouged out to the depth of about one-third of an inch. The surface was then smoothed off, and the cavity left to granulate. The wound was closed with sutures, and dressed antiseptically as usual.

The result of operation in this kind of osteitis is generally satisfactory; its effect is to arouse the part to greater activity, and so increase its nutrition. While at the same time the patient will be relieved of the pain, which is the result of the ositic inflammation.

VARICOCELE.

Gentlemen, the first case I present to you is a young man of about twenty, who has a varicocele. This is characterized by the presence of varicose veins in the scrotum. These veins are congested, their walls thickened, and their calibre increased, and they feel to the hand like a bundle of earth worms in the scrotum. This condition is usually accompanied by trifling symptoms, such as a dragging sensation, usually on the left side; but if the disease is very extensive and of long standing, there is a great deal of bearing down pain and discomfort. The farther history of these cases is, continued enlargement of the varicocele, and finally, it is believed by some, atrophy of the testicle.

There are two or three different ways of treating these cases. First: by supporting the scrotum in a suspensory bandage; or second, by a cold douche to the part two or three times a day; and these usually relieve the discomfort. But in severe cases it is necessary to perform a radical operation, which consists in obliterating the veins by compressing them with a string tied around them, or by enclosing them in a catgut ligature, so as to cut off the circulation through them. The operation should be performed under the antiseptic precautions of Listerism. I prefer to use the subcutaneous method, which consists in separating the vas deferens from the veins with the finger, and then pushing a needle, threaded with silver wire, through the scrotum between them. The needle is then pushed back again through the same openings as before, but this time it is carried to the outside of the veins, passing between them and the skin. The veins are thus enclosed within a leash of silver wire, both ends of which project from the same hole. The method of securing the ends of the wire varies with different surgeons. I bring the two ends through a hole in the centre of a small plate of hard rubber, keeping them untwisted, and on that I place a small clamp, which secures the wire when screwed up, and by turning the handle the wires may be twisted and tightened at will. This may be left on for a week or two, when it may be removed, and the wire has meanwhile cut its way through the veins. In my experience I have not yet seen any œdema, or inflammation, or supuration, follow this operation, and I am much pleased with its results. Experience shows this to be a very safe operation. The patient should lie quietly in bed for the next two weeks. The scrotum should be washed frequently with a solution of one part in forty of carbolic acid. No anaesthetic need be administered as the operation is short. The operation in this case was successfully performed as described.

CHONDROMA ON FEMUR.

GENTLEMEN:—The man whom I show you next has a lump growing upon the outer aspect of the right thigh, about a hand's breadth above the knee. He has received no injury at this point, but the tumor has been growing for four years, and now has reached a surface diameter of about two and a half inches, and is

elevated about half an inch. It has not interfered with his walking, nor caused him pain, though it is beginning to do so now. And so in view of its future growth and liability to cause pain, I have recommended an operation for its removal. I believe it is a mixed osseous and cartilaginous growth, because a purely osseous growth would not be likely to reach such a size in so short a time. These growths are generally attached to the bone by a pedicle which is considerably narrower than the tumor itself.

I think this tumor is a growth upon the outside of the femur, and that it does not connect with the capsule of the joint. Some writer says that there is danger of a bursa forming between the base of these tumors and the bone, which may communicate with the capsule of the knee-joint. I think it is unlikely that any such communicating bursa should form. However I will be careful to look for this while operating.

I now make an incision about two and a half inches long over the vastus externus muscle, and cut through the skin and superficial areolar tissue, and then tear away the muscle from the tumor, so as to wound as few of its fibers as possible. And now the glistening cartilage of the growth appears through the opening. I now cut away the surrounding tissues with a bistoury, and expose the base of the tumor, which is now clearly cartilaginous in structure, and it is irregular in shape, but about an inch and a half to two inches in diameter. With a gouge and chisel I now cut away at the base, from below upward, until I loosen the growth and then with an elevator I pry it up, and finally cut away its connections to the bone with a bistoury. As the tumor is removed you see that it has a base one inch in diameter; but a portion of the base still remains undetached, and when this is chisled out it is found to be only three quarters of an inch in diameter. Now all roughnesses are removed from the place of attachment to the femur, by the bone forceps and the chisel, and the wound is then washed out and closed with fine sutures, and dressed with antiseptic gauze. This tumor lay like a mushroom with a narrow pedicle upon the bone. The base is very deceptive in size, and I once operated where I found it so much smaller than I supposed that had I known it, I might have made a much milder operation than I did.

CANCER OF THE BREAST.

Another case which I wish to show you, gentlemen, is one which unfortunately we have frequent cause to present here. It is a case of recurrent cancer of the breast. The story is this: A patient 46 years of age. Eleven years ago a growth of a cancerous nature made its appearance as a small lump in the lower portion of the right breast. It grew upwards and inwards for six years, and it was not entirely separated from the surrounding tissue, but was quite immovable. Three years ago it was removed, and it was found to be scirrhus in character, and it weighed one pound. Her general health has never seemed to suffer, and she has had no cachexia. This, gentlemen, is her whole story. But the size of the tumor removed, and its weight, and the long period of its growth, and her general good health, seem to prove that this was not a true cancerous growth. One year after the operation a very small tumor appeared directly over the fourth rib and in the line of the nipple, and later one appeared near the right border of the sternum, and finally another in the axillary space. None of them have occasioned any trouble, except a little pain in the one near the sternum. Her general

health is still good. It is a pity that no microscopical examination was made of the tumor removed. For if it was of the large-celled variety the prognosis would be more favorable as to a permanent cure, or at least for a less speedy recurrence. The rule in all these cases is to repeat the operation for removal as often as they recur, for by so doing you give a longer lease of life, with freedom from suffering. I carried out this rule in the case on which you saw me operate last week. But it terminated fatally the next day. And this result suggests to me the thought that there is no sufficient warrant, in some of the most advanced cases, to justify the more dangerous operations. I was a little in doubt last Saturday as to the advisability of operating, but I did not expect such an immediate unfavorable result. There were certain conditions in her case of which I was not aware at the time, which tended to modify the result. By an operation, I would rather take the surest means of removing a disease which I thought I could cure in this way. But in the case of a cancer which I know will return speedily, in expectation of so short a lease of life, I would be careful as to what sort of an operation I should perform. A dangerous operation would hardly be justified in such a case.

There is very little that you can see in this case, and so you must take my word for what I see. I find here just at the right of the sternum a small indurated mass near the surface, which has contracted adhesions to the integument above. I will begin with this one, and with it I will remove a small portion of the overlying skin, so as to be sure that I leave none of the diseased tissue behind. It is always a rule in removing sarcomatous growths to cut as far away from the diseased portion as you can. Now, by a slight dissection I have removed this mass and find it to be a hard nodule the size of a marble, and on laying it open I find that fibrous tissue predominates in its structure. This is favorable. Here a little to the right is another nodule which is not adherent to the integument. And it is remarkable how you will find, where there are several of these tumors, that some are attached and others near by are not. I make a wider cut around this one, because I find there are more adhesions to the deeper tissues than I expected to find. On removing it, I find that it has a distinct outline, yet I cannot separate it from the attached tissue entirely. On cutting it open, it shows its peculiar growth very distinctly, and you can see the minute fibrous bands radiating in all directions from the centre. You notice that neither of these growths involved the cicatrix from the former operation. But it is the opinion of many surgeons that these tumors are more likely to form again in the old cicatrix. In my opinion, they seldom do. But here in the axilla is a third nodule which has formed in the cicatrix. I remove it by a deeper and wider dissection than before, and I find it differs in no respect from the others. There was slight hemorrhage from the last wound, but the bleeding from several small arteries was easily stopped by applying torsion. The wounds were then sponged off with an antiseptic solution, and immediately closed by a few sutures of carbilized silk.

Now, by removing these tumors, gentlemen, I suppose that I have removed every particle of malignant disease existing in their vicinity. It seems to be the opinion of some surgeons that the more thoroughly you remove the diseased textures the more hope of a complete recovery, and the less liability of a recurrence. I think, in nature generally, there may be some foundation for this statement. But I do not

accept it in its entirety in dealing with this disease. Again, it is the general opinion that if you take away the tumor early enough, before it has spread through the surrounding tissues, and has involved the neighboring lymphatics, you may cure the patient. Now, you would say *prima facie*, that a thorough and early operation would be more likely to remove the cancerous disease from the patient than if left till later. But this is not so, and it is one of those things which underlies a surgeon's wishes rather than his consciousness. Mr. Paget observed carefully five thousand cases of cancer, and he not unfairly deduced the opinion therefrom, that it does not make any particular difference as regards the length of life of the patient whether you operate in the first six months after the appearance of the tumor, or in the last six months of its growth. This is one of the facts which he has brought out more fully than any one else, that the time at which a cancer is removed is not important. I recently was looking over some reports of operations for the removal of cancer of the uterus; and here is a disease from which only a short respite can be obtained by an operation, and the writer closed by saying that "it yet remains to be proved that cancer can ever be cured by a radical operation." My opinion is that the disease cannot be removed by the earliest operation, but it is fatal in its tendency from its first appearance and always. Those are exceptional cases which are reported to have lived a long time after the disease became manifest, and many of them, I believe, have been imperfectly diagnosed, not having been tested by the microscope. There is a great difference in the time of the recurrence of the tumor, but there is a wonderful uniformity in the fact. They all die. But aside from the considerations of the possibility of a cure, I think it is a part of common sense to operate as early as possible, for the purpose of giving the patient comfort, relieving his gloom and despair, and avoiding the cachexia, and for other reasons which we will consider at some future time.

CARCINOMA OF THE THIGH..

Gentlemen :—The case I am about to show you has been under my observation for about a year and a half, and it presents a few points which will be of some interest. It is a tumor of the sarcomatous variety, which has been growing pretty rapidly upon the right thigh of a woman forty-eight or nine years old. It first appeared as a small tumor beneath the skin, to which it was non-adherent, as it was also to the textures below. It grew steadily until eighteen months ago, when it had become as large as her two fists. So I removed it by simply turning it out of its bed. The surface had appeared so smooth that I supposed it could be easily enucleated and that the fascia lata would be left entirely free. But we found that the tumor had already grown down through the fascia for a short distance. So the growth of the tumor had not been from below upwards, but downwards through the fascia lata. For one year after the removal she was perfectly well; but then the tumor began to grow again, and it increased in size rapidly until now it is larger than before. But its boundaries are not so well defined, and it probably extends deeper into the thigh. The object of removing it again is the hope that it may prolong her life. If it were allowed to grow it would finally produce a painful and disagreeable sloughing mass. The sarcoma that was removed was of the small spindle-cell variety. I cannot now stop to discuss the comparative danger of recurrence of the different kinds of cancer. I can

only say that the soft, small round-celled variety is most likely to return, and those which are made up of giant-cells are the least malignant; then there is a middle class, called the spindle-celled variety, such as this one we have here, which stands between the other two as to malignancy and liability to return.

Operation.—The tumor was situated on the anterior and external aspect of the upper portion of the right thigh, and was about the size and shape of an inverted saucer. After carefully washing his hands and sponging over the tumor with carbolyzed water, the operator made an incision about five inches in length, and extending from just below the middle of Poupart's ligament obliquely downwards and outwards. The superficial tissues were then separated to a depth of an inch and a half from the integument, and the hard surface of the tumor was then exposed. It was attempted to separate the tumor from the textures enveloping it by means of tearing them away with the hand and fingers. But there was no sharp and well-marked line of demarcation between them, but tough fibrous bands and prolongations bound them closely together, so that it was necessary to bring the knife constantly to the aid of the hand. This rendered the operation slow and tedious, and the severing of numerous blood vessels occasioned a considerable loss of blood, which at times gushed out from the wound profusely. The patient soon showed the effects of the sudden loss of blood by passing into a condition of shock. She became very pallid, and her pulse almost imperceptible, and her respirations were very shallow and increased in frequency, while her eyes were opened and rolled upward. As soon as this condition appeared the anæsthetic was stopped, and brandy was injected into the arm hypodermically every two or three minutes, her head was kept low, and care was taken not to move or disturb her, and she was carefully watched until the operation was completed.

After more than half an hour's labor the tumor was finally removed, and it proved to be about the size and shape of an enlarged kidney. When cut open, two-thirds of it was of a hard, fibrous consistency, and the remaining one-third, being the deeper portion, was soft and very vascular. The cavity of the wound was then washed out, and numerous small vessels ligatured, and finally a large and long drainage tube was inserted, and the edges of the wound closed over it with a continuous suture of silk. The cavity of the wound was then thoroughly washed out, by injecting a one in forty solution of carbolic acid through the drainage tube. The dressing of the wound consisted in first laying over it several layers of antiseptic gauze about ten inches square, through which holes were cut for the passage of the ends of the drainage tube, and upon this was laid a mass of borated cotton an inch in thickness, and over all was placed another layer of gauze. The dressings were then held in place by a broad roller bandage of carbolyzed cotton passed around the body and the thigh.

Gentlemen, as I worked about this tumor with my fingers I found it very firmly attached, and there was a sensation as if of bands passing from the tumor into the surrounding parts, and as I came down to the fascia lata, I found that there were various places where the tumor had grown through and into the muscles, and almost down to the bone. And the surrounding textures were so involved at points that I often cut at random, not knowing whether it was tumor or healthy tissue, but endeavoring to make it the latter. This extension illustrates one point of difference between malignant and benign growths.

The question of the return of the tumor presents, but it is impossible to say how soon this will be. But I am afraid it will occur at a pretty early period, because there was here such an extensive relation between the growth and the surrounding tissues that we can hardly hope for a long season of quiescence. When it returns it will be time enough to consider the question of a third removal of it.

The faint condition in which you see the patient is due, I think, rather to the suddenness of the loss of blood than to the amount of the hæmorrhage. We will keep her quiet and not allow her to be moved for an hour or two, until she has rallied from her faint. Her head should be kept low, and if it seems necessary the legs may be bandaged so as to drive more blood up into the head and trunk, where it is needed to carry on the vital processes.

At the close of the operation the foot of the bed was slightly raised, to cause the blood to flow more easily towards the head, and the patient was then warmly enveloped in thick flannel blankets, and hot bricks were applied to her feet, and she was left thus under careful observation.

ABOUT BOOKS.

Cerebral Hyperæmia. Does it Exist? A Consideration of some Views of Dr. Wm. A. Hammond; By C. F. Buckley, B.A., M.D., formerly Superintendent of Haydock Lodge Asylum, England. Published by G. P. Putnam's Sons. New York, 1882.

In this little brochure the author makes the attempt to disprove the existence of cerebral hyperæmia as a disease and to call attention to some apparent inconsistencies in a monograph on this subject by an eminent specialist. He induces his inquiry into the existence of cerebral hyperæmia by railing at the character of medical literature, scoffing at the remarkable fertility of some medical writers, and deploring the necessity which impels the physician to peruse these, to this distinguished critic, ephemeral publications.

After pouring out the vials of his wrath on the devoted heads of these prolific medical writers he proceeds by an original and highly entertaining, but unfortunately worthless, argument to attempt to pull to pieces the reasoning on the basis of which Dr. Hammond has recently described a new disease.

Whether the disease cerebral hyperæmia exists or not we shall not attempt to discuss, certainly this author's senseless tirade against a distinguished contributor to the scientific literature of the day, does not disprove its existence.

When divested of its high sounding verbiage the argument of Dr. Buckley is simply this, "because the symptoms of cerebral hyperæmia belong as well to some other nervous diseases, therefore cerebral hyperæmia should not be regarded as a disease. It is evident that by such reasoning as this it could be proven that no disease existed. This new David must use some more effective stone in his sling than such transparent arguments as these, if he hopes to do battle with an acknowledged giant in medical literature.

Can any one tell us who is this new aspirant for literary fame? It must of course be our ignorance of the literary lights of the age, but we have never before heard of this star in the literary firmament. It certainly does not shine to the best advantage in this little brochure, but perhaps its effulgence is dimmed by the clouds which unrecognized merit has thrown about it.

SELECTIONS FROM JOURNALS.

VOLKMANN AND KRASKE ON THE RADICAL CURE OF CONGENITAL INGUINAL HERNIA IN THE MALE.

Dr. P. Kraske, of Halle, reports in the *Centralblatt für Chirurgie*, No. 26, 1882, two cases of congenital scrotal hernia, in which, in the course of last year, Prof. Volkmann operated for radical cure. In both these cases, peculiar anatomical conditions were presented, and the necessity was indicated for a special operative treatment in future attempts to attain a radical cure of similar forms of congenital hernia. The numerous records, in surgical literature, of cases in which operations for radical cure have been performed, include several cases of congenital scrotal hernia, but no mention has hitherto been made of any special method of dealing with this latter form of hernia, with a similar object in view. In 1874, Mr. Steele, who was the first to apply Listerism in operations for the radical cure of hernia, described (*Brit. Med. Jour.*, November 7th, 1874,) an operation which, though applicable to all forms of reducible hernia, was, in the first instance, practised on the subject of a hernia that was congenital. In this operation, the pillars of the external ring, after having been exposed and their edges scraped and roughened by the scalpel, were brought together by two or three catgut sutures, room being just left for the passage of the spermatic cord. This, if there were not two objections to it, might be regarded as the most suitable and advisable operation for the radical cure of congenital scrotal hernia. But it is applicable only in cases in which the hernia is reducible, or in cases of irreducible rupture in which the obstruction is seated without the neck of the sac. In a large majority of the cases of congenital inguinal or scrotal hernia, submitted to operation for radical cure, there is either adhesion between the contents of the sac and its inner surface, or the neck of the sac is constricted. Then, again, Dr. Kraske holds, Steele's method is uncertain with regard to its remote results. Simple adaptation of the pillars of the ring by sutures will not suffice, it is stated, to establish complete and permanent occlusion. In order to attain a radical cure, the hernial sac itself must be destroyed. In what way this can best be effected in an operation for the radical cure of congenital scrotal or inguinal hernia, will depend, in the first place, on whether the hernial sac, that is to say, the vaginal process, can or cannot be readily separated from the surrounding structures, particularly the spermatic cord. If the neck of the sac can be isolated, then it may be ligatured. When one is dealing with an incarcerated or irreducible hernia, the sac must, of course, be laid open, and its contents reduced, before the application of the ligature. The proceeding may, if the surgeon follow the practice of Czerny, be completed by closing with sutures the external ring. It is recommended that the sac, in every instance, be opened below the ligature, washed out by a solution of carbolic acid, and then drained. Some surgeons (Czerny, Langenbeck, and others), excise a portion of the tunica vaginalis; but the removal of the whole of the hernial sac, which in congenital hernia is also the tunica vaginalis, is out of the question. In many cases of congenital inguinal or scrotal hernia, the isolation of the neck of the sac is attended with much difficulty or is quite impossible. The wall of the sac is sometimes closely adherent to the cord, and, in some other cases, the different elements of the cord—arteries, veins, vas deferens—are

widely separated, and in close connection with different portions of the circumference of the sac. In such cases, according to Volkmann and Kraske, no effectual operation for radical cure can be performed without castration. The corresponding testis, in cases of congenital scrotal hernia, is usually much arrested in development, as is proved by the clinical fact that, in operations on such herniæ, in cases of strangulation, this organ is almost always found atrophied, and its extirpation in operations for radical cure would not only remove all technical difficulties, but also improve very much the prospects of a permanently good result.

The first of Volkmann's cases was one of a very large and but partially reducible congenital rupture, into the left scrotum of a patient aged forty-two. The operation for radical cure was performed on February 15th, 1881. The case could not be treated by ligature in the ordinary way, as the sac was firmly adherent to the surrounding parts, and the component vessels of the cord were spread over its surface. A ligature having been placed around the neck of the sac, the tunica vaginalis below this ligature, together with the spermatic vessels and the left testis, was then removed. Notwithstanding an attack of hypostatic pneumonia on the fourteenth day the patient made a good recovery. When discharged, on the thirty-ninth day, the external ring was closed, and no protrusion of intestine could be felt on coughing or forcible straining. The subject of the second case, who was fifty-two years of age, had suffered from an irreducible congenital hernia on the left side of the scrotum. An operation for radical cure was performed at the request of the patient. The sac contained a mass of thickened omentum, which had become closely adherent to a portion of the sac wall. The testis was less than half the size of its fellow. The neck of the sac could not be separated from the cord, and the vessels forming the cord were spread out over the sac, though not so widely as in the first case. A large portion of the protruded omentum having been excised, it was decided to remove the testis, as this organ was very small, and the patient was advanced in years and had consented to such a step. The sac below the neck and the spermatic cord were then removed, and the stump of omentum fixed to the neck of the sac by sutures and a long needle, in order to prevent it from slipping into the abdominal cavity. The patient improved very much in general health and bodily vigor after the operation, and, when he was last seen, not the slightest impulse could be made out in the left groin on coughing. In this as in the first case, attention was paid during the operation and the after-treatment to the precautions of the antiseptic method.

But very few instances have been recorded of operation for the radical cure of congenital inguinal hernia, complicated by incomplete descent of the testis. In a case treated by Rizzoli in 1855, after the sac had been laid open, the rings were both dilated, and the testis, which had remained near the front of the outer ring, was replaced into the abdominal cavity. In two other cases the testis was partly detached from the surrounding structures, and placed within the scrotum. Such proceedings, it is pointed out, would be useless with regard to the cure of the hernia, if the sac could not be isolated. In a case of congenital hernia, with undescended testis, in an adult, Prof Volkmann would recommend castration, as it could not be expected that the atrophied testis, when removed from its unfavorable position, could develop into a sound organ.

In conclusion, Dr. Kraske gives the following summary of Volkmann's practice in dealing with congenital inguinal and scrotal rupture with a view to radical cure.

"1. If, in cases of congenital scrotal hernia, the neck of the sac can be isolated, a ligature may be applied around this. In addition to the deligation of the sac, which may be combined with apposition of the pillars of the ring by sutures, the surgeon should also, according to the indications of each case, wash out and drain the interior of the sac, and practise simple transverse section or partial excision of this membrane.

"2. The isolation of the hernial sac is very frequently impossible in cases of congenital scrotal rupture. Sometimes the elements of the cord are separated. When the sac cannot be isolated, the surgeon may apply a quitting suture, as recommended by Wahl, or follow Schede's practice, by plugging the ring with a stump of omentum, and subsequently disinfecting and draining the sac. These proceedings, however, can only be applied under certain circumstances. In difficult cases, one should consider the advisability of resorting to castration, an operation which may be the more readily adopted the smaller one finds the testis and the older the patient.

"3. In cases of congenital inguinal hernia, complicated with incomplete descent of the testis, the surgeon, if the sac—the vaginal process—can be isolated, may ligature the neck of this, cut across the membrane, and endeavor to bring down the testis into the scrotum. If the sac cannot be isolated, then castration should be performed. When the patient is advanced in years, this latter operation may be regarded as the simplest and most certain method under any circumstances."—*Lond. Med. Rec.*

THE RATIONAL TREATMENT OF MENORRHAGIA.

BY

ARTHUR W. EDIS, M.D., F.R.C.P.

By the term menorrhagia, it is intended to include all cases of uterine hæmorrhage occurring in the practice of the gynæcologist, whether as profuse or prolonged menstruation, or as loss of blood from the uterus other than that which occurs at or about the time of parturition.

Uterine hæmorrhage must not in every case be regarded as a disease or entity *per se*, for which one method of treatment is universally applicable. Nor must we in every case attempt to check the hæmorrhage; for it may be merely an expression of constitutional or general vascular tension, the uterine mucous membrane acting, so to speak, as a safety-valve, a smart attack of hæmorrhage often serving to avert a still more serious effusion from the ovary, or its surrounding plexus, into the peritoneal cavity, or even preventing an attack of apoplexy at the so-called climacteric period.

Of all the organs in the body, the uterus is the only one from which blood flows as a normal physiological process, the function being influenced by many and various causes, both general and local.

A recognition of this fact is essential; for, unless we acknowledge the importance of forming a correct diagnosis in every case of hæmorrhage, our treatment will not only often be futile, but actually mischievous. Diagnosis is, in fact, the most important element of treatment, for menorrhagia is merely a symptom, not a disease. In many instances, the differentiation of the predisposing and exciting causes of any individual case under observation may be one of great difficulty, but must nevertheless be attempted. The history of the

onset of the attack, whether gradual or sudden, attended or not by pain or febrile disturbance, will often give us some clue to the cause. The age of the patient often suggests the possibility of certain well defined causes, cardiac complications from rheumatic fever, hæmatocele, ovarian irritation, constipation, etc., in the young; polypi, fibroids, retroflexion, retained products of conception in the middle-aged; climacteric irregularities, cancer in its various forms, hepatic disorders, between the ages of forty and fifty.

In young plethoric girls, whose sexual development is well marked, menstruation is not unfrequently profuse. In place of giving iron, which generally produces constipation, and thus aggravates the tendency to menorrhagia, the better plan is to regulate carefully the diet, avoiding alcohol and any undue amount of animal food; to give bromides, which lessen the ovarian irritation, together with some saline aperient when requisite.

In anæmic patients, iron generally proves most serviceable; but, in place of "pouring in iron," as is not unfrequently spoken of, it should be given in combination with salines in moderate doses, more as a chalybeate water than a mixture; and care must be exercised that it does not produce headache, nor spoil what little appetite may exist.

In a case recently seen in consultation, of a young lady aged 17, whose periods were very profuse, acetate of lead had been given so heroically as to produce symptoms of lead-poisoning, the gums being marked with the characteristic blue line, colic and muscular weakness being also present. This method of treatment seemed scarcely rational, considering that menorrhagia is a well marked symptom in women employed in white-lead manufactories.

In single patients where menorrhagia is marked, and relief does not follow ordinary medical treatment, local investigation should be suggested, and, if necessary, insisted on. In one instance lately, a maiden lady, aged 37, who had suffered from frequent and severe losses of blood, extending over a period of several years, for which ergot and iron, kino, hæmatoxylon, and various other remedies had been prescribed in vain, was found to be suffering from a large intra-uterine fibroid polypus, of the size of a hen's egg. Dilatation of the cervix by means of tents was effected, and the growth was removed by the aid of the *craseur*, combined with torsion and traction. Medicines had been prescribed for many years, but the cause of the hæmorrhage had not been made out until dilatation of the cervix, when the source of the hæmorrhage was at once apparent. The patient convalesced rapidly, although, before the operation, she was reduced to a very anæmic condition, and her life was despaired of.

Where a married patient suffers from menorrhagia, the cause of which is not at all obvious at first, a careful examination should be insisted upon. In no fewer than four instances recently, I have met with cases of unsuspected pregnancy complicated by polypus uteri. A brief narration of one case may prove of interest.

N. S., aged 36, married nine years, sterile, began to have irregular losses of blood per vaginam, in addition to the periods being profuse. Ergot was given freely, but no examination was made. When I first saw her, she was looking very anæmic, from a rather smart attack of hæmorrhage. On examining her, I found that the uterus was enlarged above the umbilicus, the cervix soft and full; it was evidently a case of utero-gestation. Protruding from the cervix was a polypus

of the size of a walnut. Torsion was employed, and the growth removed, pregnancy advancing to full term.

Where the slightest irregularity in the appearance of the catamenia leads to the suggestion of the possibility of utero-gestation being present, any attack of menorrhagia, especially if it recur, should be regarded as a threatened miscarriage, and treated accordingly. Should only the foetal portion of the ovum be expelled, hæmorrhage recurring so soon as the patient leaves the recumbent position, in place of contenting ourselves with giving ergot, an examination should be made, and the remainder of the ovum extracted. Where the cervix has closed up so much as to prevent the expulsion of the placenta, though this is rare, a sponge-tent should be inserted, the cervix dilated, and means taken to clear out any debris remaining in the uterus. The following case may serve as an illustration of many others.

Menorrhagia: Attempted Miscarriage: Removal of Ovum: Recovery.—A. B., aged 18, single, mother of twins, one only living, aged twelve months. After the first few months, during which time the patient suckled her child, she had rather a copious sanguineous discharge, lasting four or five days, and recurring every fortnight. There was then an interval of five weeks without any sanguineous discharge; but after this she had irregular losses, brighter in character than usual. In June, about three months after the cessation of any sanguineous discharge, severe flooding came on during the night, lasting an hour and a half. She was much exhausted after this, and was compelled to remain quiet. An interval of three weeks elapsed, and then a second flooding occurred, the loss being very severe—estimated at three or four quarts. The practitioner administered ergot, but failed to ascertain the cause of the flooding.

When seen by me in July, on examination the uterus was found to be excessively bulky, mobile, the cervix enlarged, the os patulous. Protruding from this latter was a dense mass, about the size of a thumb. The history pointing to the probability of its being a case of miscarriage, on ovum-forceps was inserted gently within the cervix, and the mass gripped firmly. Torsion and traction were then employed, and what proved to be the maternal portion of the ovum was removed. Ergot with bark and acid were given, rest enjoined, and appropriate nourishment administered. No further hæmorrhage occurred, and the patient made a good recovery.

In this case the absence of any sanguineous discharge in a patient who had been losing blood every fortnight should at least have suggested the possibility of utero-gestation. The sudden hæmorrhage three months subsequently was accounted for by an attempted expulsion of the ovum. Even the second flooding three weeks later, which jeopardized the patient's life, led to no local investigation, and therefore to no explanation of the cause of the hæmorrhage without a knowledge of which treatment could but be ineffectual.

Where two or three periods have been missed, and the question of pregnancy is tolerably certain, should hæmorrhage occur, accompanied by pain, the fact of a miscarriage having taken place may generally be assumed. If hæmorrhage persist or recur at intervals, an examination should be made. In one instance, in which I was recently consulted, the patient was allowed to go on losing blood continuously for over three months. The history of the miscarriage at once suggested the expediency of exploring the uterus. Nearly a teacupful of placenta, perfectly fresh, was

removed, and the hæmorrhage at once arrested. An action was commenced by the husband of the patient against the practitioner for improper treatment, and the latter was advised to compromise the matter and stay further proceedings, by foregoing his claim for over three months' attendance, day and night, and giving the patient a substantial recompense.

Where uterine hæmorrhage is severe, whether from imperfect expulsion of an early ovum, intra-uterine polypus, submucous fibroid tumor, or other similar condition, in place of attempting to restrain the flow by pieces of linen or cotton-wool packed in the vagina, which practically have no influence in controlling the loss in the majority of cases, a far more scientific and rational method is to insert a sponge-tent into the cervix uteri. This has the double effect of plugging the os uteri, thus checking or arresting the flow, and at the same time dilating the cervix, so as to facilitate subsequent exploration of the interior of the uterus.

Where the practitioner does not possess the requisite skill, or has not the instruments at hand, packing the vagina with pieces of sponge is far more likely to arrest the hæmorrhage than pledgets of cotton-wool, which, in place of expanding like sponge when moistened, become compressed and lessened in bulk.

Hæmatocele, or effusion of blood into the pelvis, is a frequently overlooked cause of menorrhagia. If careful inquiry be made, there will usually be found to be some history of exposure to cold, undue exertion, over-fatigue, violent straining, or injury of some sort at or near a menstrual period. Extra-uterine gestation at an early stage, although not often suspected, will often explain these cases.

In place of applying hot fomentations to the abdomen, and pouring in brandy, a more rational method of attempting to restrain hæmorrhage is to get the patient rapidly under the influence of opium, so as to allay pain and prevent restlessness, and apply cold or pressure to the abdomen by means of ice or small pads of cotton-wool and a firm binder.

If hæmorrhage be severe and continuous, and the probability of extra-uterine gestation exist, the patient's life being evidently jeopardized by the amount of effused blood withdrawn from the circulatory system, the only hope of saving the patient is to make an exploratory abdominal incision, secure if possible the bleeding vessel, or remove the ruptured cyst, as may be found advisable.

Retroflexion, accompanied by congestion of the uterus, in patients who have borne children, is not an unfrequent cause of menorrhagia. A correct diagnosis is here essential, before treatment is likely to prove of service. The two conditions are often so intimately associated, that, unless both of them be dealt with simultaneously, permanent relief is not obtained. The misplacement serves to keep up the congestion, and the latter equally tends to prevent the uterus from assuming its normal position. Puncturing, scarification, or the application of leeches, followed up by hot water injection and glycerine plugs, may first be tried to lessen the congestion; a ring pessary, or other appropriate support, being then inserted to keep the uterus in its normal position, and thus lessen the tendency to a recurrence of the congestion.

The management of hæmorrhage, due to large intra-mural or submucoid fibroids, is one often of much difficulty. When ergot, bromide, cannabis indica, gallic acid, digitalis, and other similar remedies, fail to arrest the flow, and the patient's health is markedly affected by the repeated or severe losses, the question of spaying,

division of the cervix uteri, or removal either of the fibroid or of the entire uterus should certainly be entertained. The results obtained during the last few years by operative interference in these cases are most encouraging, and the operation well deserves more extended trial. No patient, the subject of uterine fibroid, where the symptoms are so severe as to impair her usefulness or threaten her life, should be allowed to die unrelieved without having the option of operative interference.

The following case illustrates well the importance of forming a correct diagnosis, as also the value of treatment.

Menorrhagia: Intramural Fibroid: Removal: Recovery.—M. N., aged 24, married three years, mother of one child, aged two years. Since her confinement, but especially during the last few months, the patient had suffered from frequent and severe losses of blood *per vaginam*. She was supposed to have had several miscarriages, but the subsequent history of the case rendered this more than doubtful. On examination, the uterus was found to be somewhat retroverted, excessively bulky, mobile. The cervix was large, the os patulous, admitting the finger. Protruding from the posterior wall a fibroid tumor, of the size of a very large hen's egg, was detected, almost sessile, the lower presenting about the level of the internal os uteri.

As the patient was exceedingly weak, and very much exhausted from the profuse hæmorrhage which had occurred, it was deemed expedient to plug the cervix uteri, administer ergot, and rally the patient's powers by means of strong beef-tea, jellies, milk, and other forms of nourishing, before attempting any operative proceedings.

Later on the patient was placed in the lithotomy position; chloroform and then ether was administered; the cervix incised bilaterally by means of Simpson's metrotome; the capsule of the tumor was divided by the aid of a curved blunt-pointed bistoury, the finger inserted in the aperture, and the tumor shelled out. Some difficulty was experienced in reaching the upper portion of the growth; a large ovum-forceps was therefore employed to grasp the tumor, and the removal was accomplished by a judicious combination of torsion and traction. It was as large as a goose's egg, and composed of dense fibrous tissue, almost as hard as cartilage. But little hæmorrhage occurred during the operation. A plug of cotton-wool, moistened with the tincture of perchloride of iron, was inserted in the cervix to restrain hæmorrhage, a morphia suppository inserted, and nourishment administered in small quantities at short intervals. The patient was much exhausted after the operation, but ultimately made a good recovery.

This case illustrates well the absolute importance of forming a correct diagnosis. It was assumed that the hæmorrhage depended upon miscarriages, and ergot was administered. Pain, due to expulsive efforts on the part of the uterus, seemed to support this view; but it is more than probable that the ovum, even had conception occurred, would have been washed away by the profuse loss of blood, before becoming sufficiently attached to permit its becoming developed.

Vascular disturbances at the climacteric, or change of life, as it is popularly spoken of, should never be treated lightly, but always carefully investigated.

In some instances, regulation of the bowels, restriction as to diet, especially the amount of alcohol, and a proper amount of outdoor exercise, will be all that is requisite. In others, the hæmorrhage persists, in spite of all treatment; and, on a careful investigation, epi-

thelioma of the cervix uteri is at once detected, probably too late for any operative interference. In no case should hæmorrhage at this period be diagnosed as change of life, without a careful examination being made and a correct diagnosis formed. Numerous cases could be cited illustrating this. The following may suffice at present :

Menorrhagia due to Cardiac Mischief.—C. M., aged 42, single, consulted me for profuse menstruation. The period generally lasted a full week, and recurred at an interval of from two to three weeks. During the last few months the patient had lost far more than usual, and her general health was beginning to suffer. She had been taking medicine for the hæmorrhage for some time past, but without obtaining relief.

On examining the chest, a loud systolic murmur was detected over the apex of the heart. The pulse was small, weak, irregular, and the appearance of the patient was extremely anæmic.

As the patient herself feared that some uterine tumor was present, a vaginal examination was made. The uterus was found to be fairly normal in size and position, and there was nothing in the condition of the pelvic organs to throw any light upon the uterine hæmorrhage. A mixture of iron, magnesia, and nux vomica was prescribed, and subsequently digitalis. This had the effect of improving the heart's action. Appropriate rest and diet were enjoined, the bowels carefully regulated, and the general health attended to in every possible way. Marked improvement ensued as regards the uterine hæmorrhage.

Menorrhagia: Abuse of Alcohol: Constipation.—Mrs. G., aged 40, mother of three children, the youngest nine years old, had suffered from menorrhagia the last year or two, the periods recurring too frequently, and the loss being excessive.

She was rather stout, the complexion ruddy, the conjunctivæ yellowish, the abdomen distended. The bowels were very confined, the appetite indifferent. She slept badly, and suffered much from languor and debility, spasms in the chest, and tickling in the throat.

On examination, the uterus was found to be bulky and mobile; the os patulous; the cervical canal rather granular. On inquiry, the patient acknowledged that she had been very worried and anxious of late, and had been advised to take port wine and brandy to keep her strength up.

Complete abstinence from alcohol was enjoined. A combination of rhubarb and blue pill, to act upon the liver and to secure regular action of the bowel, was given; and a mixture of bromide of potassium, ergot, nux vomica, and cinchona was prescribed. The patient improved rapidly, and the periods soon became normal.

Cirrhosis of Liver: Menorrhagia: Death.—B. T., aged 48, married, sterile, had been fairly regular as to her periods until the last three years, since which time they had been too profuse and too frequent. She was much troubled by flatulence, constipation, anoræxia, nervousness, inability to sleep, great depression, and irritability of temper. Various remedies had been tried to check the menorrhagia, but failed. I was asked to see her, with a view to determining whether any fibroid or other tumor of the uterus existed. The uterus was found to be normal in size and position, and there seemed to be nothing in the condition of the pelvic organs to explain the hæmorrhage. On examining the abdomen, it was found to be very full and distended, the walls excessively fat. The liver could be detected enlarged, hard, and nodular at the edge.

The heart's action was weak, but otherwise normal, no murmur of any kind being present. The lungs were fairly healthy.

In this case, the uterine hæmorrhage was clearly due to alcoholism—enlarged liver and obstructed portal circulation. It was subsequently discovered that she sometimes took as much as a bottle of brandy in a day. She died suddenly a few months later, being found dead in her bed.

In cases of epithelioma of the cervix, where hæmorrhage is a marked symptom, in place of giving ergot or iron, and plugging the vagina with cotton-wool, loosely, as is too often the case, the more rational method is to remove as much of the diseased mass as is deemed prudent, with either the *écraseur* or the curette, or both combined, and then to apply either the liquor ferri perchloridi fortior, the persulphate of iron, or the actual cautery.

* Much may be done in these distressing cases to postpone the evil day, and lessen the amount of suffering consequent upon the exhaustion from repeated hæmorrhages, by timely assistance. It is no reason why the patient should be left to die miserably, unrelieved by art, because the nature of the malady has been recognized to be one which at present baffles our efforts to cure it, unless complete extirpation of the uterus, by abdominal or vaginal incision, can be regarded as a cure.—*Brit. Med. Jour.*

THE TREATMENT OF INTUSSUSCEPTION.

In the September number of the *New York Medical Journal*, Dr. W. R. Gillette, Physician to Bellevue Hospital, relates a case of intussusception in a child nine months old, relieved by injections of water, the administration of chloroform by inhalation, and manipulation of the tumor felt through the abdominal wall. This, he states, is the third case of intussusception in infants which he has seen, and which he has been able to reduce by these means. He thinks that these cases, from the philosophy of their condition, and the necessary measures for relief, are best managed in the way indicated. In two other instances, in which he saw and advised this treatment, reduction was utterly impossible under the other methods tried. The children in each of these cases were held while struggling, and the injections forced into them against all voluntary and involuntary efforts which they could make. He deems the administration of chloroform almost absolutely necessary in these cases. The reason is not difficult to find, inasmuch as, while it gives such perfect control of the patient, it also eliminates the element of muscular spasm. Moreover, massage is a powerful adjuvant to the hydrostatic pressure of water in these cases. In the first two cases, the obstruction was not overcome until massage also was employed.

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A CHARITABLE ENTERPRISE DESERVING RECOGNITION AND SUPPORT FROM THE MEDICAL PROFESSION.

"THE SISTERS OF BON SECOURS, from Troyes, (France.) so well known in all the large cities of Europe for their tender and intelligent care of the sick, and for their excellent training and knowledge in nursing, have established in this City a house of their community.

They are trained nurses, and their special vocation is to nurse the sick in their homes both by day and by night. They are also ready to accompany the sick to the country and to places chosen for them by physicians. They make no distinction of age or condition; they attend all classes of society, rich and poor alike, Catholic and non-Catholic families. For their care and services to the sick, they exact no remuneration; although they have no other means of support save the voluntary offerings of those they nurse.

Application for Sisters may be made to the Sister Superior, 146 West 22d Street."

The little body of nurses whose plan of labor is outlined above have undertaken to establish in this country the grand work their order has so faithfully carried on in France and England.

To all who recognize the importance of intelligent educated care of the sick, and who are conscious how large a factor such care is in the means effecting restoration of health, the influx of this new element in the great body, constantly increasing, who are now trained to care for the sick, must awaken a sense of gratification.

What impresses us as most worthy of recognition is

the fact that no remuneration is sought by these nurses unless patients are fully able to pay; they expect, as is right, that the beneficence of the rich will enable them to care for the poor without remuneration.

The field for labor in this direction is a wide one and comparatively untrodden, though the sphere of usefulness of such a corps of workers as this is limited to some extent by the prejudice and antipathy inspired by the sombre garb of the order and the frequent exercise of their religious rites. To many thousands, however, this grand work must prove of untold benefit, and it is the duty and should be the pleasure of the medical profession in this country, and more especially in this city, not only to wish God speed to the good work, but to practically aid its extension.

LECTURES.

A SERIES OF CASES PRESENTED AT THE CLINIC AT THE NEW YORK HOSPITAL.

BY

GEORGE A. PETERS, M. D.,

Attending Surgeon.

ALLINGHAM'S OPERATION.

The first case this afternoon is one of hæmorrhoids, on which I propose to perform Allingham's operation.

The patient, M. H., 39 years of age, was born in the United States, and is a dentist. He applied in person for admission on Monday last. He has never had syphilis or rheumatism, and his family history is good. His hæmorrhoids appeared first ten years ago, when several small masses would protrude during defecation, but they could easily be replaced. This continued for four years; but after that the piles increased steadily in size. Six years ago he became irregular in his habits, and this brought on constipation of the bowels, so that in straining the piles came down; and they have remained protruding and have not been reduced since. But they have slowly been increasing in size, and at times become much swollen and painful. For the past year his habits have been more regular, and so his bowels have become regular. An examination of the anus shows two or three external piles, the size of a walnut, and several internal ones.

Now I propose to dilate this man's anus by stretching the sphincter, and then to pull down one of the hæmorrhoids and seize it with a pile clamp which has round indented blades, and then to cut the mucous membrane about the pedicle with scissors at the point where it is attached to the wall of the gut, and after putting a ligature about this pedicle to cut it off and leave only the stump behind. The advantage of this method of operating is that the great mass of the hæm-

orrhoid is removed at once and it is not left to slough, and the carbolized ligature which is left about the stump creates no trouble. The two thumbs may be used to stretch the sphincter of the anus, or better still is Dr. Cusco's instrument which will stretch it to any required extent. The difficulty in using the thumbs is that great force is required to overcome the sphincter.

HÆMORRHOIDS.

The next case was another one for hæmorrhoids which had been operated upon three weeks before, but two external tumors still remained. These were now removed in the same manner as those in the previous case by Allingham's operation.

EXTERNAL AND INTERNAL URETHROTOMY.

The next patient W. F. is 42 years of age. He was admitted January 6th. Twenty-four years ago he had his first clap. Four years ago he began to suffer from frequent and painful micturition, and the urine came away in only a narrow stream, and at last it would only dribble away. He was examined by a doctor and was told that he had a stricture, but he received no treatment. Six days before his admission he noticed that there was pain and a swelling in the perineum, and three days later this swelling ruptured and discharged a quantity of decomposed urine, and a fistula was thus formed in the perineum which has remained open ever since and through which the urine has continued to flow. There was not any complete retention of urine at any time before the formation of this fistula.

Examination.—An olive-pointed bougie, No. 30, "was stopped at $\frac{1}{4}$ inch from the meatus, and a No. 28 at a point a little beyond, and a No. 24 at $1\frac{1}{2}$ inches from the meatus, and a No. 22 at a distance of $2\frac{3}{4}$ inches, and a No. 20 at $3\frac{1}{4}$ inches, and a No. 18 and 10 met the same obstruction.

Operation.—The patient was put in the lithotomy position and whalebone capillary bougies were inserted into the urethra until one passed through into the bladder, and upon this, as a guide, the operation of external urethrotomy was performed. Then, after entering the bladder in this way, the other urethral strictures were divided by the operation for internal urethrotomy, with the Maissonneuve and Otis urethrotomes. After this had been done a No. 30 sound could be passed into the bladder. The after treatment of this case consisted in the administration of 15 grs. of quinine and 1 gr. of opium.

CANCER OF THE BREAST.

The patient, Mrs. M. G., is 38 years of age and a native of Scotland. Was admitted to the hospital January 26th, and she applied in person for admission. Her family history is good. She gives no specific, alcoholic or rheumatic history. Is married and has children. Eight months ago she was struck in the right breast with a piece of wood, and pain and swelling of the parts followed, as in any simple contusion. But these soon disappeared and no open wound was made. Six months ago her attention was called to a small lump in the right breast which was freely movable under the skin; and soon after she experienced sharp lancinating pains in the breast, which radiated upwards towards the axilla. This condition lasted until the last month and a half, the lump constantly increasing in size; but since then it has been much more painful, and has grown large more rapidly. Within the past four or five days there has been a constant burning sensation in the breast, and she has lost flesh rapidly, and her appetite has gone, and she has grown pale and

feeble. On admission she was not well nourished, and there was a slight degree of cachexia. An examination showed a hard mass, the size of a hen's egg, situated in the region of the right mammary gland, freely movable, and probably not involving the surrounding structures and not attached to the ribs. I say probably, because you cannot always tell certainly whether the deeper structures are or are not involved. The mass was firmly adherent to the skin and subcutaneous tissue, and the skin was tense and shiny over it, and the nipple was retracted, and one or two of the axillary glands were enlarged and painful.

You remember that in the case upon which I operated a week ago there were some peculiar features. In the first place there was a very large deposit of fat about the breast, which made it difficult to reach the gland, which was soft and broken down and with no well-marked boundaries; and besides, it was very vascular, and considerable hæmorrhage attended the operation. She has since done very well until to-day, when a sharp secondary hæmorrhage set in, which necessitated the reopening of the wound and the ligating of three or four bleeding points. I suppose, therefore, there is some disease of the vessels, which will probably delay the closing and healing of the wound. But in the case before us to-day there is very little fat about the breasts, and the tumor is as hard as a stone, and it is apparently one of the old style of carcinomata. It seems to be freely movable, but after all I may, after laying the breast open, find the sheath of the muscle, or perhaps even the muscle itself involved. In this case, as I expect to lay open the axilla itself, in order to get at any glands which I may find involved in the disease, I will make the line of my incisions extend in the direction of the axilla.

Operation.—Two elliptical incisions were made, one on each side of the nipple, and extending in an upward and outward direction towards the axilla, so as to include between them an area of skin six inches in length and one inch in breadth at its widest point. Then the hard mass of the tumor was dissected about, and as soon as any small arteries were cut they were seized with forceps, which were left hanging upon them while the dissection was continued, and the larger vessels were controlled by catgut ligatures tied in three knots, so as to prevent their becoming untied. When the fascia of the pectoral muscle was reached, it was found that both it and a few fibres of the muscle itself were involved. So it was found necessary to carry the dissection through them, and to remove them with the tumor. As soon as this had been done the incisions were carried further up into the axilla, so that the surgeon's finger could reach and explore its cavity, and then two hardened glands as large as a hickory nut were found and removed. When all the suspicious-looking tissue had been thus cleared away, and all bleeding had been checked, the wound was washed out with a one-in-forty solution of carbolic acid, and its edges were brought together; and after a thorough drainage tube had been inserted, they were united by fine interrupted catgut sutures. The carbolic acid solution was then injected through the tube so as to wash out the wound, and finally a Lister dressing was put on and confined by a roller bandage.

NECROSIS OF THE TIBIA.

The next case is C. G., 38 years of age, and a barber by occupation. He was admitted January 24th. He walked to the hospital, and applied in person for admission. He gives no specific history, and is only a

moderate drinker. Fourteen months ago he fell from a height of eight feet, and sustained a compound fracture of the left leg at its lower third, and the skin was lacerated at a point one and a half inches above the inner aspect of the ankle. The wound was not treated antiseptically, and no dressings were applied at first. But a plaster splint was applied three days later, after imperfectly setting the bones, and as a result there is a deformity of the limb. The case was not treated in this hospital. After the fragments had united, an unhealthy ulcer remained, and from this small fragments of necrosed bone occasionally came away with the discharges. The last piece was discharged six months ago; but a small sinus still remains open. He has been able to walk about with some discomfort for the past nine months, and as he stands up a good deal from necessity in pursuing his occupation, he suffers much pain in consequence. Pus in small quantities is still being discharged through the open wound. On admission, the patient was well nourished and his general condition good. An examination revealed a small irregular opening, half an inch in length and an inch and a half above the internal malleolus of the left leg. A probe inserted an inch and a half into the opening, and directed forwards towards the tibia, detected an exposed roughened surface of bone. The soft parts about were swollen and tender.

Now I propose to cut down upon the bone at this point and examine its condition, and then I shall remove as much of it as I find necessary. I may find some loose pieces of bone which have remained detached since the old fracture, or I may find the tibia to be softened and necrosed at this point, or I can't tell what I may find.

In order to perform the operation with the greatest facility, I will apply an Esmarch's bandage from the toes up to the knee. So I will get a perfectly bloodless operation, and there will be no hæmorrhage to obscure the view, and it will be almost like making a simple anatomical dissection. The deformity of the leg which you see here, is the result of the improper treatment of the fracture. The bones were not put in a line at the time, and so the limb is not exactly straight now, but its lower third is bent slightly outward.

Operation.—The bone was dissected down upon the point where the sinus opened, and the upper fragment was found to have overlapped the lower only half way, and at this point the bone was rough and necrosed. With a gouge and scraper all the dead bone was removed, and the surface of the healthy bone was left smooth and regular, and all the unhealthy tissues were cleared away. The cavity was then filled with carbolic lint dipped in oil, and the wound was dressed with a layer of borated cotton, and then left to fill up with granulations. The Esmarch's bandage which had been applied before the operation prevented all hæmorrhage.

SARCOMATA OF THE HAND.

The next patient is an Italian girl, M. G., 24 years of age, born in Italy, and single. Was admitted Jan. 25th, and was brought to the hospital by her father. Her family history is good, except that her mother has had a weak constitution since patient's birth. Patient gives no specific or alcoholic history. But she does give a history of hemiplegia when she was five years old. Since then she has been slowly recovering the use of her muscles, and now she has good control over her lower limbs, but she has not completely regained the use of her hand as yet. For the past eight or nine years she has had an enlargement of the cervical glands, which sometimes swell up and open, and sometimes

they enlarge and then diminish in size again. At times also the glands in the groin become enlarged. Two years ago she sprained her left wrist, and since then it has become enlarged, and is painful on motion.

On admission she was well nourished in appearance, and her appetite was fair. But she complained of general malaise and headache. An examination showed the presence of two masses the size of a pigeon's egg, situated on the neck, just in front of the sterno-mastoid muscle. Besides, there were some enlarged glands in the groin, and in other localities. She also had as a result of a bad sprain on the left wrist, two good-sized tumors, which looked like ganglia, one upon the radial side of the back of the wrist, and the other upon the dorsum of the hand.

Both of these swellings are soft and fluctuating, and they are probably due to an increase in size of the natural bursa of the part. These bursal tumors may be filled with a nearly transparent straw-colored fluid, or with the natural secretion mixed with purulent matter, or with a brownish or bloody-looking fluid, or they may be nearly or quite solid in structure.

There are various methods of treating these tumors of bursæ. One is to rupture the sac if it is not too thick, by a sharp blow upon it. And another is to obliterate the sac either by means of simple acupuncture or by injecting into it some irritating fluid, so as to set up an inflammation which will result in agglutinating the walls together, just as in the case of hydrocele. Another is to make a free opening into the sac and then to fill the cavity with lint dipped into carbolic oil, and then to dress it as we did the ulcer in the leg in the last case. Another is the method which I expect to use to-day. It consists in passing a seton through the sac from above downward, and in leaving it in long enough to set up a sufficient amount of inflammation to effect a cure by agglutinating the walls of the sac together. This should be done under the precautions of the Lister method. Before operating I will puncture the sac with a hypodermic needle, in order to examine and determine the nature of its contents. For we may be mistaken in our diagnosis, and it may be a cold abscess or some other kind of growth instead of an enlarged bursa.

Operation.—The larger tumor upon the dorsum of the hand was explored with the hypodermic needle, but no fluid could be found. So the idea of introducing a seton was abandoned, and it was determined to cut down upon the growth and examine it, and to remove it if it was found to be a solid tumor, and if it was a semi-solid one, to lay it open and empty out its contents. While carbolic acid spray was kept playing upon the parts, an oblique incision was made from the radial side of wrist across the centre of the tumor towards the ring finger. After cutting through the skin the dissection was made with care, and the superficial fascia was divided upon a grooved director, and the handle of the scalpel was used to separate the parts. When the dissection had been carried down upon the extensor tendons, what appeared at first to be a bursal sack, connected intimately with the tendons, was found; but after it had been more fully exposed it was seen to be of a different character, and it had more the appearance of a sarcomatous growth. This tumor was then carefully torn and cut away from its attachments to the tendons and deeper structures until most of it was removed. A large part of it was brought away in one piece, and this had the appearance of a mass of raw flesh of irregular shape, but about two and a half inches long and half an inch thick. After this several smaller pieces were cut off

with the scissors and removed from the wound. A portion of the large mass was preserved for microscopic examination. The wound was then cleansed and closed and dressed with a true Lister dressing.

It was decided not to attempt the removal of the second tumor at this operation.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, SEPT. 13, 1882.

Dr. E. C. Seguin the President presided. The minutes of the preceding meeting were read and approved.

Dr. Alfred C. Post presented a specimen of

"NECROSIS OF JAW"

resulting from the extraction of a tooth. He also presented a specimen of

OMENTUM REMOVED FOR STRANGULATED INGUINAL HERNIA.

The patient, a woman et 65, was an inmate of the Presbyterian Hospital. She had a tumor in the groin which had not specially attracted attention nor caused her much inconvenience until recently, when the tumor suddenly became larger and more painful and this increase in size was accompanied by vomiting.

Dr. Post had seen her soon after her admission to the hospital and had urged immediate operation, but this the patient would not consent to, till her friends had been consulted. The operation was done, however, the following morning. There was some doubt as to whether the hernia was inguinal or femoral. Patient was etherized and on cutting down a small part of the intestine was found constricted, though shielded from pressure by a piece of omentum. The omentum had been down some time and Dr. Post, as was his usual practice in cases where it had been down for a long time, removed the piece and left the abdominal ring clear. The wound was washed with carbolyzed lotion. The patient's temperature after operation was slightly elevated; on the third day it rose to 103° but since then patient had progressed nicely, the wound healing mainly by first intention. Dr. Post said in conclusion that there was some doubt among surgeons as to the expediency of removing the omentum, but where it had been long adherent, as in this case, he thought it safer to remove it than to leave it behind.

Dr. Heitzmann presented

SPECIMENS ILLUSTRATING THE HEALING PROCESS IN FRACTURED BONES.

Ten years ago he had made some experiments by which he was enabled to study this process of healing, beginning from the second day. The healing process was effected by a deviation of the fractured ends of the bone. The rupture lacerates the periosteum on one side but leaves the other side intact, then hæmorrhage takes place and a fluctuating tumor is developed. Beginning from the second day inflammation sets in and is most severe in the periosteum. The inflammation of the first week is marked by infiltration of the periosteum with the elements of inflammation. Then the inflammation and infiltration take place

along the fractured edges of bone. After the 8th day the whole cavity is filled with a new formation resulting in cartilage. This is the provisional cartilaginous cartilage. Where a fracture is, there is this provisional cartilaginous cartilage. From the second week a new process is started, tending to the formation of bone. The cartilage breaks down and a cancellous new formation takes place which coincides with the normal structure of bone. The process now is the formation of more perfect bone from the cancellous structure. Eventually the healing process is so perfect that the place of fracture can scarcely be seen. Dr. Heitzmann stated in conclusion that the specimens exhibited "the coincidence of normal with pathological formation of bone," and referred those who wished to study this matter in detail to his forthcoming book.

Dr. Wyeth presented a specimen of

ANEURISM OF THE RIGHT SUBCLAVIAN ARTERY.

At one of the June meetings of the Society he had presented the spinous processes of three vertebræ which were the seat of necrosis, the cause of which was not then known. The vertebræ had been removed April 22d; the patient had died only yesterday from rupture of an aneurism of right subclavian artery. The aneurism had escaped observation on account of solidification of the lung masking the usual signs. Necrosis of the second rib had taken place, and the necrosis of the vertebræ was undoubtedly secondary.

Dr. Post, in discussing Dr. Wyeth's specimen, said with reference to the pulsations being masked, that he had seen several cases of aneurism in which there was no pulsation and there had been doubt as to the existence of aneurism. In a case he recalled, in which pulsation could not be made out, the diagnosis was between aneurism and deep abscess. An exploratory incision was made and the patient died in twenty minutes. In a second case the tumor was in the axilla of a patient about sixty. The tumor had been developed after a fracture of the arm. No distinct bellows murmur could be made out, but subsequently the tumor ruptured, there was copious hæmorrhage, which was finally controlled by tying subclavian artery, and the patient recovered. In a third case a patient was brought to me with injury of the forearm. There was considerable hæmorrhage, which was arrested by pressure, but returned. Patient was brought to me with both limbs swollen and hard, but no pulsation could be made out. I diagnosed wound of ulnar artery with aneurism and accordingly cut down, exposed the cavity and found it as I had suspected. I mention these cases to show that there is often a period in which pulsation cannot be detected in an aneurism, and the diagnosis, even with the aid of the previous history, is not clear.

Dr. — presented a specimen of

EXFOLIATION OF WALL OF UTERUS.

The patient had suffered from most severe diarrhœa, and had ulcers of vagina and uterus. These had been treated by injections of carbolyzed water and chloride of zinc. Patient died and at the autopsy an ulcer 2 inches long was found on the anterior wall of the uterus and a small one on the posterior wall. A body was also found 4 inches long, 2 inches wide and 1 inch thick, which was supposed to be an old fibrinous clot, but which proved to be a part of the body of the uterus. The body was not attached in any way to surrounding parts and was perfectly well preserved.

Dr. Amidon presented a specimen of

URINE EXHIBITING CRYSTALS OF HIP-
PURIC ACID.

The urine had been "passed September 7th by a patient with the following history: Male, aged 43, in good health until four years ago, when a period of overwork was followed by persistent frontal headache, and ravenous appetite, the gratification of which would somewhat relieve the headache. He developed gastric catarrh from which he recovered. He complains now of frontal headache, abnormally large appetite and thinks he has phosphaturia. Urine, on examination, presents hippuric acid in crystalline form. Dr. Amidon here quoted Bentz Jones as to the amount of hippuric acid in the urine, and detailed the foods the inhibition of which was followed by appearance of hippuric acid in urine, among them plums, whortleberries, etc. Residents in tropical climates had been found to secrete it in greater quantity than those in more temperate climes. The crystals as they occur are rhomboidal prisms which collect in rosettes, stellate form, resembling triple phosphates.

Dr. Amidon presented a second specimen of
SPERMATIC FLUID.

Patient age 40, was supposed to have at first prostaticorrhœa. He was unmarried, and gave a history of nocturnal emissions, extending over a period of many years, but for last five or six years had had no emissions. He denied venereal disease, masturbation, or sexual excess. There was no lesion of the deep urethra. The discharge, which was first thought to be that of prostaticorrhœa, proved to be the spermatic fluid. Patient had been put upon ergot, cantharides, belladonna and atropine, but was by no means cured.

Dr. Heitzmann said, with respect to the first specimen, that he thought the crystals shown were not those of hippuric acid, but of triple phosphate. In many hundreds of specimens he had only met with hippuric acid once and then in the urine of a patient who had taken benzoic acid. The hippuric acid crystal were needle-shaped. Dr. Amidon, in reply to this criticism, quoted many authorities, demonstrating the fact that the crystals shown were those of hippuric acid. Dr. Wyeth also alluded to the works of Flint and others, who represented the form of crystals of hippuric acid as they appeared in the specimen presented by Dr. Amidon.

Dr. — was introduced to the Society, and after describing the process of contagion in bone tuberculosis and its communication to man, he exhibited specimens of Koch's tubercle bacilli and the micro-parasites causing splenic fever. These two diseases, he stated, viz., tuberculosis and splenic fever, are the only ones that can be positively affirmed to be produced by micro-parasites.

The tuberculosis parasite gained access through the cavities of extracted teeth, etc. In animals this disease was purely local, while in man, in whom it was propagated by contagion from animals, it caused both local and general necrosis.

SELECTIONS FROM JOURNALS.

DYSMENORRHŒA AS A CAUSE OF HYSTERO-
EPILEPSY. BY JOHN DEWAR, L. R. C. P., ED.

What is meant by hystero-epilepsy? As yet authors are not agreed. Charcot says it is "hysteria, solely

and always present, taking on it the semblance of epilepsy—epilepsy being present only in the external manifestation, but not substantially existent;" in other words, epileptiform hysteria. But so little is at present known of the true nature of epilepsy, that one must be guided to a great extent by "external manifestation" in forming an opinion as to whether epilepsy be really present or not. For this reason Charcot's definition appears to me unsatisfactory. Others regard hystero-epilepsy as simple epilepsy followed by hysteria; two separate affections, each distinct and independent. This occurrence is quite possible, but this should not be called hystero-epilepsy. Others regard it as a combination of hysteria and epilepsy, half hysteria and half epilepsy, a mixture of the two, a hybrid as it has been called. What I understand by hystero-epilepsy is epilepsy unmistakably present, but having an uterine or ovario-uterine origin.

The majority of the published cases of so-called hystero-epilepsy in France or America* I think we would regard as severe cases of hysteria only. In Richer's† typical cases the epileptoid stage only lasts a few seconds, and is at once followed by wild hysterical convulsions. It is confusing and non-scientific to call hysteria, of however aggravated a character, by the name of hystero-epilepsy, when in reality there is no epilepsy in it. It would be best to drop the word epilepsy altogether and call the disease grand or major hysteria, confining the term hystero-epilepsy to cases with marked epilepsy, combined or not with hysteria, but having an uterine or ovarian origin.

We know that epilepsy may arise from different causes—from the scarlet-fever poison, from dyspepsia, from local irritation, as worms, irritation from a tooth, a splinter of wood under the thumb nail (Greenhow), and lastly the ovary. The uterus may also be added. It is in its connection with the last two, and because of its peculiar development, that epilepsy becomes hystero-epilepsy (from *utero*, the womb). And if the term were kept in this connection, I think it would simplify matters. Dr. Barnes and others have written on ovarian epilepsy, and it is in connection with the ovary that Charcot and Richer describe hystero-epilepsy; but the uterus is ignored altogether. Dr. Graily Hewitt, I believe, was the first to draw attention to flexions of the uterus as a common cause of convulsions, though he does not speak of them as epileptic in character. But I do not know of any one who regards dysmenorrhœa as a cause of epilepsy or hystero-epilepsy. The most recent works on epilepsy only casually hint at that disease first making its appearance in young girls with disturbed menstruation. Dr. Gowers, in his recent excellent work on epilepsy, refers in a single sentence to "retarded or absent menstruation" as an exciting cause, adding "the difficulty in determining the exact causal relationship between the two conditions is very great." Why the difficulty should be greater in this than in any other kind of peripheral irritation, I fail to see. Although Dr. Gowers does not recognize dysmenorrhœa or other abnormal condition of the uterus or its appendages as a cause of epilepsy, yet, when speaking of the statistics of the disease, he says that, "at infancy and puberty the excess of females (over males who suffer) is very great." Why it is so at infancy is not very clear, though, according to Dr. Gowers, heredity has something to do with it; but heredity affects both sexes

* Hystero-Epilepsy, by C. K. Mills, M.D. *American Journal of the Medical Sciences*. October, 1881.

† *Etude Clinique Sur l'Hystero-Epilepsie, on Grande Hysterie*, pour le Dr. Paul Richer. Paris, 1881.

more equally at puberty. This leaves menstruation and its troubles responsible for the great increase—one-third more. After menstruation has ceased, males are more often afflicted with epilepsy than females.

The following I regard as a case of pure hysterio-epilepsy. Mrs. P., aged 34, was of average height and rather spare build. There was no "nervous history" in herself or family. She had no convulsions when a child. She said that, shortly after marriage, she had three miscarriages, occurring within a few months of each other, and each time about three months gone. Since then she had had more or less dysmenorrhœa, with scanty discharge. Her first fit commenced in July, 1881, when she had three fits in one night. She had no more for ten days; then she had several. They then came on more and more frequently up to the time when I saw her in October, three months after her first attack. I cannot describe the character of the earlier fits, whether they had more of the hysterical or of the epileptic in them; her friends say they were similar to what I saw, only less severe. Those which I saw were characteristic enough, some of them of great severity. They were preceded by an abdominal aura, immediately followed by loss of consciousness, tonic contraction of limbs, succeeded in a few seconds or minutes by clonic convulsions, especially of the right side. The fits were closed, the features contorted, with some foaming of the mouth, but no biting of the tongue. In some of the fits there was slight opisthotonos. I have seen one fit succeed another every ten minutes, and before consciousness was restored; so that for an hour or more she was in the *status epilepticus*. A whiff of chloroform relieved the convulsions very quickly, but did not prevent their return. Strong doses of bromide of potassium and chloral kept them under. One day she must have had as many as thirty, and it was during the menstrual period that they occurred so frequently.

There was a history of a fall about twenty feet two years previously, for which she was admitted into St. George's Hospital; but no bad symptoms followed. When the fits began, she was told by a medical man that they were due to a tumor on the brain, resulting from the fall. But, judging from her symptoms, and from the fits becoming worse at her periods, that they were uterine, I examined her. There was no displacement of the uterus; the cervix was natural to the touch, only with a slight tapering; the os was small. On introducing the sound, the internal os offered more than usual obstruction. The depth of canal was normal.

On November 19th, the patient being put under chloroform, I introduced a double-bladed hysterotome up to, but not through, the internal os; and made a double incision. I then put in a small tangletent. Next day, the vaginal portion of the tent was moderately swollen; but traction on the string would not make it come away. Thinking the uterus was only grasping it tightly, I gave her some chloroform; but even then I had to use considerable force with polypus-forceps before I could get it away. The tent presented an hour-glass appearance, or like the cork from a wine-bottle, constricted in the middle by the internal os. The constricted portion was only double the diameter of an ordinary uterine sound, the ends being at least double that size. Forty-eight hours afterwards, a sharp attack of pelvi-peritonitis set in, which lasted a week; then she gradually recovered. She has had no more fits, the dysmenorrhœa having also quite disappeared; and she is now in good health. On April 5th, nearly five months after the operation, she had menor-

rhagia for three weeks, but no pain. Tincture of hamamelis checked it.

There are several points of interest in this case.

The fits had all the characters of epilepsy, except biting the tongue. This is no doubt an important symptom, but still not an invariable accompaniment of epilepsy. And though there was foaming of the mouth, it was not so marked as in most epileptics. Again, the slight tendency to opisthotonos is a characteristic of hysteria, and not of epilepsy. But, on the other hand, the loss of consciousness, the tonic succeeded by the clonic spasms, the absence of the so-called co-ordinate movements (throwing about the hands and arms, the purposive struggling, requiring half a dozen to hold the patient down), the sudden onset and short duration of the fits, the appearance of the patient, etc., are all characteristic of epilepsy. There was nothing violent or noisy about the patient, but a good deal of helplessness and exhaustion. Pressure on the left ovary, though painful, did not bring on a fit, nor cut one short. I did not take the temperature, which is said to rise in epileptics, but not in hysteria. The day after the fits, she complained of exhaustion and headache. She had no delusions, no globus hystericus. On the whole, then, the epileptic symptoms predominated.

There is no doubt as to the origin of the convulsions. Epilepsy due to centric or cerebral disease is a much more serious disease than that which is brought about by peripheral irritation; though the latter, when of long standing, may end in confirmed epilepsy, despite the removal of the cause. In my patient, the uterus alone was at fault, the cervical stenosis producing dysmenorrhœa, and the dysmenorrhœa the fits. This is evident from the great exacerbation of the fits, menstruation; and the complete removal both of the fits and dysmenorrhœa by opening up the canal. The unyielding cartilaginous condition of the internal os is shown by the appearance of the tent. I think it would have been better to cut through the internal os in this case, though that is not usually recommended. It might have saved the inflammatory attack.

I have at present under treatment three other cases somewhat similar: one almost purely epileptic, of two years' standing, where the intelligence is beginning to suffer. In this case, there is antelexion, with dysmenorrhœa. Since wearing a Thomas's pessary, has had only one fit. The other is also a case of antelexion, with dysmenorrhœa, the fits being epileptiform and slight. The third patient had antelexion, with dysmenorrhœa, with nine months of exaggerated hysteria, eclampsia, etc., but no epilepsy. An intra-uterine stem cured this woman. But it would occupy too much time to enter into these now.

Dr. Bantock (London) confirmed Mr. Dewar's observations, that in many of the cases, of which Mr. Dewar's case was an example, relief was often quickly afforded by incision of the cervix, which he considered preferable to dilatation by means of sponge-tents.

Dr. Thomas Dutton (Sidlesham) wished to know if the ordinary treatment of epilepsy had been tried and failed. If so, he considered that they were cases of hysteria due to irritation of the uterus.

Dr. Grigg (London) thought it was a mistake to call these cases epilepsy; there are instances of hysterical convulsions due to reflex irritation, to which any lowering of the general health conduces.

Dr. Nesfield (Manchester) thought there were undoubtedly cases on the borderland between the two disorders, not unfrequently seen in children, and even in boys.

Mr. Dewar, in reply, held that his case deserved to

be called hystero-epilepsy, more than those of Charcot and others, where there were absolutely no symptoms of epilepsy. Bromide of potassium relieved, but did not cure, his case. There was an unmistakable element of epilepsy, and, as the cause of the disorder was uterine, he considered the name he had given it justifiable. Biting the tongue was not a *sine qua non* in epilepsy, which might be peripheral as well as central. —*Brit. Med. Jour.*

A SUCCESSFUL CASE OF TRANSFUSION OF BLOOD AFTER SEVERE POST PARTUM HÆMORRHAGE. BY WILLIAM WALTER, M. A., M. D., Trin. Coll. Dubl.

The case which I wish to bring before the notice of the Association is one of transfusion of defibrinated blood, for intense collapse following *post partum* hæmorrhage; and it presents a good example of the benefit that may follow this operation, even when apparently there seems but little probability of a successful issue.

On June 8th, 1881, Mr. Saberton of Ardwick was sent for to attend a patient (Mrs. S.), aged 22, in her second confinement. On reaching the house, he discovered that the child had been born and the placenta expelled at least ten minutes previously, and that the labor had not extended over more than a couple of hours. The condition of the patient was most critical; she lay in a pool of blood, her face deadly pale, and the pulse scarcely to be felt. Her abdomen was distended with an enlarged uterus, that reached almost to the ensiform cartilage. Not a moment was lost in firmly grasping the fundus uteri, and in resorting to the ordinary means of checking hæmorrhage; including the free administration of ergot; but no contraction ensued until the hand had been introduced into the interior of the uterus, and the clots which filled the uterus thoroughly removed; and these, when lifted into the chamber-utensil containing the placenta, completely filled that vessel. The uterine contraction was soon followed by dilatation, with a return of the hæmorrhage; and for an hour contractions and dilatations followed one another at short intervals, with repeated recurrence of hæmorrhage. During this time, pressure over the fundus was maintained, and occasionally the hand was reinserted into the cavity of the uterus, and the organ manipulated bimanually.

Mr. Saberton was now assisted by his partner, Mr. Gwatkin; and in the course of another hour the hæmorrhage ceased, and the uterus remained firmly contracted. Notwithstanding this, the patient showed no signs of coming out of her condition, and both gentlemen saw that, if it were possible to save her life, it could only be by transfusion of blood. For this purpose I was sent for, and reached the house two hours after the labor, and half an hour after the arrest of the hæmorrhage.

I found the patient lying still and unconscious; her face and lips were blanched; her eyes had assumed that dull and lifeless appearance which only death, or its near approach, can produce. Respiration was scarcely perceivable, and the pulse could only at intervals be felt; her extremities were cold and clammy, but the uterus was firmly contracted. It is needless to say I had no hesitation in concurring with the opinion already expressed as to the necessity for transfusion, and placed in readiness Dr. Macdonnell's transfusion-apparatus. The husband of the patient cheerfully consented to supply the necessary blood, but her mother begged that she might be the donor; and to

this request we acceded, as the condition of her health was extremely good. The mother's age was forty-two; and it is worthy of record that her next menstrual period, which should have occurred two days later, did not on that occasion appear.

Whilst Mr. Gwatkin and I were performing venesection on the mother in an adjoining room, and before we had time to collect more than four ounces of blood, Mr. Saberton acquainted us that the patient was apparently lifeless. Accordingly, Mr. Gwatkin took charge of the defibrination, and I hurried back to the patient's bed-room to prepare her arm for the reception of the blood. The difficulty one had to contend with in finding a vein was very great, but at last one came into view; and, the skin over it being divided by transfixion at a right angle to the course of the vessel, a probe was readily passed underneath the vein, so as to isolate it from the surrounding tissues. A small opening was now made in its walls, and the silver nozzle of the tube was introduced a short distance into its interior. The blood was now allowed to flow along the tube until it appeared at the opening in the side of the nozzle, whereby one knew that no air existed in the tube. The nozzle was then introduced further into the vein until the opening at the side was completely hidden from view; and the patient's arm, together with the apparatus, were elevated, in the hope that the blood would then be forced along by gravitation; but such was not the case, and it was necessary to aid in its propulsion by repeatedly compressing the dilated portion of the tube.

In from ten to twelve minutes, all the blood (nearly four ounces) was injected; and the patient's arm being bound up, we anxiously watched the results of the transfusion. Almost immediately, respiration became distinctly visible and audible, without the occurrence of any dyspnoea; the pulse at the same time returned to the wrist; and, in the course of a quarter of an hour, the insensibility gave way to consciousness, and she was able to recognize her friends. Her convalescence was steady and uncomplicated; and within a month, she was able to walk out of doors.

In conclusion, I may remark how generally it happens that, in the cases of *post partum* hæmorrhage which would be most benefited by transfusion of blood, a transfusion-apparatus is not procurable until too late to be of service to the patient; and I cannot too strongly recommend a glass pipette with tube, such as the one I now produce (which is Macdonnell's apparatus made of portable form), could be constantly carried in the obstetric bag for sudden emergencies—*British Medical Journal*.

A PROPOSED SUBSTITUTE FOR CARBOLIC SPRAY IN ANTISEPTIC SURGERY. By A. W. MAYO ROBSON, F.R.C.S. ENG.

The purpose of the present paper is to give the results of some experiments, which have extended over a period of two years, and which were undertaken in the hope of bringing before the notice of the profession a substitute for the carbolic spray, now used in antiseptic surgery.

Most, if not all, surgeons acknowledge the advantage of the Listerian method of dressing wounds; and nearly all are equally unanimous in asserting that the spray, hitherto a necessity, is both inconvenient and dangerous. The surgeon has his vision obstructed, "especially if wearing spectacles," and his sense of touch impaired. He, moreover, has the serious discomfort of living, during a considerable portion of his

time, in an atmosphere too much resembling a Scotch mist. There are many slighter inconveniences to patient, assistants, and surgeon, which are so well known, that it is quite unnecessary for me to mention them; but these are trifling when compared with the dangers to the patient attending the use of spray, especially in abdominal surgery.

That the risks of poisoning are not fanciful has, I think, been abundantly proved by Dr. Keith and other operators, who have been led to abandon the spray in ovariectomy. I believe I have myself seen death caused in more than one case of abdominal section, by chilling of the viscera and by carbolic poisoning.

About two years ago, an apparatus was advertised which created a current of air by means of a fan set in motion by clockwork, the air being forced through layers of gauze, moistened with 1 in 40 carbolic solution. About the same time, I had an apparatus made, which created a current by means of bellows, and sucked the air through a series of wash-bottles filled with 1 in 10 carbolic solution. From some experiments I made at the time with sterilised flasks, I came to the conclusion that, although the carbolic atmosphere was pure or aseptic, it was not antiseptic.

It then occurred to me that, if one could saturate the air with some volatile antiseptic, such as eucalyptol, cajuput, or peppermint, a really antiseptic air might be obtained, which, by being diffused in a room, or blown on a wound, might answer the same purposes as the spray, without having its disadvantages, I was prevented by other work from following out my idea until last September, when I made the following experiments.

The first and most essential point to be proved was, whether or not air impregnated with the vapor of volatile antiseptics is really antiseptic. To ascertain this, I sterilized a number of flasks of hay infusion, by boiling for fifteen minutes, capping with cotton-wool, and continuing the boiling for ten minutes longer; after which, to prove their freedom from life, they were placed in an incubator, and kept at a temperature of 100° Fahr. for two days. Having obtained some large wide-mouthed glass jars, capable of holding several gallons, I poured into one some about an ounce of eucalyptol, and into another the same amount of cajuput oil, so as to have a thin layer of fluid covering the bottom of the jar. Into these jars, the sterilized flasks, previously freed from their cotton covering, were inserted; being suspended by means of a thread from a bar placed across the mouth of the receiver. The transference and opening of the flasks were rapidly performed under carbolic spray; but when they were once in the jars, there was nothing to interfere with the entrance and exit of the ordinary atmospheric air. After a varying period of exposure of from two to twenty-two hours, the flasks were uncapped with cotton and again transferred to the incubator, in doing which, the usual precautions were adopted; and, in addition, the cotton which had to come immediately over the flask was just damped with a little 1 to 40 carbolic solution, to avoid the contact of germs. After being in the incubator for two days, they were put aside, to be examined at leisure.

No change occurred in the flasks through keeping, the hay-infusion looking bright and transparent throughout. There was a slight sediment in all, both in those simply sterilised and in those subjected to the action of eucalyptus and cajuput; but in no case was there a formation of scum on the surface of the fluid. In contrast to this, some flasks that had been simply exposed to the air, and then covered with cotton-wool,

began to appear opaque, and scum over within a few hours.

In order that the report might be free from bias, I asked Mr. Abbott, an experienced microscopist and botanist, to examine the solution microscopically for me, which he kindly did, giving his opinion before I examined the slides.

The following are a few examples.

1. Hay-infusion, sterilized August 18th, placed in incubator for two days; exposed to eucalyptus-air for two hours on 22nd; then placed in incubator again for two days. Examined September 7th, and found to be free from living organisms, but to contain very few of what appeared to be dead micrococci in the slight sediment.

2. Sterilized August 18th; incubator till 20th; eucalyptus-air for thirteen hours; incubator till 23d. Examined September 7th under $\frac{1}{8}$ objective and found free from living organisms.

3. Sterilized August 20th; incubator till 22d; cajuput-air for twenty-two hours on 23rd; incubator for two days. September 7th, $\frac{1}{8}$ objective revealed a few still rods and micrococci, which only showed the Brownian movement but apparently no living organisms.

Numerous flasks, acted on in a similar manner to the above, were examined with like results, except in one case, where living bacteria and micrococci were found. In this example, the usual precautions had been adopted; [it failed from some cause.]

The experiments related go far, in my opinion, to prove that, in the vapor of eucalyptus, cajuput, and other volatile fluids, we have powerful antiseptics, which, at the ordinary temperature of the atmosphere, may so saturate the air as to kill all infective particles; perhaps not only bacteria and micrococci, but also the germs of fevers and other infectious diseases.

I have experimented in a similar manner with terrene, and have obtained good results; but, as eucalyptol is abundant, cheap, and not unpleasant, it has been selected for further tests.

In my microscope-room, which is an attic at the top of the house, and in which there are numerous organic particles, rendering the air anything but pure, I exposed flasks, prepared as above, to the vapor of eucalyptol, by scattering it on the floor, half an hour before removing the plugs of cotton from the sterilized vessels. The hay-infusions, exposed for periods varying from one to twenty-four hours to this atmosphere, for the most part remained free from germs, after being placed in the incubator; but, as the results were not always the same, I cannot vouch for this method being reliable to sufficiently purify the air for an antiseptic operation.

Hence I was led to devise the machine which I now show you, in which the air is first passed through a cylinder containing cotton-wool, which Pasteur has proved to be sufficient to free it from the germs; but, as this would only be a pure, and not an antiseptic air, it is then passed through two cylinders containing pumice-stone, over which about an ounce of eucalyptol has been poured. Thus it emerges as a pure air, loaded with invisible particles of an antiseptic, which seems to be capable of destroying any vestige of germ-life which may have been drawn in from the surrounding atmosphere: it is directed over the desired spot by means of five coralline nozzles, which act on a ball and socket-joint, capable of being fixed in a certain direction by a screw. The bellows were obtained from Mr. Fletcher of Warrington, and give a continuous current at a considerable pressure. Messrs. Meyer and Meltzer make the entire machine. The following

cases from my own practice and the practices of other surgeons will illustrate the use of the apparatus.

CASE I.—Mr. G., after suffering for three weeks with onychia, called to consult me, with inflamed and suppurating axillary glands. On April 27th, I opened the abscess under eucalyptus-air, getting out about two ounces of pus. I put in a drainage tube, and dressed the wound with salicylic silk. The instrument and hands were dipped in 1 in 40 carbolic solution; but the wound itself was neither syringed nor sponged with carbolic solution. On April 29th, the matter had perforated the dressing, which was changed, and the drainage-tube removed. On May 1st, the wound was dressed in the same way. There was thin fluid on the dressings, but no pus. There was no redness round the point of incision; and the discharges throughout were quite sweet and free from bacteria, as proved by microscopic examination. On May 4th, the wound was healed. Before the incision, the temperature was 100° to 101° for several days, but never above normal after the opening was made.

CASE II.—Mrs. G. had been confined three weeks. She had previously caught cold, and had a gathered breast, which was intensely painful and very much enlarged. On April 29th, I opened the breast under the eucalyptus-air, and dressed with salicylic silk. On May 1st, the drainage-tube was removed. She had no pain since the operation, and felt quite well. The discharge was aseptic, and there was no redness round the wound. On May 5th, the dressings were removed. The wound was healed.

CASE III.—Miss C. had an aneurism by anastomosis of the scalp, which was removed under eucalyptus-air on May 1st. On May 4th, the dressings were changed. The wound had run an aseptic course throughout.

CASE IV.—was one of strumous disease of the finger with abscess, which was opened freely on April 27th. On April 29th, it was dressed. There was little discharge; the wound was aseptic and free from organisms. On May 3d, it was healed.

CASE V.—Miss P., suffering from chronic pyæmia following caries of ribs, had a parotid abscess. On May 1st, the abscess was opened under the eucalyptus-air, and an ounce of pus let out. It was dressed once a week for several weeks, and ran an aseptic course. No pus was seen after the first dressing, and the small amount of fluid showed no trace of bacteria.

CASE VI.—Mr. L. was the subject of large varicocele, which he was anxious to have radically cured. On July 10th, the operation of cutting down on the veins, ligaturing them at the external abdominal ring and at the testicle, and then cutting the varicocele away, was done under the antiseptic air. A drainage-tube was inserted, and salicylic wool-dressing applied. The wound was dressed on the 11th, 13th, and 15th; its course was aseptic, and it healed on the latter date.

Mr. T. Pridgin Teale removed a return growth of scirrhus of the breast on April 27th, under the eucalyptus-air. Mr. Ward, House-Surgeon of Leeds Hospital, who kindly reported the case to me, said that the wound pursued a strictly aseptic course until it was healed. In this example, it is only fair to say that the wound was wiped over with a carbolyzed sponge before being closed up; which however, is the course usually adopted when the carbolic spray is used.

Mr. Teale has also kindly adopted the eucalyptus-atmosphere in other cases, one of which was a large fatty tumor of the side; and in this example no carbolic acid was allowed to come in contact with the wound. The wound remained aseptic and the temperature normal throughout.

Dr. Clouston has been good enough to allow the eucalyptus-air to be used in four cases of empyema. He tells me that the course in all the cases was aseptic; and in one of these examples the dressings were examined, and found to be free from organisms.

Mr. Spencer Wells, who kindly used my first crude machine, sent me the following account of an operation.

"June 9th. I amputated a breast under your eucalyptus-vapor, put in a drainage-tube, used sutures to unite the skin up to the tube, and dressed it with salicylic wool. I did not touch it for three days; then removed the tubes under the eucalyptus-vapor; put on more wool; left this four days; then removed the sutures. Union by first intention up to opening left for the drain. No fever; no sign of any putrefactive process. Drain-opening now closed."

I fear, gentlemen, my paper has been somewhat long and full of detail; but I hope the importance of the subject will warrant my occupying your attention for this length. At present, I fear my instrument is somewhat cumbersome, and it certainly occupies one person to work the bellows; but if, in an institution such as a large hospital, the hydraulic bellows used to work the organ, or the water-power used for the lift, could be made available, it would be an easy matter to have a pipe to each ward and to the operating-room, which would convey the desired current, ready to be attached to the machine wherever it might be wanted.—*Brit. Med. Jour.*

A CASE OF PORRO'S OPERATION: RECOVERY. BY T. SAVAGE, M.D., M.R.C.P. LOND.; F.R.C.S. ENG.

Dr. Clement Dukes, of Rugby, sent for me on July 12th, 1882, to see with him a patient whom he had been attending and had seen a few hours previously in consultation with Dr. Heslop, of Birmingham. The case was an urgent one, and it was considered that it would be necessary to give some relief of a surgical nature, and that without much delay. The following are the notes which I took at the time: Mrs. H., aged 25, was married on January 4th, 1882. Her catamenial history before marriage was normal; she had three periods after marriage, the last one ending on March 18th. Soon after this she had vomiting and constipation.

She first consulted Dr. Dukes on June 30th, having pain on lying down and a slight blood discharge. He examined her the next day, and found a tumor on the right side of the abdomen, of pyramidal shape, and most prominent between the umbilicus and the iliac crest. It was very hard, dull on percussion, and non-fluctuant. It extended also well over into the left side. Neither the patient nor her husband had noticed any enlargement until shortly after menstruation had ceased in March; and they then thought it was to be attributed to pregnancy. She had no rigor or rise in temperature, but had been a good deal troubled with painful micturition.

When I saw her I found the condition as above described. Her face was flushed; temperature normal; pulse 108. The tongue was white (aphthous?). She had been taking morphia for the pain, which had been very severe, and was increasing in intensity. She had no rest or sleep, and for some days had been almost constantly vomiting. Her face had the aspect of much suffering, and she was becoming thinner daily. The tumor was very hard, and rose to the level of the umbilicus. It was very prominent on the right side, hav-

ing almost the appearance of an abscess that wanted to be opened. It was dull and non-fluctuant. It gradually flattened over on to the left side. The prominent part of the tumor was very tender indeed, especially on its right side. Both flanks were resonant, and the tension of the abdominal wall was most extreme. Through the vagina the cervix was felt very high up on the left, soft, and a little open. On the right side, through the vaginal roof, the swelling projected downwards, and was felt to be in direct relation with the abdominal tumor; and it was quite immovable. The uterus appeared to be quite distinct from the tumor; there was a sulcus between it and the cervix, and pressure from above did not affect the cervix.

In considering the diagnosis, hæmatocele and pelvic abscess were excluded; but it seemed likely that it might be an extra-uterine gestation, a myoma, or an ovarian tumor with the addition of intra-uterine gestation. It was quite clear that relief of some kind must be afforded to the patient without delay; and one of two courses seemed open for that purpose. The first was, to induce abortion; this would relieve the tension, and therefore the pain, though only to a very slight extent, not enough to be of much service, and would still leave the tumor, the cause of the trouble, untouched. The operation itself would also not be unattended with risk. The second course would be to make an exploratory incision, with a view, if possible, of removing the tumor. After taking into account the hardness and the rapid growth of the swelling, as well as the intense pain of the last fortnight, the inability to take food, and the emaciation, it was agreed to recommend an abdominal section, to which both the patient and her husband assented, after having explained to them the objects and risks of the operation.

On the following morning, therefore, Dr. Dukes giving ether, I made an incision nine inches long, the upper portion extending nearly two inches above the umbilicus. The tumor was found to be a large, solid fibro-myoma, growing out and forming part of the right side of the uterus. The cavity of the uterus was found to contain a fetus, and was pushed upwards and to the left. The right ovary and Fallopian tube were in front of the tumor, and almost black from compression between it and the abdominal wall.

It was thought that it would be safer and easier to remove the whole mass, which was accordingly done, rather than attempt removal of the tumor alone. The stump was secured by a wire clamp, and its serous outer surface was attached by silk to the abdominal wound. Two thick silk ligatures were also tied round the stump for security. Very little blood was lost, and much care was taken to prevent any from being left behind the bladder or on the vaginal roof, which appeared to be considerably dragged upwards by the clamped stump. A glass drainage-tube was inserted just above the stump, and perchloride of iron was applied to the end of the stump. After the operation, which lasted about an hour and a half, the finger passed into the vagina detected the cervix high up, but otherwise normal, showing that the wire had encircled the uterus at about the level of the inner os, and had not included any of the vaginal roof with danger to the ureters. Only about four ounces of ether were administered. The mass removed weighed nearly nine pounds, and contained the fetus with membranes intact. The recovery after this formidable operation was uninterrupted, and is largely to be attributed to the care and skillful treatment of Dr. Dukes, who had the sole charge of the patient after the operation. She may now (August 25th) be said to be quite well. The

breasts secreted milk on the fourth day. The clamp came away on the twenty-first day.

This is the second time that Porro's operation has been successfully performed in this country, so far as I have been able to learn. The first case was, very curiously, done by Mr. Knowsley Thornton at the Samaritan Hospital the day before this one (see *British Medical Journal*, July 22d); and it seems to me that it ought to be more generally successful than the records from abroad show it to have been. Dr. Alexander Simpson's compiled table shows recoveries 41.6 per cent. and deaths 58.3 per cent.; and in Italy, where it has been done thirty-eight times, the deaths were twenty-four, or 63 per cent., and the recoveries fourteen, or 37 per cent. Experience and observation up to the present time incline me to think that the extra-peritoneal method of treating the stump will be found to be the best more frequently than the intra-peritoneal. —*Brit. Med. Jour.*

INTUSSUSCEPTION IN AN INFANT CURED BY INJECTIONS OF WARM WATER UNDER CHLOROFORM.

On August 17th I was called to see a little girl aged three months, whom I found suffering from intussusception. During the previous day, and up till near noon that day, the child had appeared as usual. It then had a motion of an unnatural color, accompanied with much wind, and began to cry as if in pain. The mother had not noticed any lump in the abdomen when washing her child earlier in the morning. About half an hour later she was alarmed by the child's beginning to pass blood *per anum*. The child's condition had by that time changed, for she became extremely pallid, would not take the breast or take notice, but lay still with the eyes partly closed, only occasionally drawing up the legs, and crying.

When I saw the child, about 4 o'clock, I found the conditions above described, with the addition of a tumor in the abdomen, lying transversely on each side of the umbilicus, but situated mainly below it. I could feel nothing of the intussusception *per anum*. There must have been a good deal of bleeding from the guts, as blood came away pretty freely on examination. Later on, in the evening, Dr. Hinton, my partner, saw the case with me. Getting the child fully under chloroform, and keeping it so, we proceeded to inject warm water with one of Maw's double-action syringes, using an adult rectal tube, introduced as far as it would go without force. At first, we kept the child on its back; but, towards the end of the operation, the hips were held at a higher level than the shoulders. Nearly sixteen ounces were injected, and the abdomen, of course, became fully distended. On withdrawing the tube, a portion of the water came away, but the abdomen remained distended with the rest. The tumor now could only be felt on the right side of the abdomen. A little later, the child passed more water *per anum*, but no motion, and vomited some watery fluid.

The next morning, I found that the child had taken the breast a little, but had kept nothing down. Some of the vomited matter on its clothing was bile-stained. The tumor was now to the left of the umbilicus, and coils of intestine could be distinguished in the upper part of the abdomen. The mother thought that there had been a little motion in the napkins. About 3 P. M., I put the child again under chloroform; but this time had only the assistance of an intelligent woman. As soon as I brought the child under chloroform, I got my assistant to take the shoulders and legs, and hold it

almost vertically, with the head lowest, while I proceeded to inject warm water with a Higgonson's syringe. I found myself now under difficulties; for as soon as I could begin operations, the child would begin to come to, the first effect of which would be to force the water out again. However, I succeeded twice in getting about four syringefuls in at a time or about eight ounces. I should say that, with one of the first rejections, yellow motion came away. When I desisted, I felt for the tumor, but could only find a small knot in the situation of the ascending colon.

On calling on the third morning, I found a great improvement in the child's condition. It had taken the breast during the night, and had kept it down, and seemed quite itself again. There was very frequent action of the bowels during this day; and, twice in the evening, a little blood and some shreds were passed. No trace of the tumor could be felt. Since then, the child has gone on well.—J. M. HOBSON, M. D., in *British Medical Journal*.

AN UNUSUAL RELATION BETWEEN THE PLACENTA AND THE MEMBRANES.

In the September number of the *New York Medical Journal* Dr. Henry J. Garrigues, New York, describes a very remarkable relation between the membranes and the placenta. The placenta measured twenty centimetres in diameter, the cord sixty-four centimetres in length, and both were of normal thickness. The cord was inserted centrally. The membranes which had contained the child did not adhere to the edge of the placenta, but started from the point of insertion of the cord on this organ. Measured in a flaccid condition, hanging down around the cord, this bag was forty-one centimetres long. It was easily separated into two layers. The inner layer was covered with the epithelium characteristic of the amnion, a single layer of flat polygonal cells, which were in a state of fatty degeneration, as proved by numerous oil globules found in their interior. The outer layer consisted only of connective tissue, which, in some places, contained a few round or oval cells, and many fat drops. In other places some loose shreds were found on the outer surface, which showed a greater number of similar cells. At the placental end of the cord the sac was seen to form a kind of triangular mesentery, embracing the first eleven centimetres of the cord, and attached to the sac to a similar extent. The two layers forming this fold were not united, so that the finger could be pushed in between them up to the cord; but at the lower end (*i. e.*, nearer to the fœtus) they grew together, so that a pouch was formed between the "mesentery" and the cord, admitting half the length of the index. At the placental end of the cord there was found in the interior a small clear vesicle of the size of a pea (the umbilical vesicle). The placenta presented the common shining, smooth foetal surface, and rough maternal surface. The edge looked ragged as if something had been torn from it, and in one place even a small, square piece of membrane about two centimetres in either direction was found attached to it. This membrane had no epithelium, and was composed of an inner layer of connective tissue, and an outer layer containing many round and oval cells. From the foetal surface two membranous layers could be dissected off. The most superficial was exceedingly thin, the deeper one comparatively thick, and bound by isolated fibres to the placental tissue. The foetal surface had no epithelium. The chief point of interest was that the sac in which the fœtus was

placed, and which contained the amniotic fluid, was not attached to the circumference of the placenta, but to its centre, all around the insertion of the cord. Microscopical examination showed that this sac was composed of the amnion and the chorion, but had only scant remnants of decidua attached to it here and there. On the other hand, the portion of membranes found attached to the edge of the placenta was composed of decidua and chorion without amnion, and the foetal surface of the placenta had no amniotic epithelium. Dr. Garrigues supposes, therefore, that the placenta all around was separated, after the birth of the child, from the decidua, which remained attached so the interior of the womb. Secondly, that the amnion and the chorion together formed a fold from the circumference to the centre of the placenta, which fold on one side was open, and formed the meso-cord described. Such a folding was, perhaps brought about by accumulation of fluid between the chorion and the decidua after the formation of the placenta. At first he supposed that the amnion alone partook of the folding; but then we should find, he adds, on the sac surrounding the fœtus, the line where the chorion had been torn, and there was no trace of anything of the kind. He thinks, therefore, we must conclude that the chorion remained close to the amnion all the way, and was folded with it so as to cover the foetal surface of the placenta twice, as well as the amnion. This supposition is corroborated by the fact that two layers could be dissected from the foetal surface of the placenta. The outer one was very thin, and this he took to be the chorion; the inner was thick, and this he explains as being the two layers of amnion grown together by their epithelial surfaces.

MEDICAL NEWS AND NOTES.

New Antiseptic Compound.—Professor Barff has described in a communication to the Society of Arts, London, a new antiseptic compound applicable to the preservation of articles of food. The compound in question is an ether of boric acid and glycerine of the composition $\text{BO}_3 \text{ C}_3 \text{ H}_5$ first obtained by Sciff and Becchi. Experiments made with this substance on various articles of food, both solid and liquid, seem to have yielded satisfactory results, so far as the preserving action is concerned; but neither in the paper nor in the interesting discussion which followed its reading does it appear that the preserving action is due specially to the compound in question, or to one of its constituents. That boric acid acts as a preventive of decomposition in organized bodies when present in considerable quantity there is no doubt, but little is known of its action on the human economy, especially when taken in the considerable doses that would be contained in the substances preserved by this proposed compound. So that it seems at least desirable that a little more inquiry should be made as to the physiological action of boron compounds before it is proposed as a wholesale preserver of food stuffs. Of the other constituent of this compound something more is known. It exists naturally in many articles of food or drink, and its physiological action has been to a considerable extent investigated, and proved to be on the whole quite harmless. As a preservative against fermentive or bacterial action, it has also been investigated more fully than boric acid. In a concentrated condition it will resist both ordinary fermentation and the fermentation of various bacteria in a high degree.

Hot and Cold Drinks.—A correspondent of *Knowledge* calls attention to some of the disadvantages of hot drinks. Cold drinks, he says, are natural to man, though most people nowadays are so used to hot drinks that they do not feel satisfaction—really stimulation—unless they have them. Hot drinks are injurious to the tongue, for they deaden its sensation, and, after taking hot soup or drink, the tongue becomes quite numb, and unable to taste the finer flavors of a dish. The teeth are greatly injured by them, and many dentists say caries is due to them alone. They crack the enamel, and thus allow caries to set in. When caries has once set in, hot drinks are a common cause of neuralgia.

Hot drinks are specially hurtful to the stomach. They cause irritation of the nerves of the stomach, and consequent mild inflammation of that organ, so that after a hot drink the stomach is red and congested. In time a debilitated condition is set up. A temperature of 100° Fahr. also destroys the active ferment of the gastric juice—pepsin—and so leads to indigestion. If the stomach is at all disordered, hot drinks give rise to much griping pain, and in many cases to vomiting. In cases of diarrhœa, too, hot drinks only increase it, while cold ones tend to lessen it.

Thirst is not common in winter, unless sugary, salty, or hot spiced foods have been taken. In cold weather the air contains more moisture than in hot, and in cold weather there is less perspiration. Hot drinks increase the volume of heat in the body, and if that is not required, it is quickly got rid of by the skin. Water is the best thirst-quencher, but if simple food be taken the need of drinks will be small. Many vegetarians drink nothing from month to month, the only fluid they get being the juices of the fruits which they eat. But pleasant drinks, like tea, coffee, etc., may be taken lukewarm for a long time with little apparent damage. The least injurious is cocoa, made with plenty of milk, and allowed to stand until nearly cool. A good test is to apply the little finger to the drink, and if it be not hot to it, then it may safely be taken.

Skin-Grafting.—The patient, a pretty little girl of eight, was admitted into the Wellington ward of St. George's Hospital with the history that, two years previously, her dress had caught fire, burning both legs from the hips to the knees severely. After a year's treatment the left thigh had healed up; but the right had never got better, and presented a terrible ulcer, extending all down the outer side. She was a bright, intelligent little thing, and her sad condition excited much sympathetic interest. For four months she lay there without any signs of improvement. Though nourishing food, with wine and strengthening medicines, was freely administered, and all manner of local remedies applied, particularly that most excellent dressing, carded oakum, all was in vain; and when, on the 5th of May, the child was brought into the operating theatre, and placed under the influence of chloroform, it certainly appeared to us to be as unlikely a case to afford a fair criterion of a new treatment as could well be imagined. Two small pieces of skin were then snipped from the back with a pair of sharp-pointed scissors, and then imbedded—planted, in fact—in the granulations or "proud flesh" of the wound—two tiny atoms, scarcely bigger than a pin's head, and consisting of little more than the cuticle or outer skin which we

raise in blisters by rowing or exposure to a hot sun. Five days later no change was visible; and by-and-by the operation was considered to have failed, since the pieces of skin had disappeared, instead of growing, as had been expected. But twelve days after the operation two little white cicatrices appeared where the seeds had been sown; and in my notes I find that a week later these were big enough to be dignified as "islands of new tissue." The most wonderful part of it is that not only did these islands grow and increase rapidly in circumference, but the fact of their presence seemed to stimulate the ulcer itself, which forthwith took on a healing action around its margin. Several more grafts were implanted subsequently, including morsels from Mr. P. Dock's arm, from my own, and from the shoulder of a negro; the last producing a white scar tissue like the rest. In two months the wound was healed, and the little patient was discharged cured.

Skin-grafting is now performed daily in surgical practice, and a special instrument—a combination of knife and scissors—has been invented for the purpose. It is impossible to estimate the immense benefit of this discovery to mankind in many different aspects. Poor people, hitherto incapacitated from labor by "incurable" ulcers, and for years a burden on their parish, or inmates of workhouses and asylums, will now again resume their place in the great toiling hive, from whose daily work is distilled the prosperity of a nation. Von Grafe's operation of ophthalmia, whereby hundreds of people, who were formerly considered irremediably blind, are now restored to sight by a simple proceeding, is said to have exercised a very appreciable effect on the poor-rates of the country. As an instance of true transplantation, John Hunter's celebrated experiment of a horse's tail in a tooth to take root and grow in the comb of a cock is a well-known instance. Dentists nowadays often remove teeth, and having excised the sound portions, replant them in their sockets with frequent, though not invariable, success; and cruel plastic operations have been performed on rats, by which they have been joined like Siamese twins, or their tails caused to grow from their shoulders, or between their eyes. The late Mr. Frank Buckland, in his "Curiosities of Natural History," gives an amusing account of an operation brought by M. Triguet, a French naturalist, against a Zouave who had sold him what was termed a "trumpet-rat" for 100 francs; the said trumpet-rat proving to be an ordinary "varmint," with the tip of another rat's tail planted in its nose, and growing there.

—Dr. T. Spencer Cobbold collects together, under the title of "Human Parasites," several papers on all the known species of entozoa and ectozoa, which are most interesting and the little manual is published by the Locomans, London. The papers originally appeared in the *Medical Naturalist*, and are republished with the thought that they may prove serviceable alike to the medical profession generally, to physicians, to students, and to naturalists.

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"VERTICAL EXTENSION," IN THE TREATMENT OF FRACTURE OF THE THIGH IN CHILDREN,

BY

DR. FRANK HASTINGS HAMILTON.

So long ago as 1877, Dr. Schede, of Berlin, adopted a method of treating fracture of the thigh in children which he calls "vertical extension." Dr. Kümmel, of Hamburg, endorses the practice, and has reported twenty-eight cases treated by this method, twelve of the patients being less than a year old, and sixteen between the ages of one and two years. The usual result being union within three weeks, without shortening or displacement.

The method of treatment is as follows: "A long continuous band of plaster is fixed to both sides of the injured limb, as high as the seat of fracture, and applied so as to form a free loop below the sole. This long strip is then secured in the ordinary way by circular strips of plaster, and by circular turns of a bandage. The leg, having been elevated, is then kept in the vertical position, with the corresponding side of the pelvis suspended by means of a piece of cord fixed to the loop of plaster, and either attached above to some object over the bed or slung over a pulley, with its free extremity supporting a weight." This does

"not necessitate constant and complete rest on the back." At the end of about three weeks, when the fragments are usually consolidated, the extension is removed, and the limb is permitted to rest upon the bed.—*Amer. Jour. Med. Sci.* July, 1882, from *Berl. Klin. Woch.*, No. 4, 1882.

Surgeons inexperienced in the treatment of fractures of the thigh in children, and especially in infants, can scarcely appreciate how difficult it is to manage them satisfactorily. The limb is short, soft, intolerant of pressure, easily excoriated, and liable to be constantly wet with urine. It is also seldom at rest. Double-inclined planes are worthless. Plaster-of-Paris is not only worthless, but actually dangerous; and, in short, nearly all plans hitherto suggested and practiced have been found unsatisfactory. It is true, however, that with any mode of treatment, almost occasional good results are obtained; but this is only because fracture of the thigh in infants is generally a green-stick fracture, and the tendency to displacement is very small, and union occurs very speedily; but, on the other hand, when these fractures have been treated by plaster, double-inclined planes, simple side-splints, etc., every now and then the results have been very bad, and sometimes disastrous.

One need not be surprised, therefore, that Dr. Schede, or any other practical surgeon, rather than employ the usual methods, should adopt a plan so entirely novel and radical. As between his method and most other methods, I do not hesitate to say at once that his is, in my opinion, by far the best.

The advantages claimed by Dr. Kümmel for Dr. Schede's method, are that it does not necessitate constant and complete rest upon the back; and that it is simple, efficient, and does not cause pain or discomfort to the patient.

The only disadvantage stated, is the occurrence in some cases of females, of a severe vaginal catarrh, due, as is supposed, to the free entrance of air into the gaping ostium vaginæ; but which is quite as likely to be the result of the lateral stretching of the labia as of the entrance of air.

I shall be excused if I institute a brief examination of the merits of this method as compared with the merits of the method of horizontal extension, adopted by myself, illustrations of which may be found in all the later editions of my works on Fractures and Dislocations.

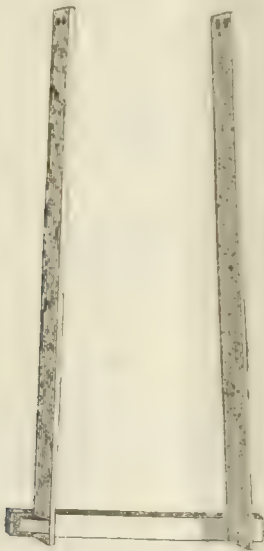
Dr. Kümmel has very frankly stated one objection which does not apply to horizontal extension, namely, a severe vaginal catarrh; and this alone would be sufficient objection, in my opinion, to its employment in the case of females. Admitting that it will prove, in most cases, to be only temporary, yet it may not in certain constitutions or habits of body cease with the removal of the cause; and no assurance can be given that the inflammation may not be propagated upwards

and thus lay the foundation of serious future uterine trouble. The mere possibility of such a result, is sufficient to condemn the practice, as applied to this class of cases.

A second objection I find in the fact, that by Schede's method the patient is during the entire period of treatment confined to the bed, while in horizontal extension he is not.

Significantly enough almost this same argument is employed by Kummel in *favor* of Schede's method. "It does not necessitate constant and complete rest on the back." In other words, the patient may turn over more or less upon his side without disturbing the fracture. This statement, it is evident, must be received with some reserve. In a large proportion of cases where the children are under two years the fracture is a green-stick fracture, and often it may be termed a mere bending of the bone; and in all such cases a certain freedom of motion may be permitted without causing either lateral or rotary displacement; but there must be a limit to the freedom of motion of the body even in these cases.

The case is very different, however, when, as occasionally happens—pretty often indeed—the fracture is complete, and the fragments have been once permitted to overlap or slide upon each other in the direction of the axis of the bone. In such cases there could be no assurance given, where the patient was subjected to no restraints whatever, that union might not be delayed; and, in some cases, that the fragments might not unite with some degree of rotary displacement. No doubt the close apposition of the muscles will tend to prevent this unfortunate occurrence to a great extent; but then it seems unnecessary to say, the danger of its occurrence is greater where such perfect freedom of motion is permitted.



THE WRITER'S HORIZONTAL EXTENSION APPARATUS

If, however, it were to be conceded that some motion of the body is admissible, and that Schede's method permits the patient to relieve the back by turning occasionally upon the side, still it must be observed that the to adjust and retain the fragments, does not permit the patient for one moment to leave the bed. In Schede's method the extension apparatus is a fixture and its position cannot be changed nor can it ever be relaxed extension apparatus, upon which Schede alone relies

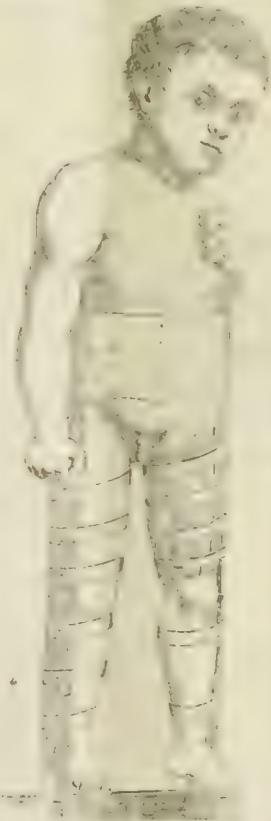
On the other hand, in horizontal extension as practised by me, the body is not indeed permitted to roll

from side to side, but the patient, enclosed in the splint, and including even the extension apparatus, may be taken from one bed to another, or taken out of doors, as often as we choose. The patient may be put temporarily into almost any position which necessity or comfort may require.

Further than this, in horizontal extension the surgeon does not rely solely upon the extension made by weight and pulley, to keep the fragments in line, so that these may at any time be temporarily removed without affecting the result. Indeed, in many cases this portion of the apparatus is not employed by myself; and I sometimes omit also the lateral splints.

Nor is it so irksome for infants to lie on their backs three or four weeks, if only they be permitted to use their hands, as some would suppose. In fact, after the first day they seem perfectly reconciled to it; while, if permitted to move, they are for a time constantly causing themselves pain by some sudden twist of the limb.

I have not spoken of the inconvenience which must be experienced in the vertical extension in the adjustment of the coverings, and especially in cold weather, which inconvenience is avoided in horizontal extension.



THE SAME APPLIED. (Copied from the French Ed. now in press.)

It must be added, also, that although in children of this age the fragments are usually firm in three or four weeks, it has not been found safe, in my experience, to remove wholly restraints until a week or two later. The contrary practice has every now and then resulted in a bending at the seat of fracture, which had subsequently to be remedied. My double splint, with only moderate confinement of the body and limbs, without extension or short splints, prevents this unfortunate accident in the later days of the treatment, while in Schede's method the limb must be left, after the extension is removed, wholly without support.

Finally, if we are to compare results, no evidence is presented by Kummel that his results are any better

than my own. By my method rotary displacement is impossible; lateral displacement or bending, improbable; and there is no shortening, of course, unless it is a complete fracture, and if it occurs then it is trivial.

FRACTURE OF BOTH CLAVICLES.

BY

JARVIS S. WIGHT, M.D.,

Professor of Operative and Clinical Surgery at the Long Island College Hospital.

D. McM—, age 34 years, born in Ireland, married, a laborer, Sunday before Christmas, 1881, was digging a grave in Greenwood Cemetery, and, when at the depth of about nine feet, the bank of earth fell into the grave on the right side of his back, crushing him against the opposite bank. Dr. Scrimgeour saw him soon after, and found the right clavicle broken at the junction of the outer and middle thirds, and the left clavicle broken about one inch from the sternal end. The fracture of the left clavicle was transverse, and the fracture of the right clavicle was oblique.

Three days after the accident I saw the case with Dr. Scrimgeour, and found the patient on his back with sand bag on each clavicle and shoulder, the fragments of each clavicle being thus kept in good position. I advised the Doctor to continue the same treatment, because it seemed to me it would give the best result. The patient was kept on his back for about five weeks, when he was allowed to get up and walk around, having his fore arms suspended in slings. After two weeks more, or seven weeks after the accident, he went back to his work, and has continued to work ever since to date, September 15, 1882, when I examined him and found: (1) The union of the left clavicle perfect, showing no deformity of any kind. (2) The union of the right clavicle ligamentous, with enlargement of the acromial end of the bone and the outer end of the inner fragment, the outer end of the inner fragment being posterior to the inner end of the outer fragment, and presenting considerable mobility in the continuity of the bone. The patient said he could work as well as he could before the injury; he said he could lift as much as he ever could.

In the *Hospital Gazette* of September 5, 1878, I mentioned a case of non-union of the left clavicle in a laborer. This man was a porter in a store, and could lift heavy loads as well as ever; in fact, he had no impairment of strength or use in the performance of his work. I then pointed out the importance of that case in a surgical and in a medico-legal point of view. Let me now draw attention to the additional point of evidence, that non-union of the clavicle does not materially interfere with the use of the corresponding upper limb. And may we not conclude that our efforts as surgeons in a case of fracture of the clavicle should be more directed to prevention of deformity, than to restoration of the ability to use the corresponding limb.

At that time I wrote as follows: "If the able surgeons who treated this broken bone could not obtain union, those who have less skill must be reasonably excused for having no better results. And if such great utility can follow so much displacement after non union of a broken clavicle, legal action could not be brought for the impairment of function. No suit for malpractice could be successful in this case." Let me add now, that the above words are as true to-day as they were on the day they were written, and that the facts they contain deserve the careful attention of surgeons.

THE RECENT DEATH FROM CHLOROFORM IN CHARLESTON.

BY

FREDERICK D. LENTE, A.M., M.D.

Dr. R. A. Kinloch, in his very frank recital of his case of "Supposed Death by Chloroform," in the *Medical Record* of August 5, says: "I am inclined to doubt whether the death, in the case which follows, can be attributed solely to the chloroform. Fright, terrible anxiety, a peculiar nervous organization, and an exalted moral sensibility may have had much to do with the sad termination." I entirely agree with the doctor, and when a surgeon observes that his patient is *unusually* alarmed and nervous, and especially if his alarm refers to the anæsthetic, he should watch the progress of the anæsthesia with special care, whether the anæsthetic be ether or chloroform. Several years ago I published a number of cases, in which, after the patient had partially recovered from unconsciousness, he relapsed, and came near dying from exhaustion, requiring the most energetic stimulation for some time to rally him. This was at a period when it was claimed that *ether* was *absolutely* safe, and I wished to call the attention of the profession to the fact that a patient might, under *peculiar* circumstances, die from the effects of ether as well as chloroform. These peculiar circumstances were of the kind alluded to by Dr. Kinloch; for in all the cases, the patients were particularly nervous and alarmed either concerning the anæsthetic or the operation, or both.

I have not written the above as an apology for chloroform. My opposition to it, dating from a very early period of its history, is well known.

SARATOGA SPRINGS, Sept. 15, 1882.

TREATMENT OF NASAL DISEASE BY ELECTRICITY.

BY

FRED'K D. LENTE, AM. M. D.

In the Sept. 16th No. of the *Medical Record* is a description of an electrode specially designed for the nasal cavity, by Dr. Bosworth. Dr. Bosworth has used only the Faradic current, and for "recurrent attacks of temporary stenosis of the nares due to turgescence of the erectile tissue in the deep layer of the membrane covering the turbinated bones." He says the current used "should be the mildest possible, and should be continued about three minutes." He only repeats at a long interval,—four or five days' The necessity for a special electrode, I presume, arises from the pain of the application, which, it is to be presumed, also deters him from repeating oftener, as would appear, otherwise, to be desirable. He says he has not used the galvanic current, "which may be equally valuable and probably less painful." My object in this brief article, is to say that he is correct in both his surmises; and the use of the galvanic current renders unnecessary a special electrode, and as it is not at all painful, also enables us to give a *séance* every day if desirable. The effect in relieving turgescence, engorgement, is prompt and decided; and it may be used for other abnormal conditions, rebellious to ordinary treatment. I use a wire with a little absorbent cotton twisted on its extremity for about an inch and well wetted. This may be passed up for one or two inches. The number of cells must not generally exceed three, *if the battery is in fair working order*, and it is well to

commence with two, or obstinate sneezing may be provoked, and for the same reason, the electrode had better be passed up *very gradually* to the desired depth. Some patients bear more than three cells. Very soon there is a considerable watery discharge from the nose. The other electrode is placed usually on the seventh cervical vertebra but may be changed to the cervical ganglia. I have usually continued the internal application about eight minutes, and then, with a flat electrode, a few minutes to the sides of the nose and over the frontal sinus.

I was not aware that there was anything novel in the treatment. I have used it for some years; but from Dr. Bosworth's remarks, I presume it is not generally used at all events. Hence this notice.

SARATOGA SPRINGS, Sept. 18.

LECTURES.

METHOD OF EXAMINING THE EYE.

A CLINICAL LECTURE

BY

HENRY D. NOYES, M.D.,

Professor of Ophthalmology and Otology, Bellevue Hospital Medical College, Surgeon to the New York Eye and Ear Infirmary, etc., etc.

Gentlemen: Our course of study has to do with the functions and disorders of sight. I will commence to-day by giving you a general outline statement of the important facts of sight and the methods of examination in diseases of the eye. My remarks will, therefore, be rather a sketchy statement of facts than a clinical lecture.

The eye consists of an optical apparatus or set of lenses so arranged as to form an image on the retina, a nervous structure which responds to the luminous qualities of light, and that portion of the brain which presides over the recognition of sight. The eye-ball has a globular form, is covered by the sclerotic membrane and defended from injury by its location in the orbital cavity, and further by elastic, soft, fatty substance, by prolongation of the eyelids, and moisture from the conjunctiva, and lachrymal and other glands.

When we speak of the disorders of sight, to understand them we must know first the normal function. There is a measure of vision called average sight. There was no effort to determine this till the last quarter of a century. At the present day we adopt simple formulæ to determine or express this. We use certain symbolical letters thus—V=vision. Normal vision is expressed by the following formula:

Or normal vision= $\frac{1}{1}$. Any departure from this would be expressed by the amount of departure, thus $\frac{1}{2}$ or $\frac{1}{10}$ of normal vision. (Dr. Noyes here explained in detail the method of expressing the degree of vision.)

He continued: The sensitiveness of the retina differs much in different parts. A deviation laterally of $\frac{1}{2}$ a degree reduces the vision to $\frac{1}{10}$. We never think of the scope of our field of vision. We are constantly informing ourselves of objects through peripheral vision. We must investigate the field of vision or eccentric sight. To determine this, shut one eye. Our field of vision is then limited on one side by the prominence of the nose, on the other by the brow orbit and general configuration of the face. Each eye should be examined separately

We learn a great deal by the aid of an instrument devised to determine peripheral vision, viz., the perimeter. (Dr. Noyes described the perimeter.) A portion of the retina is entirely insensitive to vision. This point is about 15 degrees outside of the centre for each eye. It was recognized 200 years ago. It is the point corresponding to that in which the optic nerve comes into the eye, which demonstrates the fact that the function of the optic nerve is to convey, not to receive light.

Besides the perception of light and objects and peripheral vision, we are conscious of color, and though ordinarily the examination for color sight is not important, it is most important in others, as the want of color perception may indicate disease of the eye. There may be congenital lack of color perception, but we as physicians have most often to do with that form which is the result of disease.

We can recognize blue almost at the periphery of the field of vision and next red, yellow and green. Cases occur in which perception of red at the surface fails. This is valuable in diagnosis, as we can by this means determine lesions of the nerves or retina not otherwise able to be made out. This loss of vision at the centre often results from the abuse of alcohol. One thing further with reference to normal vision. As to our ability to see objects close to us. To see an object it must be placed within the focus of vision. The power of the eye is adjusted to the task imposed upon it by the variation in the thickness of the crystalline lens. This variation is called accommodation and is symbolized by the letter A. We have then the following symbols, which we shall constantly use in describing diseases of the eye, viz.:

V=Vision.

VF=Field of Vision.

A=Accommodation.

This function of focusing begins to decline at an early age. It is reckoned according to age and health.

Let us next inquire what are some of the departures from normal sight. These are both acquired and congenital; they belong to defects in the optical apparatus, and to those in the perceptive apparatus. The parts may not be perfectly clear, and this opacity may be the result of age or of disease. There may be disturbances of refraction due to changes in the shape of the eye-ball. (This condition was illustrated by exhibition of a patient.) Most often the eye-ball is too long, though it may be too short. The eye is normally about 24 mm. in diameter. It there be a variation of one millimetre or $\frac{1}{8}$ of an inch, the optical power is affected. When the optical axis is too short the condition is called hypermetropia, and is symbolized by the letter H. This is a congenital condition. When the optical axis is too long the condition is known as myopia. The normal optical axis is expressed by the term Emmetropia. There are other optical errors besides myopia and hypermetropia, but we shall take these up at another time.

How shall we proceed to examine the patient when there is defective sight? We should examine him subjectively and operatively.

Under the subjective examination we would include testing the visual acuity, testing the visual field, the capacity of accommodation, and the function of binocular vision.

In examining objectively we should first simply look at the eye, see if there is abnormal secretion, if the cornea is clear, then look at the behavior of the pupil, condense the light upon the eye by focal illumination,

which may be done in a room with one window, but better still in a darkened room with a single light.

We shall next have to consider inflammatory troubles of the exterior of the eye.

ABOUT BOOKS.

A Treatise on the Science and Practice of Medicine, or the Pathology and Therapeutics of Internal Diseases, by Alonzo B. Palmer, M.D., L.L.D., Prof. of Pathology and Practice of Medicine, and of Clinical Medicine in the University of Michigan, Physician to the State University Hospital; Honorary Member of the New York State Medical Society, Ex-Vice President of the American Medical Association. Etc., Etc. Vol. II. G. P. Putnam's Sons; New York, 1882.

When the first volume of this treatise was published we commented at length on its many merits. The plan of the work was then detailed; its characteristic style, its method of describing diseases, etc., pointed out.

Volume II. seems to us in every respect to fulfil the promise of its predecessor. There are some errors, some incongruities of diction which point to hasty composition, but none that subsequent revision will not easily correct. In the main, the style, if not elegant, is clear and pleasing. The subject matter, which the author states has been gathered chiefly from his lectures, gives the reader the impression that the author is describing diseases and their treatment not so much in accordance with what others have said, as with what he himself has seen at the bedside. It is this fact more than any other that endows the book with a charm peculiarly its own. For American practitioners must welcome this plain statement of the symptoms by which disease is recognized, as they have been developed in American people, and modified, or individualized by the local peculiarities of climate, national mode of life, etc., with especial satisfaction, and must get up from the intellectual feast more than ordinarily edified and instructed, since it abounds with suggestions that they may apply in their own practice without fearing that they are to experiment with agents whose effects have been tested alone on those whose constitution, whose reaction to medicinal agents, is vastly different from that of their own clientele.

SELECTIONS FROM JOURNALS.

THE SYSTEMATIC TREATMENT OF AGGRAVATED HYSTERIA AND CERTAIN ALLIED FORMS OF NEURASTHENIC DISEASE. By W. S. PLAYFAIR, M.D., F.R.C.P.

GENTLEMEN,—When your president did me the honor of asking me to open a discussion on the Systematic Treatment of Hysterical and Neurasthenic Diseases, to which I had already drawn the attention of the profession in a series of papers in the *Lancet* in May, June and November of last year, I suggested to him that he should endeavor to persuade Dr. Weir Mitchell, of Philadelphia, whose method I had adopted and carried into practice, to undertake himself the task he had proposed to me. I much regret, for your sakes, gentlemen, that Dr. Mitchell was unable to accept your President's invitation, for I am sure that it would have been most interesting and profitable to have heard from that distinguished physician an

exposition of his views on a matter of such great practical moment. Until I had actually put into practice Dr. Mitchell's method, I, in common, I am sure, with the vast majority of his profession, looked upon the distressing and unhappily common cases we are about to discuss as a very *opprobrium medicinae*. Nothing could possibly be more hopeless than the experience of all of us of these wretched instances of broken and shattered lives, these bed-ridden, helpless creatures, who became a burden not only to themselves but to all around them, making happy homes miserable, and exhausting at once the patience, and the resources of those who are responsible for their care. Who is there amongst us who cannot point to some typical example of this kind, in which the patient at least, after every sort of treatment and drug has been used; after, not one, but twenty doctors have been consulted; after every method, orthodox and heterodox, has been used in vain, has been allowed to drift into this hopeless state to which I have alluded, from pure despair of alleviating her sufferings, which are none the less real because we are satisfied that they are purely functional, and are not associated with any definite organic disease. To teach us how to lift such cases from the slough into which they had fallen is no slight achievement; and I may say, without exaggeration, that, having paid great attention to this subject for the last eighteen months, I have not only acquired a daily increasing confidence in the value of Weir Mitchell's method, but have had more satisfactory and surprising results from it than I have ever before witnessed in any branch of my professional experience, and that I now more confidently undertake the care of a well selected case of this kind, than I do of almost any malady that comes under my charge. The reason for this confidence and this success is, I think, not far to seek. We have to do with cases which are, to a great extent, psychological in origin. Heretofore, although all well instructed physicians recognized this fact, they have not been in the habit of trusting to methods of treatment which were based on a scientific conception of the nature of the disease. In default of other means, recourse has been had to an useless system of drugging with the so-called nervine tonics, while the patient has been left to the unaltered morbid influence of the psychological causes, which, in nine cases out of ten, have so large a share in the production of the illness. Although the grave forms of hysterical disease we are considering differ from each other in endless variations, the peculiarities of each requiring most careful study, there is scarcely a single one of them in which unhealthy mental influences do not play a most important part, if not in causing, certainly in keeping up the disease. The injudicious and constant nursing, the craving for sympathy, the fact that the sick-room becomes the centre of interest for the patient and her friends, the constant discussion of feelings and symptoms, all have a most marked and prejudicial effect; and so long as these continue in operation no course of medicine or treatment, however judicious, has any reasonable prospect of success. As I shall presently show, the complete and perfect isolation of the patient from all these unhealthy conditions forms the very foundation and essence of the systematic management of these cases; and when once this has been accomplished, an enormous leverage has been obtained for the successful application of other methods of cure. I do not propose to occupy your time with any long description of the forms and symptoms of hysterical disease to which the treatment is applicable, or to their pathology. No study could

be more interesting, but the time at my disposal is altogether insufficient for such a task. I shall, therefore, content myself with a very brief outline sketch of the typical instances of neurasthenic disease in which systematic treatment is of most use, and follow this by an equally short sketch of what that treatment consists. And I must beg my hearers to remember that I cannot enter into any but the most elementary details on both these topics, for a fuller account of which I must refer them to the writings of Weir Mitchell and Goodell, as well as to my own former papers. I may say here that while the latter were entitled "The Systematic Treatment of Nerve-Prostration and Hysteria connected with Uterine Disease," this was chiefly because my attention was first directed to the subject in consequence of the frequent association of these states with disease of the reproductive organs in the female. It would be a great mistake, however, to conclude that there is any necessary or constant connection between the two. Indeed, although very frequently the nerve-state has originated in connection with uterine disease, in a large proportion of the cases I have seen, it has completely overshadowed the originating local disorder. I am not sure that I should not, in common honesty, make the somewhat humiliating confession that in many instances over much and injudicious local treatment has, in my opinion, at least intensified, and kept up the now dominating neurasthenic disorder, as in a case under my care as I write, in which the patient may fairly be said to be suffering from pessary on the brain—so incessantly is she thinking of one or other of the seventy-nine different instruments which she has had inserted in the last few years in America and in this country.

It is, perhaps, superfluous to recall to your minds the extremely varying and complex forms of the neurasthenic diseases, which may be fairly classed under the heading I have selected for this communication. Still I think it likely that it is only those medical men who have paid special attention to this subject, and who have had opportunities of watching cases of this description, that have properly realized how multiform, strange, and misleading these nervous diseases really are. As a matter of fact, probably no two cases are ever precisely alike, and every individual instance calls for the most careful and minute study, if we are to hope for a successful result in its management, not only of its physical symptoms, to make sure that we do not confound real but obscure organic lesion with simple functional disorder, but also of the special mental character of the patient, since much of our success must depend on a judicious reading of this, and on our tact in dealing with it. Anyone who attempts to treat such diseases without careful study of the psychological characteristics of each individual patient, will inevitably fail.

The type of case best adapted for systematic treatment is, in my experience, the worn and wasted, often bedridden woman, who has broken down, either from some sudden shock, such as grief, or money losses, or excessive mental or bodily strain. At first, perhaps, there may have been only a debility, constantly, however, on the increase, daily more and more yielded to, until at last all power of effort is lost, fostered, too often, by injudicious sympathy and the constant nursing of devoted relatives and friends. Coincident with this is the total loss of appetite, the profound anæmia, and the consequent wasting of the tissues, so characteristic of these cases. On the soil so prepared are often developed the graver protean forms of hysterical disease, such as paresis, or paralysis, vomiting, disorder

of motion, hystero-epilepsies, and many others which constitute the despair of the physician, and which must be more or less familiar to all of you. Such, in endless variations, are the cases which those of you who have attempted to cure them by ordinary medication will, I am sure, admit to have given unsatisfactory results, and caused more disappointment than almost any other in your practice.

Now, the principal elements in the systematic management of these cases are:

1. The removal of the patient from unhealthy home-influences, and placing her at absolute rest.

2. The production of muscular waste, and the consequent possibility of assimilating food by what have been called "mechanical tonics," *viz.*, prolonged movement and massage of the muscles by a trained shampooer, and muscular contractions produced by electricity.

3. Supplying the waste so produced by regular and excessive feeding, so that the whole system, and the nervous system in particular, shall be nourished in spite of the patient.

On each of these I shall offer one or two brief observations.

1. The removal of the patient from her home-surroundings, and her complete isolation in lodgings with only a nurse in attendance, is a matter of paramount importance. This is a point on which I am most anxious to lay stress, since it is the great crux to the patient and her friends; and constant appeals are made to modify this, which I look upon as an absolute *sine qua non*. I attribute much of the success which I have been fortunate enough to obtain in my cases to a rigid adherence to this rule. In almost every instance of failure in the hands of others of which I have heard, some modification in this rule has been agreed to, in deference to the wishes of the friends; as, for example, treating the case in one room by herself in her own house, or in admitting the occasional visits of some relatives or friends. While, however, the patient is to be rigidly secluded, it is incumbent to secure the attendance of a judicious nurse, with sufficient intelligence and education to form an agreeable companion. To shut up a refined and intellectual woman for six weeks with a coarse-minded stupid nurse, can only lead to failure. I have had more difficulty in obtaining suitable nurses, sufficiently firm to ensure the directions being carried out, and yet not over-harsh and unsympathetic, than in any other part of the treatment. Whenever my case is not doing well, I instantly change the nurse—often with the happiest results. In addition to the isolation, the patient is put at once to bed, to secure absolute rest. In many cases she is already bedridden; in others, there has been a weary protracted effort, and the complete repose is in itself a great gain and relief.

2. Under the second head comes systematic muscular movement, having for its object the production of tissue waste. This is administered by trained rubbers, and here again is a great practical difficulty. The so-called professional rubbers are, in my experience, worse than useless, and I have had to teach *ad hoc* a sufficient number of strong, muscular young women; and the aptitude for the work I find to be very far from common, since a large proportion of those I have tried have turned out quite unsuited for it. I cannot attempt any description of this process. I need only say that it consists in a systematic and thorough kneading and movements of the whole muscular system for about three hours daily, the result of which at first is to produce great fatigue, and subse-

quently a pleasant sense of lassitude. Subsidiary to this is the use of the faradic current for about ten to twenty minutes, twice daily, by which all the muscles are thrown into strong contraction, and the cutaneous circulation is rendered excessively active. The two combined produce a large amount of muscular waste, which is supplied by excessive feeding; and, in consequence of the increased assimilation and improved nutrition, we have the enormous gain in weight and size which one sees in these cases, it being quite a common thing for a patient to put on from one to two stones in weight in the course of five to six weeks. The feeding, at regular intervals, constitutes a large part of the nurse's work. At first from three to five ounces of milk are given every few hours, and for the first few days the patient is kept on an exclusively milk diet. By this means dyspeptic symptoms are relieved, and the patient is prepared for the assimilation of other food. This is added by degrees, *pari passu* with the production of muscular waste by massage, which is commenced on the third or fourth day. By about the tenth day the patient is shampooed for an hour and a half twice daily, and by this time she is always able to take an amount of food that would appear almost preposterous, did not one find by experience how perfectly it is assimilated, and how rapidly flesh is put on. It is the usual thing for patients to take, when full diet is reached, in addition to two quarts of milk daily, three full meals, viz., breakfast, consisting of a plate of porridge and cream, fish or bacon, toast and tea, coffee and cocoa; a luncheon, at 1 P.M., of fish, cutlets or joints, and a sweet, such as stewed fruit and cream, or a milky pudding; dinner, at 7 P.M., consisting of soup, fish, joint and sweets, and, in addition, a cup of raw meat soup at 7 A.M. and 11 P.M. It is really very rare to find the slightest inconvenience result from this apparently enormous dietary. Should there then be an occasional attack of dyspepsia, it is at once relieved by keeping the patient for four and twenty hours on milk alone.

Such is a brief outline of the method to which I am here to direct your attention. As to the results, I have already published several remarkable illustrative cases, so that it is perhaps not necessary to do much more in this direction. I may say, on looking back at my cases, that the only ones with which I have any reason to be disappointed are those in which the primary selection has been bad; and in the few in which the results were not thoroughly satisfactory, I had doubts as to their suitability for the treatment, which I expressed beforehand. These include one case of chronic ovarian disease, and one of bad ante flexion with fibroid enlargement of the uterus, in both of which the local disease prevented any really beneficial results. In a third case, I had to stop the treatment in a week, in consequence of cardiac mischief; two others were cases of positive mental disease; and in one case there was true epilepsy. I have no doubt that any positive co-existent organic disease of this kind should be considered a contraindication. In my other cases, the results have been all that could be wished, and in many of them the patients have been restored to perfect health after having been helpless bed-ridden invalids for years; in one case twenty-three without ever putting a foot to the ground, in others sixteen, nine, six and so on. In two instances my patients were in such a state, that it was found absolutely impossible to move them except when anaesthetized; and they were brought to London by their medical men long distances under chloroform, in each case leaving in six weeks perfectly cured. I am not desirous of occupying your time by long

details of cases, having already published several; but, as many of my hearers have probably not seen my former papers, I shall conclude by a short notice of some of my recent cases, which will illustrate the classes of disease in which this method is so useful; and I select them not only for their own interest, but because the uselessness of all ordinary treatment in such conditions is proved by the fact that I have with regard to each of them a list of their former medical attendants, amounting in one to no fewer than twenty-five in number, and including the names of many of the most eminent consultants in the country, of itself a sufficient proof that all that the most advanced medical knowledge and skill could do had been tried in vain.

CASE I. On the 24th of April last, I was consulted on the case of a young lady from the North of England, suffering from intense hysterical vomiting. This had commenced six years previously, after severe mental strain. Latterly, she could keep nothing but a single mouthful of milk on her stomach, and this only when mixed with whiskey, so that in this way she was taking three to four glasses of spirit daily. She was terribly emaciated, weighing only 4st. 7lbs. Her mother wrote of her, "it is just five years last Christmas-day since she has ever retained a single meal. Her symptoms have been most distressing, and have resisted every kind of treatment. Her young life has been completely blighted, and I have long since given up her case as quite hopeless." The rapidity of the cure, in this instance, was almost ludicrous. In three days after she was isolated, she was keeping down two quarts of milk, it is needless to say without the aid of whiskey. In ten days she was eating with an enormous appetite, and in six weeks she left town weighing 7st. 8lbs., a gain of 3st. and 1lb., and has since remained quite well.

CASE II. The next case is illustrative of the evil effects of over much education and mental strain, in a clever girl of highly developed nervous organization. It was placed under my care by the advice of one of our most eminent metropolitan physicians, who had been seeing her frequently in consultation with her own medical attendant for several years, and besides him many other physicians, equally eminent, had been consulted. This young lady was seventeen years of age. At the age of fourteen, when working, she had suddenly broken down, got complete hysterical hemiplegia, and for four years had never been out of bed or moved either of her lower limbs. In addition, she had a loud barking cough, which could be heard all over the house, and which had resisted every kind of medication. No food could be taken beyond milk, and a biscuit, and an orange. This case was placed under my care as a sort of test, and I was particularly anxious that it should turn out well. As to the result, I need only say that at the end of a month I drove her out in my carriage, dropped her at the top of the street in which she lived, and made her walk down to pay her parents a visit. She has since remained perfectly well. It was a curious and characteristic point that her cough, which had resisted for years all sorts of energetic treatment at home, entirely ceased forty-eight hours after she was removed, and was never again heard.

CASE III. The next instance is one out of many of the same sort I have had under my care, and is a typical example of the kind of case best suited for this treatment. In this there was no definite illness, no simulated disease, as in the last lady, but a general and complete break down. Her medical man sent her to me with

the following note: "She has all her life been an invalid, with no well-defined symptoms; sometimes headache and nausea; at others spinal irritability, giddiness, etc. In fact, she is a typical hysteric or neuralgic patient. She never stirs out of the house, or moves from her bed or sofa, eats next to nothing, and is never happy unless seeing a doctor, or taking physic." I found, as was to be expected, that this young lady was wasted to a skeleton. Her chief complaints were nausea, headache, backache, intense nervous depression, and timidity (so that she was unable to speak to a stranger), and absolute anorexia; skin dry and rough; menstruation irregular; entirely dependent on chloral and morphia for sleep. She was twenty-nine years of age, and for nine years had been entirely on her back. I need say no more about this case, than that it was as successful as the rest of the same type I have had to deal with, any one of which I might have selected as an illustration. In six weeks she was walking about; in two months, she started on a sea-voyage with her nurse, with directions that she should be forced to mix as much as possible with the passengers, to overcome her dread of society. Only two days ago she came to report herself to me, having traveled alone from the country by rail; and I positively did not at first recognize her—so different was the well-dressed, healthy-looking woman, from the wretched invalid of a few months ago. She tells me that she now plays tennis; goes out to picnics and parties; and enjoys life like anyone else.

CASE IV. The last example which I shall trespass on your patience, I am tempted to relate, because it is one of those remarkable instances of the strange and multiform phenomena which neurotic disease may present, which it has ever been my lot to witness. The case must be well known to many members of the profession, since there is scarcely a consultant of eminence in the metropolis who has not seen her during the sixteen years her illness has lasted, besides many of the leading practitioners in the numerous health resorts she has visited in the vain hope of benefit. My first acquaintance with this case is somewhat curious. About two months before I was introduced to the patient, chancing to be walking along the esplanade at Brighton with a medical friend, my attention was directed to a remarkable party at which every one was looking. The chief personage in it was a lady, reclining at full length on a long couch, and being dragged along, looking the picture of misery, emaciated to the last degree, her head drawn back almost in a state of opisthotonos, her hands and arms clenched and contracted, her eyes fixed and staring at the sky. There was something in the whole possession that struck me as being typical of hysteria, and I laughingly remarked, "I am sure I could cure that case if I could get her into my hands." All I could learn at the time was that the patient came down to Brighton every autumn, and that my friend had seen her dragged along in the same way for ten or twelve years. On January 14th of this year, I was asked to meet my friend Dr. Behrend in consultation, and at once recognized the patient as the man whom I had seen at Brighton. It would be tedious to relate all the neurotic symptoms this patient has exhibited since 1864, when she was first attacked with paralysis of the left arm. Among them—and I quote these from the full notes furnished by Dr. Behrend—here complete paraplegia, left hemiplegia, complete hysterical amaurosis, but from this she had recovered in 1868. For all these years she had been practically confined to her bed or couch, and had not passed urine spontaneously for sixteen years. Among other symp-

toms, I find noted, "awful suffering in spine, head and eyes," requiring the use of chloral and morphia in large doses. "For many years she has had convulsive attacks of two distinct types, which are obviously of the character of hystero-epilepsy." The following are brief notes of the condition in which I found her, which I made in my case-book on the day of my first visit. "I found the patient lying on an invalid couch, her left arm paralyzed and rigidly contracted, strapped to her body to keep it in position. She was groaning loudly at intervals of a few seconds, from severe pain in her back. When I attempted to shake her right hand she begged me not to touch her, as it would throw her into a convulsion. She is said to have had epilepsy as a child. She has now many times daily, frequently as often as twice in an hour, both during the day and night, attacks of sudden and absolute unconsciousness, from which she recovers with general convulsive movements of the face and body. She had one of these during my visit, and it had all the appearance of an epileptic paroxysm. The left arm and both legs are paralyzed, and devoid of sensation. She takes hardly any food and is terribly emaciated. She is naturally a clever woman, highly educated, but, of late, her memory and intellectual powers are said to be failing."

It was determined that an attempt should be made to cure this case, and she was removed to the Home Hospital in Fitzroy Square. She was so ill, and shrieked and groaned so much on the first night of her admission, that next day I was told that no one in the house had been able to sleep; and I was informed that it would be impossible for her to remain. Between 3 P. M. and 11:30 P. M., she had had 9 violent convulsive paroxysms of an epileptiform character, lasting, on an average, five minutes. At 11:30, she became absolutely unconscious, and remained so until 2:30 A. M., her attendant thinking she was dying. Next day she was quieter, and from that her progress was steady and uniform. On the fourth day she passed urine spontaneously, and the catheter was never again used. In six weeks she was out driving and walking; and within two months she went on a sea voyage to the Cape, looking and feeling perfectly well. When there, her nurse, who accompanied her, had a severe illness, through which her ex-patient nursed her most assiduously. She has since remained, and is at this moment, in robust health, joining with pleasure in society, walking many miles daily, and without a trace of the illnesses which rendered her existence a burden to herself and her friends.

In conclusion, I may remark that it seems to me that the chief value of this systematic treatment, which is capable of producing such remarkable results, is, that it appeals not to one, but many influences of a curative character. Everyone knew, in a vague sort of way, that, if an hysterical patient be removed from her morbid surroundings, a great step toward cure is made. Few, however, took the trouble to carry this knowledge into practical action; and when they did so, they relied on this alone, combined with moral suasion. Now, I am thoroughly convinced that very few cases of hysteria can be preached into health. Judicious moral management can do much; but I believe that very few hysterical women are conscious impostors; and the efficacy of the Weir Mitchell method seems to be to depend on the combination of agencies which, by restoring to a healthy state a weakened and diseased nervous system, cures the patient in spite of herself.—*British Medical Journal.*

THE STUDY OF THE FACE AS AN INDEX OF THE BRAIN.—BY FRANCIS WARNER, M. D., Lond., M.R.C.P.

The face is a region of the body well worthy of clinical study. We may observe its form, color, and mobility; and the effects of movement in causing expression. The movement is the outcome of the action of the brain.

The tissues forming the structure which we call the face are mainly the skin, with its vessels and vasomotor system; the subcutaneous fat; the facial muscles, supplied by the facial nerve; and some of the masticatory muscles, supplied by the fifth nerve.

Most of the variations of facial expression are produced by the facial muscles, which are acted upon by the changes in the brain; and these are the special indications of the cerebral condition to which attention will here be called. The muscles of mastication are less expressive of the condition of the brain than are the facial muscles; but they may become the subject of spasm, atrophy (see Case, *Lancet*, January 7th, 1882), or may produce teeth-grinding, as the result of conditions of the brain.

In almost all cases, the best indications of the conditions of the central nerve mechanism are its effects as seen in the spontaneous action of the muscles; and it is by the result that we usually judge of the central condition. Such effects are conveniently spoken of as nerve-muscular signs. Nerve-muscular signs are the best indices of the brain; the change in the brain affects the muscles; these control the position of the visible parts; and, from the facial changes resulting, we gather our information.

We are here studying the results of cerebral action upon muscles, according to well-understood principles of physiology; while physiognomy deals mainly with the shape of the brain-case, and the passive condition of the face.

The principal movements of the facial muscles are these:

1. Dilatation and contraction of the facial foramina; probably this corresponds in significance to flexion and extension.
2. Elevation and depression of parts. Such conditions are well seen by comparing the two sides of the face in a case of Bell's paralysis.
3. Retraction and drawing forward of parts, as in grinning and screwing up the mouth.

To examine a face, hold a piece of paper in front of it, with one edge vertical; either half of the face can then be covered in turn. Again, the face may be divided into three zones, by holding the paper with one margin horizontal, leaving the forehead above the eyebrows uncovered; or, the face below the lower margin of the orbits may alone be exposed, showing the mouth, most of the cheeks, and the *alæ nasi*; or, again, the middle zone, including the eyes with the upper and lower eyelids, may be viewed alone.

After looking for symmetry in a face, the nerve-muscular condition of the individual parts may be compared. A different condition of the different zones has, possibly, about the same kind of significance as an unequal condition of flexion and extension of the different fingers. A condition of different activity in the three zones of the face is a departure from physiological calmness (*e. g.*, a smile or snarl); it may be normal or abnormal. An unequal condition of the different zones is very common in "nervous people."

In the upper zone, we have the occipito-frontalis and the corrugator supercilii. Here we see the outcome of

brain-action in those conditions termed grief, surprise, etc., producing muscular action and corrugating the forehead. The occipito-frontales are often seen overacting in imbeciles, and in cases of chorea; sometimes, also, they overact as a mere "chronic nervous habit." Symmetry in this zone is usually maintained. In the middle zone asymmetry is less uncommon, but is seen in winking and in ptosis. The important muscles here are the orbiculares oculorum. With megrim, and in conditions of depression, a marked change is often seen in the midfacial zone, due to a fullness about the eyes, especially about the under eyelids; the orbiculares have lost their tone, the skin hangs too loosely, the skin of the lower eyelid, instead of forming a convex surface, passes as a plane from the ciliary margin to the lower margin of the orbit. If the patient be made to laugh, the orbiculares are energized for the moment, and the look of depression is lost.

Passing on to the consideration of the lower facial zone, we see here the most marked effects of facial spasm or palsy from brain-disease—*e. g.*, in hemiplegia and lesion of the crus cerebri. Thus the weakness of the face is well demonstrated by making the patient show his teeth or smile. Now, the muscles of this region are those most commonly seen in spontaneous action in imbeciles; it is these muscles that work awkwardly in nervous one-sided grinning, and in this region we most commonly see asymmetry of the features, due to nervous-muscular conditions. It is interesting to note that this region of the face is the most affected by brain-disease (paralysis), and in "nervousness" (irregularity of the mobile features). Again, it is the levator labii superioris in the lower zone which produces one-sided snarling, one of the lowest expressions produced by the human face. In complete development and perfect health the features are usually regular in passive form and symmetry of movement. In most expressions, the symmetry of bilateral movement is complete; from this we infer that the nerve-mechanisms for each side of the face are intimately connected.

In observing how easily facial asymmetry is brought about, we see evidence that the union of the facial centres is easily dissolved and not very strong, the asymmetry being especially seen in the lower zone; thus asymmetry is produced by nervousness (see one-sided grinning), by the desire to attack (see *Darwin on the Expression of the Emotions*, page 250) (snarling), or by such defective nutrition or development as produces unequal features when in motion. The higher, more intelligent expressions are symmetrical. Union of the facial centres is less perfect than the union between the motor centres of the eyes, for the cerebral condition producing "emotion" cannot cause dissociated movement of the eyes. We find here an illustration that symmetry of action, as well as symmetry of structure, is part of the law of beauty.

It may be remarked as a peculiarity of the facial muscles in man, that they are usually free or disengaged, not mainly occupied in doing a definite work, but their movements are mainly the spontaneous outcome of brain-action. The facial muscles are usually very mobile, and often illustrate the struggle of nerve-muscular actions; this may be seen in the conflict of the muscles about the mouth in the endeavor not to cry. The study of nerve-muscular signs in the limbs shows the importance of observing whether "the movement of small parts"—*e. g.*, the fingers—be thoroughly good; this kind of observation in the facial region is, I think, represented by "the finer movements of expression." These are totally absent in some cases of paralysis agitans, although the larger movements of

the face can be voluntarily performed. When fatigued, the brain does not act well in producing the small fine movements of either hand or face. We sometimes see a nervous play of the features; this, I imagine, depends upon slight irregularity of the muscles producing slight movements. In convulsions, both clonic and tonic, and in tetanus, the larger muscles usually produce the most marked effect.

In observing the different types of face, we become at once struck with the fact that some faces express intellectuality, others vulgarity; some faces are very mobile and very expressive, others are passive and immobile.

The peculiarity of vulgar faces may be roughly divided into two elements. 1. Physiognomy or the shape of the brain-case and face, together with the character of the facial tissues, and the structure of the features and parts of the face. Here, probably, we have an example of the coincident defective or coarse development of the face and the brain.* This illustrates the relation of morphology and function, the structure of the face, and the coincident structure and function of the brain which moves the face. Elements contributing to this character of face are a large under jaw, a thick immobile condition of the facial skin, thick lips, etc. It will be seen that these are mainly conditions in the development increasing the protective character of the skin of the face; the thick immobile tissue is better able to resist the action of external agencies, but it is also less mobile under the action of nerve-muscular changes. The large lower jaw may be very useful for mastication or defence, but it does not serve to increase the play of nerve-muscular actions.

2. The second typical characteristic is the nerve-muscular condition of the face. Such signs are more directly indicative of intellectuality of the brain; hence we should study a face as the index of the brain, when it is seen in action as well as when at rest. The mobility in the different zones and the relative condition of these areas give indications of the condition of the mental nerve-mechanism. These considerations afford some evidence that facial expression results from nerve-muscular action, the outcome of the motor action of that part of the nerve-mechanism which produces mental states.—*Brit. Med. Jour.*

FORMULARY AND POINTS IN PRACTICE.

IN ECZEMA OF CHILDREN AFFECTING THE HEAD THE FOLLOWING FORMULA HAS PROVED OF GREAT SERVICE.

℞ Acidi salicyli ʒ ss
 Ung. cetacei ʒ ii—ss
 Ol. theobrom. 3 v—ss
 Ft. ung.

ONTIMENT FOR EXCORIATIONS AND IRRITABLE SORES.

℞ Bismuth subnitrat. ʒ i
 Axungia ʒ ii
 Ft. ung.

*See "Defective Developmental Conditions," *Medical Times and Gazette* Jan. 21st, 1882. Coincident defects I there show to be common.

AN EXCELLENT ANTISEPTIC OINTMENT.

℞ Salicylic acid. 3 ss—ʒ i
 White wax ʒ i
 Paraffin ʒ ii
 Almond oil ʒ ii
 Melt and rub up in a heated mortar.

AN EXCELLENT COATING IN ERYSIPELAS, ITCHING ERUPTIONS, ETC.

℞ Ovorum vitell ʒ iv
 Glycerini ʒ v
 Misce.

ONTIMENT USEFUL IN BRONCHOCLE AND MESENTERIC DISEASE.

℞ Ung. iodi
 Ol. morrhuae aa—ʒ iv
 Ft. ung.

THE FOLLOWING OINTMENT MAY BE APPLIED WITH A CAMEL'S HAIR BRUSH IN OZENA WITH GOOD EFFECT.

℞ Iodoformi grs. v
 Aetheris ʒ i
 Vaseline ʒ i
 Ft. applicatio.

EMPLASTRUM FUSCUM FOR BOILS, ECTHYMA, ETC.

℞ Camphor ʒ ss
 Black pitch ʒ vi
 Yellow wax ʒ ix
 Red oxide of lead ʒ ii
 Olive oil ʒ iv
 To be melted together till a little burned.

HYALCOAL POUITICE.

Useful in foul and sloughing sores. May be made by incorporating charcoal into a bread poultice and sprinkling the surface thoroughly with powdered charcoal.

COD LIVER OIL AND BARK ENEMA.

Take four ounces of milk, one ounce of port wine, half an ounce of codliver oil, two drachms of tincture of yellow cinchona and twenty minims of liquid extract of opium. Mix. To be administered every twelve hours.

QUININE AND SOLUTION OF BEEF ENEMA.

Take one tablespoonful of brandy, five grains of sulphate of quinine, one teaspoonful of glycerine, two tablespoonfuls of cream and from four to eight ounces of restorative soup. Mix. This enema may be administered every six or eight hours. Where the rectum is very irritable, or it is necessary to relieve pain from fifteen to twenty minims of the liquid extract of opium may be advantageously added.

BEEF TEA AND CREAM ENEMA.

An excellent nutritious enema can be made by mixing together from four to eight ounces of strong beef tea, an ounce of cream, and half an ounce of brandy, or an ounce and a half of port wine. It may be administered twice or thrice in the twenty-four hours. Useful in cases of acute gastritis, obstinate vomiting, etc,

AN AGREEABLE DEMULCENT, SLIGHTLY ALTERATIVE AND DIAPHORETIC MIXTURE—USEFUL IN THE ERUPTIVE FEVERS AND FOR INFLAMMATION OF THE MUCOUS MEMBRANES.

- ℞ Syrupi hemidesmi..... ʒ ii
Glycerine..... ʒ i
Decoct. hordei..... ʒ ix

Mix and direct one tablespoonful to be taken frequently.

IN SOME CHRONIC SKIN DISEASES, PRURITUS OF THE ANUS, AND CHRONIC CATARRHAL AFFECTIONS.

- ℞ Picis liquidæ..... ʒ i
Pulv. aromatici..... ʒ ½

Mix. Divide into five grain pills and order two or three to be taken three times a day.

AN ALTERATIVE AND APERIENT FOR CHILDREN WHERE THERE IS GREAT ACIDITY OF THE SECRETIONS.

- ℞ Sodæ bicarbonat.....
Hydrarg. cum creta..... āā gr. 2
Magnes. carbonat..... gr. 5

Mix and make a powder to be taken every other night.

AN ALTERATIVE AND APERIENT FOR CHILDREN WHEN THE STOOLS ARE PALE AND DURING FEVERISHNESS ATTENDING DENTITION.

- ℞ Hydrarg. cum creta..... gr. 1—2
Pulv. rhei
Sodæ bicarbonat..... āā gr. 2—4

Mix and make a powder to be taken every night or every other night.

IN CHRONIC DYSENTERY WHERE THERE IS ABUNDANT SECRETION OF MUCUS FROM THE LINING MEMBRANE OF THE COLON AND RECTUM.

- ℞ Tinc. kino..... ʒ vi
Vini ipecacuanhæ..... ʒ ii
Decoct. hematoxylin..... ad ʒ viii

Mix. One-sixth part three times a day.

MEDICAL NOTES AND NEWS.

Embalming the Unknown Dead.—The authorities of Leadville, Colorado, have introduced the practice of embalming the bodies brought to the city morgue. The object, of course, is to facilitate the identification of the unknown dead, should inquiries concerning them be made within a year or two. The *Chronicle*, speaking of the large number of cases in which legal complications have arisen through the lack of means for such identification, says that it is astonishing how many missing young men, belonging to good families in the East, are constantly inquired after there. Letters of that character are received by city and police authorities, ministers, and undertakers daily, but in most instances there is no clew. People come there from their Eastern homes with no definite object in view, probably spend their means in dance halls and gambling saloons, fail to obtain employment, and are too proud and sensitive to write home for assistance. They drift into the mountains as prospectors, or into neighboring mining camps, and perhaps die of disease or accident. Thus swells the great army of the missing.

Two New Antiseptics.—M. G. Le Bon has just presented to the Academy of Sciences two new and very effective antiseptics, the glyceroborate of calcium and the glyceroborate of sodium. Both of these compounds have the advantages of being very soluble, destitute of odor, and free from all toxic action. When exposed to the air they both deliquesce with great rapidity, absorbing from the air an equivalent weight of moisture. Both alcohol and water dissolve twice their own weight of these salts. They are powerful antiseptic agents even in very dilute solution; the most effective in a therapeutic point of view appears to be the calcic salt. It is absolutely innocuous, and it can be applied in strong solution to so delicate an organ as the eye without bad results. In a hygienic sense both can be employed with advantage as disinfectants and as preservers of meat and other alimentary products. M. Le Bon has transmitted meat simply coated with a varnish of the glyceroborate to La Plata, and it has arrived in a perfectly fresh and sound condition. He thinks both salts will prove very useful as antiseptics in Lister's mode of dressing wounds.

Relative Power of Antiseptics.—The *Revue Scientifique* (February 4th) contains an abstract of experiments made by M. de la Croix to ascertain the relative value of various substances in preventing the development or evolution of the micro-organisms of putrefaction. He placed finely divided boiled or raw meat in water, and ascertained the maximum and minimum quantities of each substance that were effective. The figures in the following table indicate the number of grammes of water in which one gramme of the substance mentioned prevented the development of micro-organisms; *a* denotes the maximum dose in which development is not arrested; *b*, the minimum dose in which development is arrested:

Substance Employed.	<i>a</i> .	<i>b</i> .
Alcohol	30....	1.77
Chloroform	134....	1
Soda biborate.....	107....	14
Eucalyptol.....	308....	14
Phenol	1002....	10
Thymol	2229....	20
Potash permanganate...	3041....	35
Picric acid.....	3041....	100
Borated soda salicylate...	3377....	30
Benzoic acid.....	4020....	50
Ethereal oil of mustard...	5734....	40
Sulphurous acid	7534....	72
Alum acetate.....	7535....	478
Salicylic acid.....	7677....	343
Mercury bichloride	8358....	2525
Lime hypochlorite.....	13092....	109
Sulphuric acid.....	16782....	135
Iodine.....	20020....	410
Bromine	20875....	493
Chlorine.....	34509....	431

This indicates that chlorine, the hypochlorites, and perchloride of mercury are very effective, while alcohol is comparatively impotent.

Hygiene of the Electric Light.—Dr. Siemens, in his able address at the British Association, justly lays stress on the hygienic advantages of the electric light. He considers that the principal argument in its favor is furnished by its immunity from products of combustion, which not only heat the lighted apartments, but substitute carbonic acid and deleterious

sulphur compounds for the oxygen upon which respiration depends. The electric light is white instead of yellow, and thus enables us to see pictures, furniture, and flowers as by daylight; it supports growing plants instead of poisoning them; and by its means we can carry on photography and many other industries at night as well as during the day. The objection frequently urged against the electric light, that it depends upon the continuous motion of steam or gas engines, which are liable to accidental stoppage, has been removed by the introduction into practical use of the secondary battery. This, although not embodying a new conception, has lately been greatly improved in power and constancy by Planté, Faure, Volckmar, Sellon, and others, and promises to accomplish for electricity what the gas-holder has done for the supply of gas and the accumulator for hydraulic transmission of power. It can no longer be a matter of reasonable doubt that electric lighting will take its place as a public illuminant, and that, even though its cost should be found greater than that of gas, it will be preferred for the lighting of drawing-rooms, and dining-rooms, theatres and concert-rooms, museums, churches, warehouses, show-rooms, printing establishments and factories, and also the cabins and engine-rooms of passenger steamers. The extreme brightness of the luminous parts is, however, dazzling and unpleasant.—*British Medical Journal*.

The Mushroom Season.—The season for mushrooms has arrived, but if the truth were generally known, the London *Morning Post* thinks there would be no necessity for a "season" in the matter. "There are many other fungi, every whit as palatable as the common mushroom, which are ready for the market in other months. Of these, however, the cookery-book feigns absolute ignorance, and our only hope lies in the annually increasing interest displayed by scientific epicures towards the hitherto most undeservedly despised tribe of fungi. The mushroom, it is true, is a fungus; as are also the morel, the champignon, and the truffle. But the favor accorded to these four species only aggravates the contempt with which we treat many of their congeners. There are at least sixteen edible British species of the genus *agaricus*, of which the gorgeous *agaricus Cæsareus* has been declared to be at once the best and the most beautiful. The mushroom is only one of these, and therefore inferior to his highly-colored cousin with the Roman patronymic; and yet, for some reason, the mushroom has been singled out in England for notice and appreciation, while such is the mystery of fashion, the inhabitants of Italy and Hungary avoid it as poisonous. They, however, eat several species which in England, for the trivial reason that they will not part readily with their skins, are stigmatized as neither more nor less than venomous toadstools. Perhaps the fact that ancient writers have dubbed the toad himself as a malefactor who 'sittes on his stoole, lording it,' has something to do with the ignorant prejudice against so many esculent and excellent fungi. 'Were not ten righteous men enough to save the Cities of the Plain, and shall we utterly condemn' a tribe of plants, of which a single genus contains sixteen good and wholesome vegetables? It is sheer ingratitude to persist in including the whole unlucky order—'Unlucky as Fungoso in the play,' as Pope has it—in such wholesale condemnation. Dr. Badham enumerates no fewer than thirty species of toadstools which are natives of Britain, and were eaten by himself and

friends. In the matter of fungi, the Japanese have already shown the way, for they export as much as 1,200,000 francs worth of indigenous species for the Chinese market annually. Their method of cultivation, too, seems simple enough. A few logs with shallow transverse trenches cut in the wood are soaked in water, and carried into some shady place among the trees. The rest is left to Nature and the fungus, until at harvest-time the Japanese owner comes round and collects his crop. This arrangement suffices for five years, and does not seem to present any insuperable difficulties in inception or execution."

Curious Habits of Ants.—Sir John Lubbock's extraordinary book on "Ants, Bees, and Wasps" will amaze readers. Fancy ants having slaves! Fancy these proverbial examples to the sluggard keeping certain insects as we keep cows, and building sheds over them, and keeping others as pets! The aristocracy of ants seem to have all the vices which brought antique monarchies to destruction. Sir John writes soberly, as a philosopher should, and weighs his words no doubt, which makes his conclusions the more astonishing. The author quotes some of Huber's experiments, the value of which he has himself tested. The bloated ant aristocrats, it is said, "have lost the greater part of their instincts; their art, that is, the power of building; their domestic habits, for they show no care for their young, all this being done by the slaves; their industry, for they take no part in providing the daily supplies; if the colony changes the situation of its nest, the masters are all carried by the slaves on their backs to the new one; nay, they have even lost the habit of feeding. Huber placed thirty of them with some larvæ and pupæ and a supply of honey in a box. 'At first,' he says, 'they appeared to pay some little attention to the larvæ; they carried them here and there, but presently replaced them. More than one-half of the Amazons died of hunger in less than two days. They had not even traced out a dwelling; and the few ants still in existence were languid and without strength. I commiserated their condition, and gave them one of their black companions. This individual, unassisted, established order, formed a chamber in the earth, gathered together the larvæ, extricated several young ants that were ready to quit the condition of pupæ, and preserved the life of the remaining Amazons.' This observation has been fully confirmed by other naturalists. However small the prison, however large the quantity of food, these stupid creatures will starve in the midst of plenty rather than feed themselves. * * * I have, however, kept isolated specimens for three months by giving them a slave for an hour or two a day to clean and feed them; under these circumstances they remained in perfect health, while, but for the slaves, they would have perished in two or three days."

Vaccination in Zululand.—The *Cape Mercury* of July 19th states that the Government had King Cetewayo and his suite vaccinated, previously to their visit to England. It further records the interesting fact that, twenty years ago, when a very severe epidemic of small-pox broke out in Zululand, the late King Panda (Cetewayo's father), having heard from some traders of the remarkable power of vaccination, sent to Natal for a medical man, and had the whole nation vaccinated, including himself and Cetewayo. The result was that the disease was soon stamped out.

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PHTHISIS WITH PLEURISY.

A CLINICAL LECTURE DELIVERED AT THE COLLEGE
OF PHYSICIANS AND SURGEONS, N. Y.

BY

ALONZO CLARK, M.D.,

Emeritus Professor of the Principles and Practice of Medicine,
etc.

The patient is a man thirty-five years of age. He complains of shortness of breath, especially on exertion, such as going up and down stairs. He can lie with equal ease upon either side or upon his back, and the dyspnoea is not so great as to cause him to lie with his head raised. He says that he coughs almost all the while and then he raises a greenish-looking matter as an expectoration, and in sufficient quantity to nearly fill a tea-cup in twenty-four hours, and it contains no blood. He thinks his father died of asthma, but patients do not often die of asthma itself, though during the paroxysm they often feel as if they were going to; but the disease goes on until it is complicated by an emphysema or a chronic bronchitis, and they finally die of some intercurrent disease as a rule. The asthma weakens the patient so much that other diseases, when they attack him, are more apt to prove

fatal. The history of his father having had asthma makes it very likely that he had phthisis also, which may have caused his death. His mother, he says, died of dysentery, and he has lost one brother by paralysis, which affected only the right side of his body. The true cause of his death was probably the formation of a thrombus or embolus in the vessels of the brain. But there is not much certainty as to this. This man's cough has troubled him for two years, and it was as bad a year ago as now, yet he is not losing flesh he says, or if he has previously lost any he has now regained it, for he weighs as much as he used to.

The rational signs, gentlemen show us nothing definite; but the history of a cough lasting for a year or more is presumptive of phthisis, yet on the contrary side there has been no bleeding from the lungs and no marked emaciation, so I should say that phthisis is rather excluded by rational signs, but perhaps it is not positively. As the diagnosis is yet indefinite there is nothing left but for us to examine his chest for further information.

By inspection, I can perceive no difference in the movements of the two sides of the chest, but I am able to see where the apex of the heart strikes against the chest wall. In the normal state the apex beat should be felt three and a half inches to the left of the median line, and one inch below and to the inside of the nipple. Upon placing my hand over the præcordial region, I find here that I cannot feel the cardiac impulse, though I am able to see it indistinctly, and it does not appear to be much, if at all, out of place. But if I cannot feel the apex, perhaps I can make it out more definitely by percussion. I do find that the area of cardiac dullness ends here, at a point three and three-quarter inches to the left of the median line, and this, therefore, is the position of the apex, which is nearly in its usual place.

Now, I will listen over the apex to see if I can get a mitral murmur. I find none. Next I listen at the base of the heart to ascertain if there is any murmur at the aortic orifice. As the result of my examination I find that the first and second sounds of the heart are both perfectly clear and natural, and there is no purring sound nor any prolongation of the natural sounds. So we can exclude the heart in forming our diagnosis except that perhaps there is a slight increase in its size. But there is normally no regularity in the size of the hearts of different individuals, and a man with unusually broad shoulders and a large chest may well have a heart a little larger than a narrow-chested man. We will now examine the upper part of this patient's chest more carefully, and now you see something which is very significant, and that is, a marked shrinkage or falling in of the right side of the chest, which makes quite a large pit under the clavicle, and this is not seen upon the left side.

I will now listen to his breathing, and I do this to

determine two things—first, whether the tone of the respiratory sounds is normal; and second, whether the expiration is shortened or lengthened. Normally, the expiratory sound should be about one-fifth the length of the inspiratory. The inspiratory sound can be heard all the time during inspiration, and this is followed by a pause and then a short expiratory sound. If, however, the expiratory sound is prolonged, it is generally due to some condensation of the lung, which, being more closely pressed upon by the ribs, conducts the expiratory sound more easily to the surface. So when you find the expiration lengthened there is reason to fear some sort of consolidation in the lungs, and this may be due to a pneumonic process, a tumor in the lungs, or to several other causes, but in nineteen cases out of twenty it means phthisis. So this prolongation of the expiratory sound is a very important point in the diagnosis of phthisis. This most valuable fact was discovered by one of our own countrymen. You have probably heard of the celebrated Dr. Jackson, of Boston. He had a son who, when a young man, was studying medicine, and his father sent him to France to pursue his studies under Charles Louis, and while there one day as he was examining a patient with phthisis he observed this prolonged expiration. He then examined another case and found it also present there. No one had ever noticed this fact before, so he called the attention of Mr. Louis to it, and after a thorough trial of it he found that it was a really valuable test. We may therefore rightly call it a "Yankee notion," because it was first noticed by an American. Now, upon listening here, I find that the expiration is prolonged, and the sound of the voice has twice as much volume upon the right as upon the left side, and it is also a little higher pitched. Another evidence of pulmonary consolidation may be derived from the vibration which is produced by the voice as the hands are applied to the two sides of the chest. Here fully twice as much of a jar may be perceived upon the right side as upon the left, and this is another evidence of consolidation from some cause in this case. Now here we come to a point which requires a little delicacy. The amount of difference in the percussion resonance upon the two sides is not great here, but by pricking up your ears and listening closely you may determine that the percussion note is higher pitched upon the right side and the dullness is considerable as compared with the left. Upon listening over the chest behind, I find that the voice sounds are louder upon the right than upon the left side. But I have not yet been able to discover here the rôle which I am looking for and which is the important point in the diagnosis of phthisis. I can follow down this increased resonance of the voice, whoever, as far as the angle of the scapula upon the right side. But here, at a point a little lower down and nearer to the axillary line, I find a spot where the voice seems to come from a distance, and it loses about two-thirds of its volume. The question then arises as to what is the cause of this diminution of the vocal sounds. It may be due to anything which will crowd the lung away from the chest wall, and this is most commonly the result of an effusion into the pleural cavity. But it may be that you are listening below the level to which the lung itself normally extends. I have devised for myself a handy method of measuring the place where the lung should end, for I have observed that the average depth of the lung below the angle of the scapula is just the width of my hand with the fingers closed and the thumb extended. Thus you see here, as I put my hand with the joints of

the little finger just upon the inferior angle of the scapula, the tip of my fully extended thumb reaches one and a half inches below the point where I found that the dullness began. I will now try another expedient. I tell the patient to stand up and turn slowly around, while I mark the size and outline of the two sides of the chest, and see if there is any difference in them. Here I perceive that the right side is distinctly the smallest. Another expedient is to place the hands on both sides of the chest at the same time and then see if it moves as freely on one as on the other side. So here I can feel that the right side does not expand quite as freely as the left. The finding of fluid then one and a half inches in depth, and the sinking in of the chest walls, and the fact that the movement of the chest is less distinct on the right side, are three points in favor of the diagnosis of pleurisy. It is very evident that there has been a greater pleuritic effusion here than there is at present, and the subsidence of it has left only a wedge of fluid in the most dependent part of the pleural cavity, and what remains is very little in quantity. Unless it is confined in position by adhesions which shut it off from the main cavity, I think I can show you conclusively that this dullness is really due to the presence of fluid. By marking the spot at which I have found dullness to begin and the vocal sounds to become faint, and then listening again while the patient bends forwards over a table, I find that I get the voice sounds distinctly nearly two inches below the point where they were lost before, and the resonance on percussion is also extended over this same area. This evidence is conclusive of the presence of fluid in the pleural cavity; and so we make out that this man has had and still has a pleurisy, although he has not complained of any marked pain in the right side, and the water now extends up to the level of the dullness, and the loss of voice begins at the same time. Altogether, then, we have found that this man has evidence of consolidation of the lung just under the right clavicle, and extending downward posteriorly to the inferior angle of the scapula, and also the evidence of dullness beginning an inch and a half below this and changing with the position of the patient, and then, that he has had a cough with shortness of breath for two years. Our diagnosis, therefore, is phthisis upon the right side, together with a pleurisy, which is probably the consequence of the phthisis, and which is getting well.

Now the question is, what to do for this man? As to his pleurisy, we may leave that to take care of itself. But if you did not do this, you might hasten the absorption of the fluid by the use of some of the diuretic preparations. A favorite of mine for such cases is this:

R. Potass. carb. ʒ ss.
Aquaë ʒ vj.

M. Take a tablespoonful of this mixture with a tablespoonful of fresh lemon-juice every two hours, and besides, if you choose, you may add a dessert-spoonful of the infusion of digitalis three times a day. With reference to the phthisis, you must try to build up the system and maintain the patient's strength as long as you can. This man's having gone for two years with a cough, and yet having no cavity in the lungs, is a favorable factor in this case; and the fact, too, of his not being markedly emaciated is worthy of being taken into account in making your prognosis. There is in this case no positive evidence of any hereditary tendency to diseases of this kind, but the chances are greater that his father died of phthisis

than of asthma, and if he did, then this would form an element in the prognosis, for inherited phthisis is not supposed to be as curable as when it is spontaneous in its origin. Yet those who are predisposed to this disease by reason of an inherited tendency to it sometimes recover. It is commonly thought by the people that consumption means sure death, but this is not so at all, for in my own observation I have seen hundreds and even thousands of patients who were prescribed for when the disease was in its early stages, throw it off entirely and get well. But there is no specific for this malady, and there is no real value in any of the advertised sure cures for phthisis. There are only three or four simple methods to be pursued in the treatment of this disease. Prolonged exercise in the open air should be enjoined, and the patient should not be allowed to stay in-doors, for this is very unfavorable to the result. Many hours each day should be spent out of doors, and the exercise obtained by riding horseback is especially to be commended. So long as two hundred years ago, in Sydenham's time, it had been noticed that horseback riding was favorable for phthisis. Perhaps I can impress upon you the value of this treatment by relating to you a case of my own. Last spring a young man came to me whom I found was suffering from phthisis, and he was constantly growing worse. By my advice he hired a horse by the month and went into the country and rode twenty-five miles every day; after he had become accustomed to riding shorter distances at first. He kept this up faithfully and at the end of a fortnight he wrote me that his cough had greatly improved and that he was gaining strength every day; and in a month or so he felt so well that he stopped his riding and came back home greatly benefited. But he should have remained longer in the country and have continued his riding, for as the spring advanced and the summer came on his cough returned, and it grew steadily worse until fall. Now it would be useless to prescribe horseback riding for this man, for he is too poor to hire a horse, but he can sit out in the open air in the parks and take walks for exercise.

The next point in the treatment is the food. An oily food of some sort is most essential. Food very much the same in kind as cod liver oil can be obtained in other ways, if the oil itself can not be taken. For instance cow's milk can be favorably employed for this purpose. One to two quarts of rich milk a day should be taken, and if to this can be added half a pint of cream it will be even better for those who can afford it. The cream may be taken agreeably on hominy or oat meal stir-up or upon baked apples and the like. Solid foods should be eaten also in large quantities, and of these meats the most nutritious and the best, are such as roast meat and beef steak. I have never tried the plan of feeding these patients on raw meat because it is not a pleasant food to use, and I do not believe it possesses any peculiar virtues more than cooked meats.

I do think, however, that there is some virtue in friction applied to the surface of the body. But I do not believe in using counter-irritants, as they are called, such as blisters and moxas and the like; but I do use dry friction to the surface with flannel, applied twice a day. Flannel is electrical to some extent in dry and cold weather, and this may add something to its virtues. All parts of the body, except the neck and face, should be briskly rubbed twice daily, and the best and most convenient times, I think, are before breakfast in the morning upon rising, and at night just before retiring.

No medicines are needed except such as may be

required to relieve special symptoms, such as loss of appetite or coughing. For the former some simple bitter, such as the compound tincture of gentian one teaspoonful, to a tablespoonful of sherry, will often awaken an appetite. I have also sometimes prescribed with much benefit the citrate of iron and quinine in lemonade, and this aroused such an appetite in one patient that she wanted to eat almost constantly, and she would wake up in the night and be so hungry that she would ask for something to eat. This or the compound tincture of gentian or the infusion of the bark taken with a little wine are all very good. This man does not need any of these, however, at present, for his appetite is good and he is not losing flesh. To relieve the cough I avoid medicines if possible, for almost any cough medicine which will prove efficacious contains opium, and this impairs the appetite either for the morning meal or for the whole day. I prefer for this purpose to employ the vapor of steam as an inhalation for five minutes at once several times a day. I do not know as this does much more than to soften the mucus so that it may be expectorated more easily, but I have found it especially favorable in those cases of nervous cough where the amount of coughing is greatly exaggerated considering the small quantity of the expectoration. For preparing a solution for inhalation I dissolve two grains of the extract of opium in three ounces of water, and to this, if you choose, you may add a small quantity of glycerine. This is put in an ordinary spray-producing apparatus, which the patient can be taught to use himself, and it is blown into the lungs when the mouth is open, the bulb being pressed so as to force out the spray during inspiration, and seven or eight deep inspirations are thus taken in succession while the vapor is being inhaled. I will tell you of a case to impress the value of this upon your memory. A lady came to town with her daughter to get advice and treatment for a cough which troubled her constantly, but was not accompanied by any expectoration, and she did not cough during sleep at night, so I concluded that it was a cough due more to a constitutional nervous excitability than to the presence of a secretion in the air passages.

But before coming to me they went to a hotel, and the next day the mother was going to bring her daughter to consult me. While waiting there, however, a gentleman who heard her coughing came to the mother and said: "I have heard your daughter cough a good deal, and as I am a physician I would like to relieve her, as I assure you I can if you wish to employ me." But she answered him that she came to see Dr. Clark, and so she would wait until to-morrow. When she went to her room, however, she found a lady there who was very polite to her and said she would be glad to lend assistance in any way, and she so pressed upon her attention the skill of the doctor in the hotel that she finally concluded to pay him a visit, and so she went with the lady, who afterwards proved to be the doctor's wife, and she received some medicine for her daughter. But the next morning her cough was just the same and not at all relieved, and so they came to see me. I prescribed for her an inhalation, composed of equal parts of the tincture of the balsam of tolu and Hoffman's anodyne, which was to be put, a few drops at a time, into a hot cup, and the exhalation was to be inhaled. This will often relieve a nervous cough, but it did not here, for she continued to cough all the same. I then set about thinking what I could do. Then it occurred to me to try a spray made by dissolving the extract of opium in water, and this I prescribed. The next morning the lady came to me and

told me that her daughter had no more cough, and she has had none since that time. A spray of this kind will often allay a cough which is out of all proportion to the amount of secretion; but cough mixtures in general are of but little good here. In reference to Churchill's remedies, the hypophosphites, I must say that I have not much faith in them; yet I often give them, though I cannot say that they do much good. I do not know much about Fellow's preparation, either. Lately a new method of treatment has been practiced, and it is gaining some foundation. It is the inhalation of a germicide, which kills the little creatures which are supposed to be the cause of phthisis. Within the past year a favorable case has been made out for the theory of minute parasites or germs being the cause of phthisis. Only yesterday a patient came to see me to whom I had a few months before advised the inhalation of a spray from a solution of one drop of carbolic acid in two hundred of water, and she said that after using it for two or three months the cough ended completely; and yesterday she came to me well, and she ascribed her recovery to the carbolic acid inhalations. But in the treatment of most cases of phthisis increasing we aim chiefly at gradually increasing the patient's strength, and for this purpose we must rely mostly upon nutriment, fresh air, and exercise. These are the most important means for combating this disease, which is so fatal.

CRANIOTOMY—VULVAR TUMORS.

CLINIC BY

WM. T. LUSK, M. D.,

Professor of Obstetrics in Bellevue Hospital Medical College.

Gentlemen:—Before bringing in the patient upon whom I am to operate to-day, I wish to tell you about an interesting case of puerperal eclampsia which was brought to my notice yesterday. The history of the case is, that an Aztec Indian woman was brought to the emergency hospital early yesterday morning in an ambulance, and it seems that she had been in labor for several hours, and had been having repeated convulsions. I was sent for and I went immediately to the hospital. When I arrived I found her lying insensible, and when I saw her condition I determined to try to deliver her as quickly as possible. I passed a catheter into the bladder but no urine could be drawn off. I then put a Barnes's dilator into the os uteri and distended it as rapidly as I could. She then had another very severe convulsion, and her condition was so low that I felt that there was no time to be lost, so I determined to extract the fœtus with the forceps. But I found, upon trial, that I could not do this, for the head was not below the pelvic brim, and I was unable to force it down. I then hastily measured the size of the pelvic cavity with my finger, and it seemed to me that she had a justo-minor pelvis, and the head of the fœtus was too large to pass through it. As, after a careful examination, I found no signs of life in the fœtus, I thought it best to perforate the skull and perform craniotomy, thinking that this would result in less injury to the mother than to attempt forcible delivery by the forceps. I could not perform version because I could not get my hand in the uterus without rupturing the soft tissues too extensively. The operation of craniotomy I found very difficult, and while I was perform-

ing it she had another convulsion, but I finally delivered the child without much injury to the soft parts. Upon passing the catheter again I now drew off about an ounce of pure blood, or at least it was almost if not absolutely pure. In these convulsions which I witnessed there was a complete suspension of the respiratory muscles, and in one this suspension of respiration lasted so long that I thought that she was dead, but finally there was a return of the radial pulse, and then I completed the delivery. About four ounces of bloody urine were drawn off from the bladder some time after the delivery, and during the morning she had one more convulsion, which ended in her death at about noon. We did all we could to save her, and I believe we did the best thing that could have been done under the circumstances. I believe that the shortest way to manage these cases of convulsions is to empty the uterus as speedily as possible, and the earlier after the convulsions have set in that she comes under your observation the better for her, for if you see her early after they have commenced you may often prevent the occurrence of another convulsion, while the cervix is being dilated, and the uterus is being emptied, by the administration of anæsthetics. This woman had the most severe convulsions I have ever seen, and she had had about a dozen before she was brought into the house by the ambulance surgeon, and she had five while in the house, and one after she was taken away, and one in the hospital to which she was removed, and two during delivery, so she had at least nine which I saw, and at last she lost her life in one. I have here the placenta of this woman, which I brought to show to those younger members of the class who are not yet familiar with the appearance of this respiratory organ of the fœtus. But as I see that it is now somewhat green from commencing decomposition, and as I am about to perform an operation on another patient, I will not touch it with my hands, but will have it passed around the class for you to inspect at your leisure.

This patient whom I now am about to show you I saw a few weeks ago, and I then found that she had a papillary tumor of the vulva due to an enlargement of the lymphatic glands, which was the result of constant irritation, I supposed. I then expressed my opinion that the tumor was of the carcinomatous variety, and now I know that it is. I propose to remove it to-day, but just how I shall do it I cannot say until I have examined it more carefully. But it is my intention to use the thermo-cautery knife if possible. The dangers in removing such a tumor are hemorrhage at the time, and septic poisoning later on. In removing carcinomatous growths, I think that it is not a good plan to bring together the opposing surfaces of the wound, but I prefer to leave the wound open and to cauterize the base to prevent hemorrhage. There is not much danger of sepsis after the removal of these tumors, but it is hemorrhage that I am most afraid of. So here I intend to try the thermo-cautery, and if it promises to be successful I will remove the tumor by this means. The great disadvantage in using the thermo-cautery knife is that you cannot hold such a long knife as this has to be so easily as a scalpel. While this patient is being placed under an anæsthetic I will improve the time by merely showing you another case.

The patient before you now has a cyst upon the right labium, which is probably due to a degeneration of the vulvo-vaginal glands. You remember the anatomy of the glands of Bartholini, and the ducts leading from them, and you know that these ducts may become obstructed, and then the glands will become inflamed

and increased in size, and then results the condition which you see here as I place the patient in position on her back with the knees flexed and separated. It is remarkable that I saw an exactly analogous case to this in the hospital only three weeks ago, and now here is another case presenting itself with a tumor on the right labium, just as in the case I saw before. This cyst is the size of a small egg, but upon pressure I find that I can not squeeze any of the secretion out as you can often do from cysts of the vulvo-vaginal glands.

The treatment of these cystic tumors consists in incising them and dissecting out the cyst after splitting open its external covering, and this is followed by immediate relief and the trouble is removed with but little resulting soreness. Yet there is no urgency in having these growths removed, for they create but little trouble unless very large, and some women have these cysts for a long time without being conscious of it, for they cause them no annoyance, and they may not learn of their presence until a physician, in examining for something else, discovers them and tells them of it. In this case I should advise the removal of the cyst, for the operation is not difficult or serious. Besides there is one thing which may be said about these growths in favor of an early removal of them, and that is that if left to themselves they are liable to become inflamed and then they can not be dissected out as they could before, but they go on to the formation of abscesses which must be incised, and then the process of suppuration lasts for some time. But in their present condition it is a very simple matter to remove them. I will do this for her or not, just as she likes, but I will not perform the operation now as the other case is ready for me.

Now that this patient is anæsthetized, as I expose the parts, you see the tumor upon the left labium. I will first try to remove it by the thermo-cautery knife, but if it bleeds too much then I will pass through its base a double wire and twist the ends around both sides so as to strangulate it. You see she also has large protruding external piles and it will do no harm to tie them off too if I have time; and the best way is to pass a double ligature about their base so as to stragulate them, and then the next morning to snip off the strangulated portion with the scissors, and this saves the patient much trouble and pain and the dangers of gangrene.

Operation:—As I lift up portions of the tumor with a tenaculum I cut around its base with the thermo-cautery knife heated to a dull red heat, being careful to steady my hand by resting my elbow against my side, as you see. I find that we are going to be able to get off the entire mass successfully with but a very little hemorrhage; and so I can say that the result of operating with the thermo-cautery knife is very satisfactory to me, and this method of removal is probably better for her. As I remove it thus, you see the tumor is very thin and about the size of a fifty cent piece and it is of an unhealthy carcinomatous character. The bleeding amounts to almost nothing, so I will trim off the few remaining irregularities with the scissors, and then touch over the bleeding points with the cautery. Now I have removed the greater part of the tumor proper, but there is still a little spreading of the papillary growth into the mucous membrane around, and as I cannot get at these with the cautery knife I think it is safest to employ a bistoury and to slit up the mucous membrane over the growths, just as in a perineal operation. In doing this, however, I now find that my confidence in the

knife was a little misplaced, for I have unexpectedly divided a small artery, but I will be able to stop this bleeding by applying a pressure forceps. The rest I will pick up with a dressing forceps and cut them out with a scissors, and then I will sear them all over with the cautery. I do this because in all carcinomatous growths there is danger that in cutting through the fresh parts you will open a large number of lymphatics, and septic material may enter these and be absorbed. But by searing over the parts, you expect to shut up these vessels and so avoid this danger. I will now cover the wound with a piece of borated cotton and leave it for awhile while I tie off these piles.

With a long needle I pass a ligature through the base of one of these protruding piles and then tie the ends so as to cut off the circulation through it. I then do the same to another, and then to a third pile, and so all are strangulated. The difficulties following the operation for piles are greatly diminished by snipping off the next day the portion in which the circulation has been cut off by the ligature, and this device also avoids the risk of gangrene and lessens the suffering. This portion of the operation was devised by me, but Dr. Van Buren, who is more than an expert in these matters, advises the removal of piles by the operation of tying. So I tie them to please him, but the next day I snip off the strangulated portion to please myself. So you see there is really no discrepancy in the teachings of the school.

Now I want to look at some enlarged glands which I find here in the left groin, and as they may contain some of the carcinomatous matter I think I will try to remove them, though I may be sorry I attempted it before I get through. You see this woman is a very mine for surgical operations.

The operator now made an incision about two inches long a little below the centre of and parallel to Poupart's ligament, and he cut down upon the point of greatest enlargement. After passing through the skin and superficial tissues a grooved director was passed in, and the remaining incisions were made upward upon this until the gland was exposed. And now instead of finding an indurated gland as it was supposed to be, an irregular broken down and tough mass of glandular matter was disclosed which was firmly adherent to the neighboring parts. This rendered its removal a difficult and tedious task, and it had to be taken out in ragged pieces. None of the other glands appeared to be sufficiently enlarged to warrant their removal. The wound in the groin was now thoroughly washed out with a carbolized solution and a drainage tube was inserted, and a complete Lister dressing was put on. No sutures were used to coapt the lips of the wound, for it did not gape. It was determined to dress the wound on the labium by the open method after the manner of Wood's management of amputation wounds. But now as the pressure forceps which had been left hanging upon some bleeding vessels in the wound were removed, the hemorrhage returned and was very obstinate though not profuse. Various methods were resorted to check it, but with little success. The actual cautery, torsion, ligature and a styptic solution of acetic acid were tried in succession, and finally the bleeding became so slight that it was decided to place over the wound a piece of borated cotton and bind it on, and leave it temporarily while the patient was removed to the wards, where she could more easily be cared for and receive appropriate treatment. Antiseptic precautions were taken throughout.

ORIGINAL ARTICLES.

MYOPIA AND THE NECESSITY OF ITS CORRECTION BY GLASSES.

BY

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Myopia has justly been called a disease of civilization, and, unless prompt measures are taken to counteract the injurious influences which lead to its development, it must necessarily spread more and more with the advance of civilized life. Appreciating the importance of the subject, hundreds of the most competent observers have occupied themselves with it of late, and it is only a few years ago, that one of the ablest of them, Dr. E. G. Loring, presented to you the results of his labors in this field of medical science in such a clear and scholarly manner, that it would be presumptuous of me, to come before you with a similar paper, were it not that Dr. Loring confined himself especially to the causation of near-sightedness, whereas the object of the following remarks is to point out the necessity of preventing the progress of the disease, and such we may justly call it, by prompt attention and early use of glasses. Myopia has very little of a history; there are no data of its occurrence or its frequency in older medical books, and it is only after measurements of myopic eyes by Prof. Arlt, in Vienna in 1854, that we have anatomical proofs of its existence. Indeed it may be said that only after the discovery of the ophthalmoscope a scientific study of it became possible.

Myopia or near-sightedness, as we all know, depends upon an elongation of the eye-ball. The diameter of the normal eye is about 23 mm. or nearly one inch, that of a myopic eye is more than this, and the longer the eye the greater the degree of near-sightedness, so that in highly myopic eyes their diameter may be longer than one inch and one half. It is chiefly on this account that the myopic eye is a very prominent one. However not all prominent eyes are myopic; some people are born with larger eyes, and the formation of the skull and orbit plays a very important role in the appearance; but if a person should be near-sighted to a higher degree in one eye than in the other, this would be apt to become apparent, even on superficial examination, by the greater prominence of the more near-sighted one. This contrast is striking in persons that have one far-sighted and one near-sighted eye; the former, the hypermetropic one, appears small and flat, the latter, that is the myopic one, is fuller and longer.

We are naturally lead to ask what the cause of this elongation of the eyeball is; it would not be surprising if this was always a congenital condition, but such is not the case; according to the most careful observations made here and in Europe, of the eyes of new-born infants, the long or myopic eye is found in only very few cases. In order to become myopic, the eye has to change its shape, and myopia is therefore, with few exceptions, an acquired condition. The reverse holds true in regard to hypermetropia; this is nearly always congenital. An eye may under certain conditions become longer, but unfortunately it cannot be made shorter. On this account it is impossible to cure myopia; we can possibly prevent it, but if it is once established, we can only watch that it may not increase; that our patient may not become excessively near-

sighted, and above all that he may not lose any power of vision. To accomplish this object effectually, we must consider the causes of myopia, and the time in which it is apt to develop. We have just seen that myopia is generally acquired. Do some eyes have a greater tendency to acquire this affection than others, is the next question? Undoubtedly this is the case. Under this heading we have to consider two important factors: the one is heredity and the other debility, that is debility or lack of resistance of the sclera, the tough enveloping membrane of the eye. The importance of the factor "heredity," will become apparent when I call your attention to this chart, the result of Dr. Derby's and my own observations. Independent of the frequency of myopia, of which I shall speak later, we see here that the myopic eye was found among Jewish and German children more frequently than among the American and English. The great frequency of this condition among the first is perhaps due to some extent to the greater diligence of these children, but their parents were more often near-sighted than the Germans, and these more than the Americans. Of 45 Jewish myopic children, 18 or 40 per cent. came from myopic families. Of the 82 German myopies 29, or 35 per cent., came from such families; but of the 160 American children, there were only 49 or 31 per cent., that had myopia in their families. A very striking case of this kind came under my observation. Mr. H., an English Jew, is very myopic and has lost one eye in consequence of it; he has seven children and of these five are near-sighted, some of them to a quite alarming extent. The mother is likewise near-sighted, but only to a moderate degree. If we see cases like this it seems only a wonder that there is not more hereditary myopia than has been found among more than 2,000 school children, examined by Dr. Derby and myself in the most careful manner. We found that of this large number of children, 257, or about 12 per cent. were near-sighted, and of those only 51, or nearly 3 per cent., came from myopic families. The other condition mentioned, as being likewise favorable to the development of myopia, is a want of power of resistance of the sclera. This is perhaps one of the most frequent and most dangerous of all causes of near-sightedness; it is apt to last during lifetime in some persons and leads to those cases of high degree of myopia, which are too frequently followed by loss of sight. It is one of those conditions, that are apt to follow debilitating diseases of childhood and which, if other causes are brought into play, such as much reading or other close applications of the eyes shortly after measles, scarlatina or diphtheria, leads to myopia, the beginning of which is easily traced back to the time spoken of. A case of this kind came to my knowledge through the kindness of Dr. Derby; a young lady in whose family no myopia existed, was taken sick with scarlatina when 17 years of age and, although she enjoyed excellent eyesight up to the time of the attack, she became so near-sighted within 18 months, that she was obliged to get medical advice. The myopia nearly disappeared after the use of atropia, but soon commenced to increase again, so that now, 3 years after the attack she requires a —5, and has only $\frac{2}{3}$ of her visual power left. This lack of power of resistance is one of the main causes of the development of Myopia in illiterate people, and it is of more frequent occurrence in such countries, where the lower class of people are insufficiently fed and cared for, or where they are addicted to debilitating vices. Therefore we must not be surprised to find many such cases among the hard working and ill fed people of Ireland or

among the Italians. In Italy, according to Sormani, a large number of recruits are myopic to such a degree as to be exempt from military duty; that is, they require a glass at least as strong as a —6. But of this number, a large percentage can neither read nor write, have never been to school nor used their eyes for fine objects.

Other cases depend upon some defect of the eye itself, on account of which greater accommodative efforts are necessary, especially for near-vision. An irregular curvature of the cornea, astigmatism, may be the cause of myopia, for which the following case may serve as an illustration: Mr. C, a theological student, 17 years old, coming from a family that is entirely free of myopia, consulted me during the summer vacation of 1879 on account of a very annoying redness of the edges of the eyelids. He has had a good deal of pain around the eyes and lachrymation after studying for 15 or 30 minutes. This was especially marked if he had used his eyes in the evening. On examination I found that, although he had a $V = \frac{20}{x}$ in each eye, he would accept a convex cylindrical glass and under atropia it required a combination of a convex spherical and cylindrical glass to give him perfect vision. This was therefore a case of compound hypermetropic astigmatism. I advised the use of such glasses when studying, but he refused to wear them as it might injure him in his calling. He wanted some preparation for the lids. In the summer of 1881, two years later he called again, principally for his blepharadenitis, which had been troublesome off and on, but also on account of his inability to see distant objects. He had by this time become myopic and he required a —20 for the left and a —16 lens for the right eye. Under the use of atropine and homatropine but little change in the refraction of the eye took place. Here was a case of hypermetropic astigmatism, which not being corrected by glasses, required such efforts of accommodation as to result in a change of the shape of the eyeball; similar cases are frequently seen by the specialists and especially Dr. Risley of Philadelphia has laid a great deal of stress on the necessity of correcting such errors of refraction to prevent the development of myopia.

Slight opacities of the cornea lead likewise to changes of the eye; such cases are universally known; the following one is taken from my case-book: Mrs. Sharp, age 35, married, complains about pain in eyes after using them; the examination reveals hypermetropia or far-sightedness in the left eye of $\frac{1}{8}$ s; with the right eye she sees very little; there is a slight central opacity of the cornea but a concave glass of $\frac{1}{4}$ gives her nearly $\frac{2}{3}$ of normal vision. This eye had become myopic because the corneal opacity made seeing so difficult that a much greater strain of the accommodation was called for, and this led to the change of the right eyeball. Dense opacities of the cornea will exclude vision to such an extent that the eye is rarely used.

The most important factor in the development of myopia is, however, the occupation with small and near objects during childhood. The evil effect of school life has been pointed out before. Whenever this subject is mentioned, we ought not to forget to thank Professor Cohn in Bresslau for his pioneer work in this direction. It was he who first examined a large number of school children in order to determine the frequency of myopia. He was followed by many equally careful observers on the other side, and also here in America, especially in New York. The surprising results obtained by these gentlemen are generally known, and have been mentioned by Dr. Loring

in his valuable paper. It has been observed that in the rural districts and in the lower-grade schools of the cities the percentage of myopic children is very small, but with the increased duration of the attendance at school, and especially in proportion to the length of the school-life, the near-sightedness increases, until it reaches in the higher schools really alarming proportions. In a paper, read before the German Scientific Association, I have already given the result of Dr. Derby's and my own examinations of more than 2000 school children in full. In the primary departments only 203 scholars were examined, and of these only six, or nearly 3 per cent. were near-sighted; but none of them had suffered any loss of visual power. Of Grammar School 58, 698 children were examined, and of these $8\frac{1}{2}$ per cent. were myopic. This number includes 425 American children, with 34 cases of myopia, and 273 Germans with 26 myopic scholars; 10 of the children had suffered a diminution of their power of vision.

In Grammar School 35, which is looked upon as the most advanced and best school, 896 scholars were examined; there were 630 Americans and 266 Germans. Of the total number 119, or $13\frac{1}{2}$ per cent., were near-sighted. The per cent. of American myopies was 10, that of the German $17\frac{1}{2}$.

In Columbia College 201 students were examined; of these 69 were near-sighted, which makes 35 per cent. The percentage was greater in the Academical Department than in the School of Mines and greatest in the senior class.

But not only literary occupation is apt to lead to myopia, although it is undoubtedly the most frequent cause of it. Our entire mode of living, sedentary occupations, and want of out-door exercise may cause near-sightedness; for this reason even the lower classes, that do not study too much, may, from a want of practising the eyes for distant objects, keep the accommodation under such constant strain, that it will lead to a change in the shape of the eye-ball. For this reason, the wife of the city laborer, spending her life mostly indoors, is in greater danger of becoming near-sighted than the man whom his work calls into the open air, where he can rest his eyes by looking at distant objects. Even the domestic animals begin to feel the effects of this mode of life, although they are, as a rule, hypermetropic.

German papers spoke, a short time ago, about an amusing event that occurred in the city of Zwickau, A gentleman had a very fine horse, which was, however, very intractable. A careful examination revealed the fact that the horse was near-sighted. A pair of concave glasses were ordered, and the animal became docile and apparently happy. It is said, that it is one of the greatest treats for the street boys to see the gentleman take his afternoon drive behind a horse adorned with a large pair of spectacles.

Spectacles will, however, not only cure bad habits of horses, they may cause great changes in children. The effect of errors of refraction on the mind of a child has been pointed out by many observers. Dr. Noyes and Dr. Loring have both called attention to this fact. A near-sighted child, for instance, does not see as well as its playmates, who will not be slow to take advantage of it; in school and at home, not being able to become as well acquainted with its surroundings as the other children, it is looked upon as dull and slow, and thus, not being appreciated, the child prefers solitude, takes to reading a great deal, and neglects out-door exercise; it becomes morose, and its mode of living favors the further development of the myopia. Supplied with

the proper glasses, everything is changed, and the child's opportunities are greatly improved.

But, important as it is, this is not the greatest danger of myopia; it is the change in the interior of the eye caused by the nature of the trouble, the stretching of the more delicate inner structures of the eye-ball that we have to fear.

Myopia, as it depends upon a change of the eye-ball, cannot be cured after it has once developed; but there is a great difference in the degrees of this affection, and whilst a myopia of slight amount, in which of course the change of the eye-ball is only slight, is of no danger to the eye, that of high degree is not only apt to impair the vision, but will frequently lead to a total loss of this function. It should, therefore, be the main object of the physician to prevent myopia, when once developed, from increasing. Before speaking of the best means of doing this, it will be well to consider the way the change of the shape of the eye-ball is brought about, and the most dangerous time for the development, and for the approach of the more serious complications of this affection.

In order to have the shape of the eye undergo any changes, the sclera must be soft and yielding. This condition exists at the time when the child is growing, and especially if there is an *inherited* weakness of it, or if a debilitating disease has reduced the tone of the general system and also that of the sclera. Occupation with small objects, such as reading, drawing, and writing, which require accommodative efforts, and convergence, will lead to a compression of the eye-balls by the external muscles, which move the eye, and to congestion of the interior of it. As the eyeball is supported at the sides by the muscles, which are compressing it, and as its anterior portion, the cornea, is very firm, the effect of the pressure must be especially felt at the posterior half, and an elongation takes place in this direction. The most dangerous time for the beginning of myopia is, therefore, between the fifth and sixteenth years, and it is only in very rare cases that it develops in persons older than twenty years.

Another dangerous period sets in at the age when the lens becomes harder and less elastic; greater accommodative efforts are required at this time in order to see. These will, especially in a highly myopic eye, where the more delicate tunics are greatly stretched by the expansion of the eyeball and less able to bear any new strain, lead to inflammatory exudations, and cause great impairment of vision.

The myopic eye differs from the normal one, not only in shape; the choroid and the retina are more or less stretched, and not only apt to be easily irritated, but the former will undergo atrophic changes, which are generally found in the neighborhood of the optic disc, and are known by the name of cone, crescent meniscus, or posterior staphyloma. This latter expression, which should only be used for a posterior bulging of the sclera is, however, most frequently used for these changes. It was formerly supposed that this white crescent, which surrounds usually the temporal half of the optic disc, was entirely due to atrophic changes of the choroid, but this is not the case. The choroid is firmly adherent to the optic nerve-sheath and by connecting fibres with the lamina cribrosa, and according to Paulson and Weiss, it is the dragging over of the nerve-sheath and disc that leads to the formation of a cone; later the choroid and retina become thin and intensely stretched, and atrophic changes, as well as changes in the pigmentary layer

take place near the disc and in the region of the macula lutea.

As the nutrition of the vitreous humor is principally derived from the choroid, irritation or inflammatory changes of the latter will soon lead to changes of the vitreous. In the beginning they are slight, and in the shape of minute opacities, and will cause the well known mouches volantes that near-sighted people complain so much about. But they are not serious, and they may also depend upon mere congestion of the inner structures of the eye. Later the vitreous becomes very thin by serous infiltration, and is often filled with dense opacities, the result of choroidal exudations. The greatest change, however, is found in the ciliary muscle. Jwanoff was the first to call attention to this fact. He pointed out that in the normal eye the ciliary muscle has two sets of fibres, the circular and the longitudinal ones, in about equal proportions, but that in myopic eyes a part of this muscle, namely the longitudinal fibres, were much more developed, and in hypermetropic eyes the circular ones.

It was supposed that, as in myopic eyes accommodative effects, causing an increase in the curvature of the lens were not called for, the circular fibres, which are especially concerned in this action, were not needed; but it was never sufficiently explained why the longitudinal fibres should be so much more abundant, when there was no work for them to do. Dr. Emmert, of Bern, has published, in a very able paper, his experiments about the mechanism of the accommodation of the human eye. He maintains that the arrangement of the different fibres of the muscle is such, that the circular ones, which are placed in the neighborhood of the suspensory ligament of the lens, will, by their contraction, draw the ciliary body toward the lens, and as they act like a sphincter, allow this organ, by releasing the suspensory ligament, to become more globular and powerful. The longitudinal fibres, which are interlaced with the former, will, by their action, draw the ciliary body, and with it the suspensory ligament of the lens toward their point of insertion, which is near the sclero-corneal junction. This must necessarily produce tension of the ligament, and as a result of this we get a return of the lens to its normal condition; we may even get a flattening of it, and with it a decrease of its refractive power. If an abnormal spasm of the circular fibres exists, the paralyzation of these by the use of atropia will give the longitudinal ones greater power by relieving them of the antagonistic action of the former, and the lens will become flatter. This is the reason why in myopic eyes the use of atropia diminishes the amount of the error of refraction; the lens becomes flatter, and it takes a weaker concave glass to focus the rays upon the retina.

This is exactly what the myope needs; the focal point of his dioptric apparatus is in front of the retina, and by diminishing the refractive power of the lens, its focal point is brought nearer to the macula lutea, and the person is enabled to see better. Prof. Knapp, Coccius and others have by actual measurement demonstrated, that the lens of myopes becomes flatter for distant vision than that of the emmetropic eye. As the traction of the longitudinal fibres is also felt posteriorly, where they are connected with the choroid, these efforts of very near-sighted people, where these fibres are very much developed, must exert an injurious effect on the posterior half of the eye. It is on this account that the vision for distant objects should be corrected as nearly as possible by proper glasses, which will do away with the efforts of the patient to

flatten the lens in the manner described. The two sets of fibres of the ciliary muscle are known as the circular ones, also called after its discoverer, the muscle of Müller; and the longitudinal ones, also called Brücke's muscle, or tensor choroideæ. The former acts like a sphincter, and is, like the circular fibres of the iris, supplied by the third or motor oculi nerve. The longitudinal fibres, like those of the dilator of the pupil, derive filaments from the sympathetic. Notwithstanding the denial of Dr. Ayers in his admirable paper on the physiology of the accommodation, published in the *N. Y. Medical Journal* a short time ago, and contrary to the general opinion, I believe that these two sets of muscular fibres must act as antagonists, just as the two sets of fibres of the iris. Each set will develop with the demands made upon it. In the hypermetropic eye, where a great curvature of the lens is constantly needed, the sphincter fibres become more abundant; in the myopic eye, where the lens is needed very flat, the longitudinal ones predominate to such an extent, that in highly myopic eyes, say for instance that of $\frac{1}{4}$, which would require accommodative efforts only for objects which are nearer to the eye than its far-point, that is three inches, an occurrence which seldom takes place, has hardly any circular fibres. If such an eye is not corrected by glasses, it is constantly trying to diminish the power of the lens; it is, therefore, like the hypermetropic eye, which constantly accommodates for near as well as for far objects, practically speaking, never in a state of rest, and therefore more liable to serious complications. This is particularly the case if any extra demand is made upon it, especially at that age when the lens has become hard and less elastic.

The most injurious effect of myopia, due to elongation of the eyeball and the traction of the longitudinal fibres, also called tensor choroidea, must be felt by the choroid, especially at its posterior fixed point, where the result will be a posterior staphyloma; later exudative choroiditis and disturbances of the vitreous humor show themselves; also detachment of the retina is probably due to this cause. The constant tension of the suspensory ligaments will naturally interfere with the nutrition of the lens itself, especially at that point where this is most difficult, namely, the posterior portion, and posterior polar cataract is the result. Even dislocation of the lens, spontaneous and traumatic, is more apt to occur in such eyes. The condition is, however, greatly modified if proper glasses have been used, especially if their use has begun early in life. The improved facility to see distant objects without effort will be of the greatest help to prevent a further increase of the myopia, and I have been struck by the fact, which has never been sufficiently emphasized, that persons who have been using proper glasses are, comparatively speaking, but rarely troubled by these serious complications of myopia. But on the other hand, people who have never used glasses, especially those of the less cultivated class, who unfortunately have such a great prejudice against the use of them, are the ones who not only suffer from some serious complications, but frequently lose their eyesight altogether. If I should succeed to-night in interesting you only in this particular point, I should consider myself richly paid for my trouble, as I know what a powerful influence your voice has with your patients, who probably never dream of any danger from this point, and who never come near a specialist until it is too late.

Before citing a few of the many cases collected during my connection with the Eye and Ear Infirmary and Bellevue Hospital out-door department, where we have

so much *more* opportunity of seeing just these cases than in private practice, in support of my assertion that the neglect to use glasses is constantly doing so much harm, I shall refer to an extensive clinical report of Dr. Schleich in Tuebingen. He observed 84 cases of serious complications among 578 myopic patients; of these, 12 were found among lawyers, physicians and teachers, 3 occurred in government officials, 6 among merchants, 5 among women of education, and 54 belonged to the lower, uneducated class; of these, 31 were males, and 23 females. Considering the relative infrequency of this affection among the lower classes, and the fact that they seldom use glasses, these figures are of the greatest importance. I shall not try your patience by the recital of the history of many cases, although I have collected as many as 40 of them of patients, who lost the vision of either one or both eyes, some entirely, others nearly so; all on account of myopia, which had never been treated, by glasses or otherwise. I have seen, however, upon the other hand, many cases of myopes, even of high degree, where glasses had been used constantly and early in life, and most of them had excellent vision in old age. Allow me to refer to this table. Those of the 1st class were almost entirely taken from cases which came to Dr. Derby's or my own class at the Infirmary; those of the 2d class were seen in private practice.

	Of 40 myopes 35 to 60 years old, who never used glasses.	Of 40 myopes, 35 to 60 years old, who always used glasses.
Males.....	17.....	37
Females.....	23.....	3
Best eye, visual power of	$\frac{2.0}{xx}$ 0.....	3
" " "	$\frac{2.0}{xxx}$ 1.....	10
" " "	$\frac{2.0}{x}$ 2.....	4
" " "	$\frac{2.0}{L}$ 4.....	10
" " "	$\frac{2.0}{Lxx}$ 8.....	2
" " "	$\frac{2.0}{CC}$ 5.....	5
less than	$\frac{2.0}{CC}$ 12.....	2
Loss of one eye.....	8.....	3
" both eyes.....	2.....	0
Posterior staphyloma.....	39.....	35
Vitreous opacities.....	13.....	5
Changes in choroid.....	22.....	2
" Macula lutea.....	4.....	1
Detachment of retina.....	6.....	0
Posterior polar cataract.....	4.....	1
Senile cataract.....	4.....	1
Dislocation of lens.....	2.....	0

CASE 1.—Mrs. L., 56 years old, born in Germany, married, has always been near-sighted, but has never used glasses. The left eye is almost useless; she sees only movement of hands, by ophthalmoscope myopia $\frac{1}{2}$ -with great changes of choroid, especially in region of macula lutea and atrophic changes of optic nerve. The right eye $\frac{1}{2}$. Vision $\frac{2.0}{Lxx}$; large posterior staphyloma. Complains about a black speck floating before the best eye. This is due to a moderately large vitreous opacity. Vitreous humor very fluid.

CASE 2.—Norah Leary, 35 years old, Irish, has been near-sighted as long as she can remember; has never used glasses. Moderately large posterior staphyloma on both eyes; a small spot of atrophy of choroid between optic nerve and macula lutea on right eye. V $\frac{2.0}{16}$ with = 16. Has had tender eyes (sensitive to light) with slight pain around eyes for two years. No specific history. Ordered atropine and coquilles.

CASE No. 9.—Chas. Schabechar, German, 53 years old; has always been near-sighted and lost the use of the right eye from complicated cataract seven years

ago. After kalsomining his rooms, a work to which he is not accustomed, his vision began to be dim, and the next morning, when he came to me, he could see very little with a peripheral portion of the retina; the rest of the retina was detached, and required the most energetic treatment to resume its function. His M is $\frac{1}{4}$ in this eye.

CASE 41.—Mr. C. Wells, editor, age 66, began to wear glasses when 15 years old; his first glass was a —10. Had to change glasses several times, but has been using a —6 for more than 20 years; his vision is $\frac{20}{200}$ with a —5; has slight granulating of the lids; uses his glasses every day from morning until night.

CASE 43.—Mr. Ch. B. Burt, 35 years of age: right eye myopia $\frac{1}{4}$ V=1; left eye myopia $\frac{1}{4}$ V= $\frac{20}{20}$. He has had weak eyes, but they were never sore, they are sensitive to light, and there is slight blepharadenitis. Has been using a —5 $\frac{1}{2}$ since his 17th year for both eyes. Applications of homatropine as well as of atropine did not diminish the amount of myopia. After complete rest of the eyes for several weeks, and the use of a hœurteloup and blue concave glasses, is able to attend to his business as before. Ascribes his trouble to reading and smoking in the evening.

Such is the difference in the results when the myopia is corrected in time or if it is neglected.

The circular fibres of the ciliary muscle are intimately connected with the iris, and if they, by the action of the longitudinal fibres, are drawn toward the periphery, they will likewise exert traction upon the iris and thus dilate the pupils. This will explain why myopes, who are constantly making efforts of this kind in order to see distant objects, have wider pupils than emmetropes, or especially hypermetropes, who seldom relax the circular fibres entirely, even in distant vision. On this account far-sighted, that is, hypermetropic eyes, which have to accommodate constantly by means of the circular fibres of the ciliary muscles, are often recognized by the smallness of their pupil.

On account of the size of the pupil, which admits more light than that of the normal eye, myopes suffer greatly in bright light, especially if this, on account of its composition, contains many irritating rays. This irritation is not only an inconvenience, but it is absolutely harmful, and will not only interfere with clear vision, but by causing irritation and congestion of the inner tunics of the eye, it will become a new factor in increasing the amount of myopia existing. The correction of this condition should therefore be a matter of great importance, especially in the earlier stages of myopia, when such patients are apt to complain about the dazzling and also painful effects of bright lights. Even congestion of the lids and the conjunctiva are by no means of rare occurrence at these stages. The following case is interesting in this respect: Mr. K., 25 years of age, is working in a very light office; he has suffered for several years from slight blepharadenitis; lachrymation, as well as a burning and a slight pain in the eyes has annoyed him frequently, especially on bright days, so that he is obliged to wet his eyes quite often. He does not care to go to the theatres, because the light in them gives him great pain. He has been using a concave glass of 9" focus for several years, and began to wear glasses at the age of 15. The strength of his first glass was one of 18" focus, which he gradually exchanged for stronger ones. His present glass, a —9, gives him almost perfect vision, but the smallest line of the test types appears not quite distinct. A very faintly tinted blue glass, held before his spectacles, does not only cause a very pleasant, cooling sensation, as he expresses it, but makes him see the small test-types

much clearer than before. Under atropine his myopia is reduced to $\frac{1}{10}$. I ordered him, therefore, a faintly tinted blue concave glass of only 10 inches focus, and a very mild astringent eye-lotion to use on his lids. This was in May, 1880. He has been using the glasses ever since; his lid trouble has entirely disappeared; he can do any amount of writing, and enjoys going to the theatre as much as anybody. On very dark days, however, he prefers to use perfectly white glasses. A faint tint of smoke added to the glasses, instead of blue, relieves the irritating effect of bright light a little, but does not improve his vision, and he greatly prefers the blue shade.

A near-sighted person has the advantage that he will see without any effort near objects, which are at or near the far-point of his eyes, because the rays emanating from these, will reach them in such a divergent direction that they are focused on or very near the retina. This is the reason why such a person can do very fine work for a long time without any fatigue and why such eyes are looked upon as very strong; but it is evident, that a myope must make efforts to see objects that are farther removed from his eyes. As the far-point is in intimate relation to the degree of near-sightedness and corresponds to the focal distance of the lens, required for the correction of the latter, that it lies at 4 inches from the eye, which requires a concave lens of 4 inches focus, or at 20 inches for an eye that is corrected by a —glass of 20 inches focus, it is easy to understand, that all objects beyond such distance are only indistinctly seen, and that the myope has to try constantly to improve his sight for such objects by bringing the longitudinal fibres of his ciliary muscle into play and try to flatten his lens as much as possible.

Long continued efforts in this direction result eventually in great pain and irritation of the eyes, which symptoms are generally known as asthenopia. The following case is one of this kind. Miss C., 21 years of age, born in the city, music teacher. She is slightly myopic, commenced to wear a —30 glass when 17 years of age, but has used them only for the distance. During last winter after copying and writing much music, her eyes became troublesome, and especially after playing the organ, when her notes were nearly 3 feet distant, then the left eye began to pain severely. She found likewise that her glasses did not give her the same good vision for the distance as before. Several weeks rest in the country benefited her only slightly. I examined her eyes under hyoscin, and found that her left eye required a —18, the right one a —20. I gave her these glasses for distant vision; but in order to read music at 36 inches, I prescribed, according to the well known rule, that rays for this distance are more divergent than those from an infinite distance, a —36 for the left and a —40 for the right eye. I gave these glasses, as well as those for the distance, a faint blue tint, ordered a general tonic and a stimulating eye-spirits, composed of: essence of rosemary 2 oz., essence of lavender and spir. vini gall. $\frac{1}{2}$ oz of each, to be used for bathing the lids, and she has been getting along very nicely ever since.

I should like to say here a few words of recommendation for the new mydriatic hyoscin, which, recommended by Edlefsen and Hirschberg, has been used by me repeatedly for more than a year. 1-500 of a grain of it will dilate the pupil and paralyze accommodation in 7 minutes; the effects disappear in about 2 or 3 days. For children not more than 1-1000 of part of a grain should be applied to the conjunctival sac, as it is apt to cause alarming constitutional symptoms, if

given in larger doses. In fact, I prefer for young patients the use of homatropine, which although not near as powerful, is a much safer preparation. The advantage which hyoscin has over atropine, is that it acts more promptly. The same quantity, 1-500 part of a grain of atropine, takes from 12 to 15 minutes to act and its effect will last 10 to 15 days; much longer than that of hyoscin, which will leave the pupil in a normal state in about 3 or 4 days and which is really annoying only for 24 or 36 hours.

Before closing my remarks on myopia, I must mention those cases that are known as false myopia or spasm of accommodation, where the trouble does not depend upon a change of the eyeball, but upon a disturbance of the refractive apparatus, caused by a spasm of the circular fibres of the ciliary muscle, whereby the lens is allowed to retain a greater curvature. In this condition of the lenticular apparatus the rays of objects in the infinite distance, which reach the eye in a parallel direction, are focussed in front of the retina, just as in real myopia, and such patients see also better in the distance by the aid of concave glasses. The causes of this trouble are great efforts of accommodation in young people, especially under unfavorable conditions. Such patients complain of poor vision for the distance; their eyes are congested and painful, especially when exposed to bright light. The ophthalmoscope or the use of a mydriatic, such as hyoscin or atropine, make the diagnosis easy. These are the only cases of myopia that can be cured, and the cure is easily accomplished by rest and by the use of atropine and plain blue glasses, which are known by the name of coquilles. These serve merely to moderate the amount of light entering the eye. In spasm of accommodation the pupil is usually narrow and the far-point lies further from the eye than that of real myopia.

In regard to the prevention of myopia, the dangers which we have to guard against are, in the first place, the condition of the sclera itself; second, the avoidance of compression of the eyeball by the external ocular muscles; and third, the avoidance of intraocular pressure, brought on by intense and long-continued accommodative efforts and fullness of the intraocular blood-vessels. In regard to the first indication, we must remember that the sclera is most apt to yield, and thus lead to changes of the eyeball between the age of six and sixteen, a time which unfortunately corresponds to school life, when the eyes are more taxed than at any other period of life. The danger is greater after debilitating disease, and children should not return to school for at least six weeks after they passed through one of the severer diseases of childhood. Those children in whom a hereditary predisposition to near-sightedness exists, should be very carefully watched. The second danger, compression of the eye by the external ocular muscles, is only to be feared when the child is occupied with small, near objects, which demand constant convergence. Such efforts will not only cause a certain amount of pressure of all the six external ocular muscles on the eyeball, but it will also interfere with the return flow of blood through the vena vorticiosa. Reading and writing should, therefore, not be continued for a long period at a time, because this compression will change the eyeball, especially if its sclera should not be very firm, temporarily at first, but, if it be continued for a long time and be frequently repeated, the change of shape will become permanent. Care should be taken to have good light and good print. The third factor, the avoidance of increased intraocular pressure, is likewise of great

importance. On this account tight collars, compressing the blood-vessels of the neck, a bending over of the head and remaining too long in the same position and studying before breakfast, are injurious. Long-continued accommodative efforts, and especially the occurrence of a spasm of the accommodation, are apt to bring on real myopia. Constipation and poor ventilation of the school-rooms will act in a similar way, and should be avoided; but out-door sports and practice of distant vision are to be encouraged.

These rules are not only necessary in order to prevent near-sightedness, but they are also of the greatest importance after myopia has once developed, in order to prevent its increase. But more energetic measures are called for if the development of this affection is accompanied by great irritability of the eyes, which becomes manifest by the sensation of heat and fullness in the eye, by pain in the region of the forehead or in the eyeball itself, by lachrymation, dread of light, and redness of the conjunctiva as well as of the lids. In these cases, which are known as progressive myopia, complete rest of the eyes is necessary; this may be brought about by the use of atropine, which is best suited for this purpose, because its effect is more lasting than that of any other mydriatic. The use of plain, moderately dark blue glasses is necessary as long as the effect of the atropine lasts. If such glasses are not used, it will be necessary to keep the patient in-doors during the atropine cure; but it is better for a myope to let him have as much out-door exercise as possible. Gymnastic exercises should be encouraged, in order to improve the general muscular tone of the system and improve circulation.

After the symptoms of irritation have disappeared, the amount of the existing myopia should be ascertained by means of test-glasses and the ophthalmoscope. If the degree of near-sightedness is small, glasses should be ordered for the distance only, and if there should be any signs of irritability of the eye, these lenses must be made of light-blue glass. If the myopia is of such a degree that the usual work of the patient lies farther away from the eye than the far-point of the latter, weaker concave glasses must be ordered for such work. If the patient should require a—16 for the distance, but has to deal with objects 30 inches from the eye, a—32 will probably be the best glass for him. Patients with a marked degree of myopia, say of $\frac{1}{8}$ down to $\frac{1}{4}$, will often get along best with one glass for all distances. In these cases the use of the glass should be constant and be begun as early in life as possible, say between the twelfth and twentieth year; the glasses should be rather a little weaker than too strong. Lenses having a light blue tint will in most cases be preferable, especially in younger persons, as the light passing through them is rendered less irritating, and gives them on this account better vision. These are the reasons why such glasses may help to prevent the progress of the myopia. In some persons an abnormal preponderance of the external recti muscles exists, which requires greater efforts of the internal recti at convergence, and results in marked asthenopic troubles. Many authors, especially A. V. Graefe and Prof. Arlt, of Vienna, look upon this as one of the most potent factors in the development of myopia. Correction of this difficulty by weak prismatic glasses, their base towards the nose, should not be neglected—in marked cases of this kind, which lead sometimes to rapidly-progressing myopia, division of the external recti may be called for. Dr. Derby has published some striking cases of this kind.

The greatest care is necessary in selecting glasses

for the higher degrees of myopia. If such patients come to us later in life, after the changes in the interior of the eye, which are peculiar to myopia have already fully developed, and strong glasses, which correct the myopia, are prescribed, the eyes will be called upon to accommodate, but as they have only very few circular ciliary fibres, these will not be able to accomplish the work, they will tire easily and thus lead to severe disturbances in the interior of the eye, which quite frequently result in choroidal disease, or detachment of the retina and thus do often irreparable injury. If such a patient be old and the lens hard and unelastic, it is best not to give glasses at all for reading or writing, as they would only task the already difficult act of accommodation. For the distance full correction of the higher degrees of myopia, in old people, should likewise be avoided; but weaker glasses, which will render the great effort to bring about a flattening of the lens, so to speak, easier, will generally do a great deal of good, and these should, by preference, be given a light blue tint. Such patients can only be partly relieved; they must make up their mind to go through life with a smaller amount of visual power. But this is their own fault: they waited too long, and therefore I have to emphasize, once more, the importance of the treatment of myopia during its earlier stages, in order to avoid those dreadful and incurable complications, which are so apt to develop in highly myopic eyes, and because eyes, that are only slightly myopic, are in old age even better adapted for work than emmetropic or hypermetropic ones; but those of high degree of near-sightedness are always more or less in danger of becoming blind. Such patients should avoid everything that might lead to congestion of the interior of the eye; long continued accommodative efforts, especially under unfavorable circumstances, exposure to very bright light, and great heat, lifting of heavy objects, remaining for any length of time in a stooping position, constipation, tight neckwear, and great emotional shocks, should be carefully guarded against. Younger persons, who are highly myopic, require different glasses for different distances.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK COUNTY MEDICAL SOCIETY, SEPT. 25, 1882.

The President, Dr. F. R. Sturgis, presided. The minutes of the previous meeting were read and approved. The report of Comitia Minora was presented and adopted.

Nominations for officers being next in order, the following gentlemen were nominated:

For President.—Dr. David Webster, nominated by Dr. Jacobi, and Dr. F. R. Sturgis nominated by Dr. Sexton. Dr. Sturgis declined renomination.

For Vice-President.—Dr. Andrew H. Smith, Dr. James L. Little, Dr. W. Gill Wylie.

For Secretary.—Dr. W. M. Carpenter.

For Ass't Secretary.—Dr. Charles H. Avery.

For Treasurer.—Dr. O. B. Douglas.

For Censors.—Drs. J. D. Bryant, F. R. Sturgis, W. R. Gillette, H. D. Conrad, Daniel Lewis, E. B. Bronson.

For Delegates to State Medical Society.—Drs. Wm. McLaury, S. Sexton, McLane Hamilton, Paul F. Munde, Joseph W. Howe, Andrew H. Smith, Beverly Robinson, C. S. Bull, Wm. Stevens, Frank P. Foster, Partridge, W. M. Carpenter, R. C. Brandeis, W.

Johnson, R. M. Fuller, Francis Wells, Wm. J. Morton, James L. Little, W. Gill Wylie, Goodwillie, T. S. Robinson, F. R. Sturgis, V. P. Gibney, Lockrow, Morrow, L. H. Sayre, Mittendorf, M. A. Pallen, E. C. Howard, R. C. M. Page, E. C. Seguin, F. H. Bosworth, Alexander Hadden, J. F. Warren, David Webster, C. L. Dana, M. J. Roberts, O. D. Pomeroy, W. T. Alexander, E. Herrick, G. B. Fowler, J. Ripley, A. G. Caille, J. I. P. Oberndorfer, Charles S. Fisher, Daniel Lewis, E. T. Ely, Gerster, A. E. McDonald.

After the nominations were closed Dr. Jacobi made a very pertinent speech to the effect that before delegates were elected they should promise to be present at the meeting of the State Society, as it was very important this year; especially that the County Society should be well represented.

Dr. Piffard suggested that each gentleman present who had nominated a candidate should see him personally and ascertain if he were willing to go as delegate.

The scientific paper of the evening, entitled

"MYOPIA AND THE NECESSITY OF ITS CORRECTION BY GLASSES,"

was then read by its author, Dr. W. F. Mittendorf, and discussed by Drs. David Webster and O. D. Pomeroy. This paper is published in full in another column.

The Society then adjourned.

MEDICAL NOTES AND NEWS.

Doctors Wanted.—We clip the following from the New York Herald:—TO THE EDITOR OF THE *Herald*: I know of nothing of which the community is so short as doctors. They are so few in number and the colleges so stiff about granting diplomas to candidates that the people are likely to perish for want of physicians. Some attribute this to the long and expensive curriculum and the extreme severity of the preliminary (arts) and professional examinations. A few medical schools, I am informed actually require the students to be able to read English intelligently and write their names legibly. This is rather hard, and I think quite unnecessary and unfair. What business has a medical man with mere reading or writing? His attainments are of a far higher order. He aspires to the study of anatomy, physiology, chemistry and toxicology, obstetrics and gynaecology, surgery, materia medica and physic, not to the mere mastering of vulgar letters and calligraphy. In view, then, of the scarcity of doctors I would suggest to every man who has a son that he does not know what to do with to make him a physician. It matters not whether he has ever studied or worked before, whether he has been grocer, tinker, tailor, even "loafer," he will speedily master the elements of the profession, obtain his diploma if he can pay for it, and go forth to make a rapid fortune. A nice, easy life is that of doctoring. There is no hard work connected with it—at least none worth talking about—and money will pour into the coffers forthwith. If the newly made M. D. rise not quickly to wealth and eminence surely it will not be the fault of his adviser.

DOCTOR PATT.

OCTOBER 5, 1882.

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COUNTY DELEGATES AND THE NEW YORK CODE.

"To thine ownself be true;
And it must follow, as the night the day,
Thou canst not then be false to any man."

In our issue of August 26th, 1882, we published an editorial entitled "A Timely but Mysterious Warning," which was incited by an anonymous letter published in the *Medical Record* of August 12th.

This letter embodied a warning to the Medical societies throughout the State of New York not to allow themselves to be propelled into undue action, with respect to endorsing or condemning the code of ethics approved by the State Medical Society.

We suggested that such a warning would have additional weight if published over the name of the author. The spirit of the editorial may have conveyed the idea that we were inclined to make light of, if not to laugh at, in a quiet way, a warning which, if rightly interpreted, seemed at such a time, to say the least, superfluous. In addition, we intimated that we were somewhat in the dark regarding the ulterior meaning of this warning.

In response to this editorial the author of the warning, in the *Medical Record* of October 7th, 1882, discloses his identity and more clearly states the meaning of his former letter, as follows:—

First.—The abrogation of the Code of Ethics was a surprise to nobody. It was the subject of deliberation, through the course of a year, of a committee of five of the best known medical men of the State of New York, who had been appointed for that purpose.

Second.—It was generally understood that final action on the question would be taken in the session of 1882, and it was taken in a special meeting held on the second day of the proceedings.

Third.—The abrogation of the code was not the work of some specialists, hungry for consultations and greedy for more money.

Fourth.—That imputation ought never to be made by those who claim an honorable position in medical literature. The tone of their remarks resembles the questionable tactics of some ward primaries more than it does the decorous discussions of scientific publications.

Fifth.—It is a grave mistake on the part of some County Medical Societies to tie the hands of their delegates, and to force them to vote one way or the other. That is what they have done when they instructed their delegates for 1883 to vote for reversing the action of the meeting of 1882, no matter what they might hear and learn in the discussions proposed for the next meeting.

Sixth.—The only dignified action on the part of the County Societies is to send their delegates with *but one binding instruction viz., To attend the meeting in February next; to hear, and to speak, and then to vote according to their convictions, such as they will be after the several opinions and reasons will have been exchanged.*

We will reply to these candid statements with equal candor, though in doing so we must take exception to some of the propositions advanced, on the ground that they are based only on opinion, and should not be stated as facts. In accordance, therefore, with their author's statement that the first principle of this country is free speech, we shall state some propositions based equally on opinion, but on opinion which we firmly believe represents to-day the convictions of the majority of the better element of the profession of New York State.

First.—The abrogation of the code of ethics surprised and aroused the indignation even of many of those who had been instrumental in securing the appointment of the Committee of Five.

Second.—That this most radical step would not have been taken had the opinion of the profession of New York State been well and fully represented at the meeting of the State Medical Society.

Third.—That, as a matter of fact, the abrogation of the code was mainly brought about by the labors of specialists, though we would not impute to these honorable gentlemen motives other than honorable.

Fourth.—That a delegate, according to Webster, is "one deputed to act for another," and that other, in the case of the delegates from the county societies, is the society they represent. That it inevitably follows that a delegate should vote in accordance with the will of the society he represents. That this is neither undignified, nor does it indicate moral or intellectual servitude, but on the contrary is entirely in consonance with abstract justice and a high sense of personal honor.

Fifth.—That moreover, as regards the question under discussion, viz., the rescinding of the action of

the State Society in abolishing the code, it is one which has met with such wide discussion already, which has excited so much controversy, been so thoroughly ventilated, is withal so simple, that it is not presumptuous to suppose that every member of the profession from one end of New York State to the other is sufficiently familiar with it to have formed his convictions, and if these are not in harmony with those of his society, he is not obliged to represent his society as a delegate.

Sixth.—That it is to be earnestly hoped that every county medical society will be intelligently represented at the meeting of the State Society in February next, and that each delegate may have an unshaken conviction of what his duty is, and remember that "duty well done for duty's sake is ever its own reward."

THE NEW YORK POLYCLINIC.

Who can watch without mingled wonderment and admiration the facility with which the American mind carries into execution ideas which seem hardly to have been conceived. As Minerva sprang full-grown from the head of Jupiter this new school seems to have bounded full-grown into the arena of medical teaching, embodying principles of teaching which all conservers of the medical weal and advocates of medical progress have been for a long time repeating, were lacking in our system of medical instruction, and whose exposition was vital to its perfecting. Not even the most hopeful of these laborers for better medical instruction, we think, anticipated that we should so soon have in our midst a post-graduate school and a polyclinic.

The announcement of the New York Polyclinic will be found in another column. From this it will be learned that it is modelled after the well-known *Poliklinik* at Vienna, that the course of study will be eminently practical, that didactic lectures will form no part of the plan of instruction, but that clinical medicine and surgery will be taught by dividing the class into sections and giving each one opportunities of leisurely and thoroughly studying the clinical features of each case. These and many other equally excellent means of clinical instruction are promised in the announcement. What seemed a few months ago but the mistiest of dreams has been speedily realized. The many members of the profession who went abroad the past spring with no intimation of what these few months would bring forth in the way of medical instruction, and who have come home deploring the imperfection of our system of medical teaching as compared with that in operation abroad, must rub their eyes and wonder if they have not been affected with the lethargic sleep of old Rip Van Winkle, when they see these new schools in operation.

Perhaps we enthuse too much over the consummation of these long-sought methods of medical teaching. We are not disposed, however, to damn with faint praise what we believe to be the most important step yet taken in medical instruction in this country.

And now let us remind our readers of what they are all probably aware, that in no city in the world is the field for this kind of instruction richer than in New York; that, now that its resources are to be opened up to them, they should not delay embracing the opportunities for securing a portion of the wealth of medical knowledge thus afforded them. The men who are identified with this new school are able, energetic, practical, competent instructors. It remains with

those of the profession who are conscious of their deficiencies in medical knowledge, and more especially of their skill in applying it, whether this most important departure in medical teaching shall receive the appreciation it deserves.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, OCTOBER 5th, 1882.

The President, Dr. Fordyce Barker, presided. The minutes of the previous meeting were read and approved. After the transaction of routine business the President welcomed the members after the summer adjournment.

The paper for the evening entitled

"CASES BEARING ON DIAGNOSIS AND LOCALIZATION OF CEREBRAL DISEASES AND THEIR DIFFICULTIES,"

was read by its author, Dr. E. G. Janeway. The following is a brief *resumé* of Dr. Janeway's paper:

Mr. President and Fellows of the Academy: I had, at first, thought of analyzing a number of cases and presenting them to you, but on looking over the recent works on this subject I found them so thorough, so exhaustive, as to permit of my adding little to what has been better said there. I therefore thought it better to draw attention to some difficulties of diagnosis of this class of diseases, and to difficulties of diagnosis in general.

The marked cerebral symptoms which accompany typhus fever render it difficult to diagnose from cerebro-spinal fever. The most important aid we have in distinguishing them is by the study of causation, by investigating the surroundings and previous history of the patient. After ten or twelve days the differential diagnosis is easier.

Acute ulcerative endocarditis is also difficult to distinguish from typhus. (A case illustrating this point was cited by Dr. Janeway, viz., that of a patient who had been in his service in the hospital.)

Typhoid fever rarely poses under the form of cerebral disease, since it is more easily diagnosed on account of the abdominal symptoms, the tympanites, and diarrhoea.

Malarial difficulties also are not often mistaken for cerebral trouble, though the converse of this statement is not equally true, since cerebral disease is not unfrequently taken for malarial trouble.

Pneumonia and pleurisy are often taken for cerebral disease, especially in children and in those cases, not infrequent, in which such symptoms as muscular soreness, and stiffness of the muscles at the back of the neck assume an undue prominence.

Bright's disease, especially that which results in formation of the contracted kidney, is frequently accompanied by cerebral hæmorrhage and thus may be mistaken for primary cerebral disease. (Typical cases illustrating this were cited.)

Dr. Janeway in conclusion took up the interesting subject of the localization of cerebral disease and commented on the experiments which had been made to establish this theory, citing a number of cases which tended to prove that cerebral disease could be located.

In the discussion which followed Drs. E. C. Seguin, J. C. Dalton, H. Knapp, and Dr. Birdsall took part.

Dr. Seguin said: the paper covers so extensive a field it is difficult to discuss briefly. The diagnosis of

general diseases was a department of practice in which specialists were not as a rule well versed. The question of the diagnosis of general diseases with cerebral symptoms from cerebral diseases was an important one. The group of symptoms described under cerebral hyperæmia were made up of cases which were subjects of lithiasis, and those in which the eye was at fault.

Dr. J. C. Dalton said such papers as tell us about the difficulties of diagnosis are what we want at the present time.

When the doctrine of central localization first was discussed, great anticipations were felt as to what it would lead to. With the remarkable corroborations it received from pathology and experimental physiology it seemed as if a new era in the study of the brain had begun and that we could map out the brain as the phrenologist did. But the difficulties in connection with this subject must not be ignored. There are many cases in which lesions of the brain have not been accompanied by symptoms, and in which symptoms have existed without corresponding lesions.

When you cut out a portion of the motor tract from the brain of a dog, the dog is hemiplegic, but he does not remain so. We can account for this restoration of function in many ways. First we may suppose that the portion of the brain left would after a time take up the function of the part removed.

Dr. Dalton in this connection gave a very entertaining description of the views of a distinguished physiologist who explained the apparent lapse in visual power, which a dog suffers on removing the visual centre for one eye by the ingenious theory that the animal does see but he does not know what he sees and therefore takes no notice of it.

Dr. Knapp said the one fact he wished to call attention to was that the appearance known as choked disc could not be much utilized in the localization of cerebral disease.

Dr. Janeway closed the discussion after which the society adjourned.

LECTURES.

CLINICAL REMARKS ON IRRITABILITY OF BLADDER—INGROWING NAIL—MULTIPLE WENS—OBSTINATE HEMORRHAGE AFTER TEETH EXTRACTION.

BY

HENRY B. SANDS, M.D.

Professor of the Practice of Surgery, College of Physicians and Surgeons New York, Consulting Surgeon New York Hospital, Attending Surgeon Roosevelt Hospital, etc.

CASE I.—Child, æt. 14 months. Has frequent micturition and passes water in bed almost all the time. This child suffers from irritability of the bladder, the organ expelling its contents before it is fully distended. The act of micturition is unaccompanied by pain. The child does not pull at the prepuce and no blood is passed. Therefore it is not probable that he is afflicted with stone. Symptoms like those caused by stone may be due to irritable bladder depending on some other cause. On examining the genital organs we may find that something is wrong with the front of the penis. We are apt to find a condition called phimosis, in which the preputial canal is so small that the foreskin cannot be retracted over the glans.

Examination shows that such is not exactly the case with this child. The morbid condition which is present here I have little doubt may be the cause of the irritable bladder. Phimosis itself is common enough and often causes us irritability. It is a fashionable mistake at the present day to perform circumcision when it is not altogether necessary. I have known children to get well without operation, as they grew larger, the prepuce becoming less contracted; but this is not the case in severe phimosis, in which one is quite unable to retract foreskin. In the present case I discover that the external surface of the glans penis can be only partially exposed. I am unable to draw the prepuce back sufficiently to uncover the corona glandis and the sulcus behind it; not because the prepuce is too small but because it is held by the presence of adhesions between it and the glans. This is a morbid condition resulting from balanitis. The smegma or secretions accumulating in the interval between the glans penis and prepuce. This sets up inflammation which results in the formation of adhesions which finally become very firm so that it may be impossible to separate the adherent parts except by the application of the knife. These adhesions form very slowly. The firmness of the adhesion seems to be retarded by the accumulation of moisture of this epidermal matter or smegma. When children are young it is easy to rupture these adhesions, then, having cleared the penis of such accumulations of cheesy matter as may be there situated the subsequent treatment is very simple and consists in washing the parts often enough to keep them clean so as to prevent a recurrence of the inflammation. The penis is deformed and its functions are somewhat embarrassed if these adhesions are allowed to remain; and, in many cases, they are the cause of just such irritation as this child has experienced.

CASE II.—Female, has ingrowing nail of the great toe. The edge affected is, as usual, the outer one. The nail is deeply buried in the flesh which rises up in the form of exuberant granulations. Various operations have been devised for the cure of this trouble. One is simply to take off a triangular piece of nail comprising the edge buried in the soft parts. The base of the triangle is at the anterior edge of the nail. The apex is backward, beyond the point at which the nail is buried in the granulation tissue. In some cases this operation will suffice. A second operation consists in cutting off the granulation tissue and leaving the nail. I have never done this and have but little faith in the operation. The irritation here is purely mechanical. It is caused by the presence of the sharp edge of the nail in the flesh just like the irritation caused by the presence of a piece of glass, wood or iron. The indication is, to remove the portion of the nail which has caused the disease. In this case I would take away a piece $\frac{1}{4}$ or $\frac{1}{3}$ of an inch in width. The incision should be carried to a point somewhat behind the posterior margin of the nail. Where there are exuberant granulations above the level of the nail I think it proper to take some of the soft parts away. Do not sacrifice integument however for this is never replaced by anything that is an efficient substitute. A cicatrix takes the place of the integument and is always more or less tender. I prefer to take away merely the offending edge of the nail. A strip of adhesive plaster, iodoform dressing or nitrate of lead can be applied to the matrix after the operation.

CASE III.—Female, has a number of swellings on the scalp. These are wens. Generally, there is a thick sac which is imbedded in loose connective tissue. In consequence of this loose connection between the

sac and the surrounding parts, these tumors are very readily removed. Multiple wens are not uncommon. This woman is made uncomfortable by the presence of these tumors, and desires to have them removed. I have known of instances in which erysipelas has followed multiple operations upon the scalp, and I prefer, in the present case, to remove one at a time.

The operation is of the simplest kind. A bistoury should be taken and thrust through the skin and growth so as to leave the upper semi-circumference divided and the lower part undivided. Then, with two stout forceps, the skin can be drawn aside by one and the growth seized by the other. Unless the sac is unusually thick or adherent it comes away by evulsion, no dissection being necessary. The scalp does not need to be shaved for this operation nor are sutures necessary. I allow the parts to fall together and let the blood form the dressing. I prefer to apply a bandage, because if exposed to the air, inflammation may occur.

CASE IV.—Male, had eight teeth extracted nearly a week ago and is still suffering from hemorrhage.

An examination of the sockets of the teeth shows that the operation has been skillfully done. I can discover no fracture of the jaw, and no extensive ulceration of the gum. Ordinarily, bleeding from the socket of a tooth is arrested in the course of an hour. In this case it has lasted five days. The loss of blood has not been very great, and yet the patient says the bleeding has been continuous. The occurrence of persistent bleeding after the extraction of teeth does not always depend upon the same cause. Sometimes, after the extraction of teeth, as in fracture of the jaw, an artery of some size may be injured, but ordinarily the cause is found to be a tendency on the part of the patient to bleed whenever wounded. There is some evidence that this man is a "bleeder." He had a hemorrhage from slight cause in England about eight years ago, lasting for a week. When he cuts himself the bleeding lasts for a considerable time. In some of these cases life is threatened, or even destroyed, where the bleeding occurs as the result of operative interference. I see the sockets of two teeth which are in a bleeding state. One of these is that of the left lateral incisor. The place where it has bled is marked by the presence of a plug or coagulum. There has also been bleeding from the sockets of the first or second molar.

Treatment.—I should suggest plugging of the sockets of the teeth with a piece of cotton impregnated with the perchloride or persulphate of iron. If this fails to stop the bleeding, I should recommend the application of the actual cautery. A case of this sort recalls to mind the fact that persons in whom this tendency exists should not be subjected to surgical operations. I read recently of a death which took place in a bleeder in consequence of a slight cutting operation. There are instances in which, although death has not occurred, obstinate hemorrhage has taken place, lasting a long time and nearly exhausting the patient. The hemorrhage depends upon the extreme tenuity of the blood vessels, in consequence of which they are deprived partly or wholly of their contractile power, upon the presence of which, to some extent, the arrest of bleeding depends.

ABOUT BOOKS.

The Physician Himself and what he should add to the strictly Scientific. By D. W. Cathell, M. D., late Professor Pathology College of Physicians and Surgeons, Baltimore. The Second Edition, enlarged, re-arranged, and divided into chapters. Published by Cushings & Bailey, Baltimore, Md. Price \$1.25.

When the first edition of this little work was published, we alluded to the style and merits of it in detail. The publication of a second edition so soon shows that it does not lack the appreciation its well-timed hints deserve.

Nitro-glycerine as a remedy for Angina Pectoris. By William Murrell, M. D., M. R. C. P., Lecturer on Materia Medica and Therapeutics at the Westminster Hospital. Published by George S. Davis, Detroit, Michigan. 1882.

The object of this book is stated to be "to give directions for the administration of nitro-glycerine as a remedy for angina pectoris, the principal points being illustrated by reference to cases that have been under the author's care"—some of these having already been published in the *Lancet* in 1879.

Some interesting facts regarding the discovery, the manufacture and the chemical nature of nitro-glycerine are first given. The result of investigations showing the action of the drug on animals is next detailed. A history of its physiological effects follows. The influence of nitrite of amyl and nitro-glycerine on the pulse is compared by illustrations of sphygmographic tracings.

The author then states that he has employed nitro-glycerine in treatment of many cases of angina pectoris and with marked success, and proceeds to give typical cases. He closes with the statement of certain conclusions regarding the dose and mode of administering nitro-glycerine. The one per cent. alcoholic solution, which is non-explosive, is the one preferred. As to the dose, it is impossible to lay down any rule, half a minim of the solution named being a safe dose to begin with, and dose repeated every three hours, with an extra dose at time of attack. It is claimed that angina pectoris is not only relieved but cured.

A Manual of Hypodermatic Medication—The Treatment of Diseases by the Hypodermatic Method. By Roberts Bartholow, M.A., M.D., LL.D., Prof. Materia Medica and Therapeutics in the Jefferson Medical College of Philadelphia. Fourth edition revised and enlarged. Published by J. B. Lippincott & Co., Philadelphia, 1882.

The profession are already familiar with this book as it has been presented to them in former editions.

This latest edition has had one hundred and fourteen pages of new matter incorporated with it, and much of the former text has been rewritten.

The author has conformed to the opinion of those who desire that medical nomenclature should be technically correct, though the effort to make it so must necessarily, for a long time, sacrifice clearness and lead to confusion. He has accordingly substituted the word hypodermatic for hypodermic.

To those who have not read this book of Dr. Bartholow's we may say that it is a most comprehensive manual. It gives first a history of subcutaneous medication; then details the method of injecting, the syringe to be used, the nature of the solution, etc.

Next are given the remedies administered by the hypodermatic method, the local and systemic effects of subcutaneous injections, and the actions and uses of the remedial agents employed hypodermatically. It is scientific, reliable, and complete, and must furnish a most valuable guide to those wishing enlightenment in this most important method of medication.

Essentials of Vaccination—a compilation of facts relating to vaccine inoculation and its influence in the prevention of small-pox. By W. A. Hardaway, M. D., Prof. of Diseases of the Skin in the Post graduate faculty of the Missouri Medical College, St. Louis. Published by Jansen McClurg & Co., Chicago, 1882. Price \$1.00.

This book embraces a compilation of many interesting facts regarding vaccination. To those who are unfamiliar with the history of vaccination, its nature and method, it will furnish the lacking information.

After giving a history of vaccination, the author discusses "Variola in animals," "Nature of vaccinia," "Vaccinia in the human subject," "Abnormal modifications and complications of vaccinia," "Re-vaccination," "Merits of different kinds of vaccine virus," "Methods of obtaining a strong vaccine virus," "The operation of vaccinating," and closes with an "Examination of the objections to vaccination."

ORIGINAL ARTICLES.

DR. HAMILTON'S METHOD OF TREATING FRACTURES OF THE SHAFT OF THE FEMUR IN ADULTS.*

Being a supplement to the paper on Fractures of the Femur in children contained in a late number of the GAZETTE.

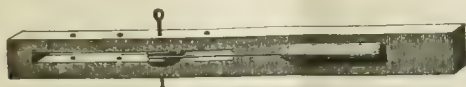
BY

DR. FRANK H. HAMILTON.

My usual practice now, in a private house, is to remove the foot-board and lengthen the bed by boards laid longitudinally, and projecting one or two feet beyond the bottom rail. This furnishes a firm support for the mattress. Sometimes, of course, it will be found necessary to lengthen the bed. No hole is made in the flooring of the bed or of the mattress, to provide for fecal evacuations.

Having prepared the bed for the reception of the patient, and elevated its lower end about four inches by placing blocks underneath the foot-posts, the following additional preparations should be made before we proceed to reduce the fracture and dress the limb:—

There should be provided a piece of board of the requisite length and breadth, furnished with a slot to receive the pulley, and called the "standard," a small

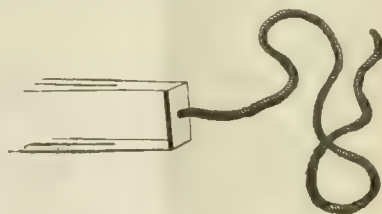


iron rod, a pulley, a yard of rope, and a vessel or bag to receive the weights. The slot should have sufficient length, and the standard should be perforated in the direction of its breadth at short distances, to enable

*The wood-cut illustrating the dressing complete, is taken from the Paris ed. now in press, and is not the same as that found in the last (sixth) American Edition. The latter having been rejected as being indistinct.

the surgeon to elevate or depress the pulley, as may be required. In case a metallic pulley cannot be obtained, a spool will answer as a tolerable substitute. We now employ generally, at Bellevue, an iron upright rod, with a pulley affixed, and which is made fast to the iron frame of the bedstead with two iron clamps; secured in place by screws. They may be found at the shops of any of our instrument makers. A pulley, mounted with a screw, may be sometimes substituted, the screw being attached to the foot-board.

A thin block or piece of board, called the "foot-piece," is to be provided, perforated in the centre to receive the cord, and of sufficient length to prevent the adhesive strips or "extension bands" from pressing



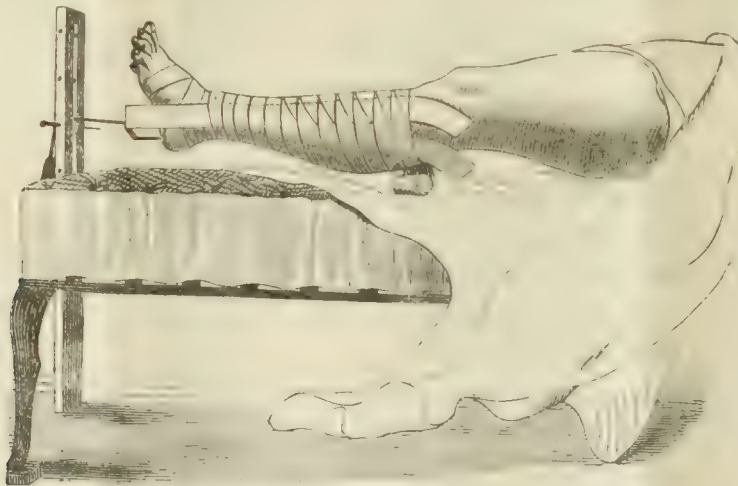
upon the malleoli. An average size for the foot-piece in the case of an adult is about three inches and three-quarters in length, by two and a half in breadth.

The adhesive plaster may be cut in the shape shown in the illustration; five and a half inches wide



in the centre, and two and a half inches wide at the narrowest point, and gradually widening again toward each extremity to four inches; the narrower portions being slit down two-thirds of their length. For an adult we generally require a strip of about four feet and eight inches in length, namely, sixteen inches for the central and widest portion, and twenty inches for each extremity. The shoulders of the central portion are cut, as represented, in order that when folded upon the foot-piece and upon itself it may reinforce the lateral bands at their weakest points.

The lateral or side splints may be made of thick pieces of gum shellac cloth, of stout leather cut and moulded to the limb, or of thin pieces of board covered with cotton cloth and stuffed on the sides next to the skin with cotton batting to fit all the inequalities of the limb. Of these several materials gum-shellac cloth is much the best. It is thin, light, firm, and after immersion in hot water can be sufficiently moulded to the contour of the thigh. The cotton cloth must be stitched over the splints like a sac, but left open at the ends until the padding is properly adjusted. Loose cotton batting always becomes displaced. Four splints are generally required; one for the anterior surface, extending from the groin below the anterior inferior spinous process of the ilium to within half an inch of the patella; one for the posterior surface, extending from the tuberosity of the ischium to a point six or eight inches below the knee; one for the side, extending from near the perineum to the inner condyle; and one for the outside extending from above the trochanter major to the outer condyle. These splints ought to encircle the limb almost completely, only leaving an interval of from half an inch to an inch between each of the adjacent splints. The outer and inner splints may be extended below the knee when the fracture is low down; but in that case they must be carefully fitted to the irregularities of the condyles. The posterior splint is the most important of them all. It should be wider and much longer than either of the other splints, and it must be fitted with great accuracy to the back of the thigh, ham, and upper part of the leg. It is important also to cover this with a sac of cotton cloth so that it may be stitched to the centre of the bands, which are to enclose all the splints. If this is not done, it is very liable to become displaced.



A long side-splint must now be prepared, long enough to extend from about four inches below the axilla to five inches below the heel; four and a half inches wide, by half an inch in thickness, and provided with a cross-piece at the lower end, two feet long by three inches wide and half an inch thick. The purpose of this splint is not to make extension; but to prevent the femur from becoming bent outwards at the seat of fracture; which is accomplished more certainly by this splint than by the short splints, inasmuch as it keeps the whole body, including the upper part of the femur, in a straight line. Its purpose is also to prevent eversion of the foot, which purpose is never accomplished effectively by junks or by any other method I have yet seen adopted. It is to be employed in all fractures of the thigh, including fractures of the neck. The inner

surface of this long splint must be padded through its whole length, and thus fitted accurately to the sides of the body and limb.

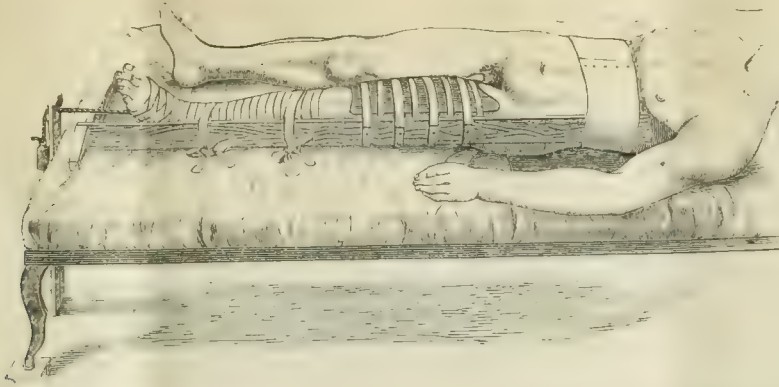
Supplied with rollers, several additional strips of bandage, and cotton batting, we are now ready to reduce and dress the fracture.

The patient being placed in position upon the bed, one assistant seizes the limb by the knee, and a second by the foot, drawing upon it firmly and steadily; while the surgeon lays the extremities of the extension strip upon each side of the leg, with the centre, containing the foot-piece and the rope, about one inch below the sole of the foot. With a muslin roller, inclosing the limb from near the metatarsophalangeal articulation to the tuberosity of the tibia, the adhesive strips are held in place. As a rule, and especially in the case of women, and of persons of a delicate lax fibre, it is well to lay against the tendo Achillis, and over the instep, a little cotton-batting before applying the roller. In some cases I am in the habit of applying a thin sheet of cotton-wadding over the whole surface of the limb. Any excess of the bands at the upper end is disposed of by turning the ends down, and inclosing them in a few additional turns of the roller. As soon as the application of the adhesive strip and roller is completed, the weight may be adjusted, and extension applied. The amount of extension required for adults will vary from eighteen to twenty-three pounds. In a large proportion of cases, twenty or twenty-one pounds will be borne without complaint; and the ability of the patient to tolerate the extension, alone limits the amount. Occasionally, even a few pounds, when first applied, causes pain in the ligaments about the knee-joint, but in a few hours the amount may be increased. It is better to apply eighteen or twenty pounds at once

if it can be borne. Lifting the knee slightly by a pad placed underneath will often relieve the pain caused by the extension.

Extension being effected, and the patient already resting upon the posterior coaptation splint, the three other side-splints are applied, and the whole four secured in place by the four or six transverse bands already described as attached to the posterior splint; the bands being tied over the front splint firmly.

It remains only to lay the long splint beside the body, and to secure it in place by separate strips of bandage. Three strips for the leg, one broad strip for the pelvis, and one for the chest are all that are required. The leg strips may be drawn pretty firmly to prevent all outward rotation of the limb. The pelvic band also ought to be tight to insure the constant



contact of the pelvis with the long splint; but the thoracic band may be rather loose, as its function in this respect is not so important. Both of the latter bands should be sewed to the cover of the long splints to prevent their being displaced. In the drawing (Fig. 194); similar strips inclose the thigh, but I often omit them as being unnecessary; indeed, it is better sometimes to omit them, when the fracture is high up, lest they should hold the lower fragment out, when the pelvis was not firmly secured to the long splint, in which case the upper fragment might incline in the opposite direction, causing thus a bowing out at the point of fracture.

The patient's pillow must rest under the head alone, in order that the whole weight of the body, from the shoulders down, may be employed as a means of counter-extension. Omission of this important precept will sometimes permit the body of the patient to descend toward the foot of the bed, even where the foot of the bedstead is raised.

During the first four or five weeks the patient should not be allowed to rise or sit up in bed. It is an error to suppose that such restraint is irksome. In my experience, no patient has ever complained of it; and I have no doubt that such movements increase the danger of non-union; a misfortune which has never happened when a patient has been under my treatment from the first to the last. I have, however, seen several cases of non-union, or of delayed union, in the practice of other surgeons, which I attributed to the patient having been permitted to rise in bed. For this reason, also, I reject all modes of treatment which are intended to permit these motions of the body, such as Burges's fracture-bed.

In order to evacuate the bowels, the patient may draw up the sound limb, when a properly constructed bed-pan is easily placed under the nates. This occasions no disturbance to the fracture.

From the time of the first dressing the patient should be seen daily, and the co-aptation splints loosened or tightened from time to time, as may seem necessary. To open the limb, and even to remove temporarily all the coaptation splints, except the posterior one, is harmless, and it is often a source of comfort to the patient. Ordinarily it is not necessary or prudent to disturb the extension until the union is completed. The usual time required for consolidation in the case of an adult is from six to eight weeks; but if the bone feels pretty firm at the end of four weeks, the extension may be a little relaxed. When at length the patient is permitted to leave his bed, a pair of crutches is indispensable; and during the following two months but little weight should be borne upon the limb.

SELECTIONS FROM JOURNALS.

THE EFFECT OF DISTENSION OF THE RECTUM ON THE OTHER PELVIC VISCERA. By J. G. Garston, M. D.

Some years ago, when investigating the result of distension of the rectum in relation to the examination of the abdominal cavity by means of rectal palpation, my attention was attracted to the displacements of the anatomical structures contained in the pelvic cavity produced during the operation. At that time, I only carried my investigations out in the male subject; since then, I have made some further researches on the female, and find that as important practical results are yielded by the latter as by the former. I may, perhaps, be permitted briefly to recapitulate the *modus operandi* of the investigations, and the results found in the male by distension of the rectum, though those have already been published.* In each case, the rectum was distended with an India rubber bag, similar in shape to those commonly used for the distension of the os uteri. The bag was introduced into the gut in a collapsed condition, and then distended with water until it measured about 24 centimètres in circumference, or, roughly, until it was of the circumference of the closed fist. Previously to placing the bag in the rectum, I ascertained that 300 grammes of water were required to distend it to this circumference. The bladder was also filled with about 240 grammes of water. The subject was then frozen and afterwards bisected longitudinally and vertically. The section showed that the bladder was entirely raised up out of the pelvic cavity, and along with it the peritoneum also, both in front and behind; so that the bladder occupied much the same position that it does in the new-born child. On comparing this section with a normal one, it was found that the distance of the internal orifice of the urethra behind the symphysis pubis remained equal, so that the displacement of the bladder evidently took place in a plane parallel to that of the symphysis. The dislocation of the bladder was produced, not by raising of the perineum, but by stretching of the urethra in its so-called fixed parts. The prostate was stretched to nearly double its ordinary length, and was flattened. The membranous portion of the urethra was not quite so much stretched, but was considerably longer than usual. The position of the peritoneum in front of the bladder is expressly noteworthy. As a rule, when the bladder is filled to the same extent that it was in our case, the peritoneum

* *Edinburgh Medical Journal*, October, 1878, and *Archiv für Anat. und Physiologie*, November, 1878.

is only elevated above the symphysis pubis a few millimètres; but in the section there was, between the upper border of the symphysis pubis and the peritoneum, a clear space of 4 centimètres—a space which would have admitted of the extraction from the bladder of a very large stone by the suprapubic method, without injury to the peritoneum. The results obtained in this section were confirmed by subsequent observations of a similar kind on other subjects, and in some cases the distance between the symphysis pubis and the peritoneum was greater, being as much as 6 centimètres in one subject, where the bladder was even filled with a less quantity of water (200 grammes). By varying the quantity of water injected into the bladder and rectum, it was found that the internal orifice of the urethra was not altered as to its distance behind the symphysis, but its distance from the plane of the conjungata vera varied according to the stage of distension of the rectum. The depth of the peritoneal pouch behind the bladder is always diminished by distension of the rectum.

In the female, the investigations I have been able to make hitherto have, in some respects, not been so complete as they were in the male, but are sufficient to indicate what are the main changes in the relation of parts.

By various measurements on the dead subject, and from frozen sections made by various German anatomists, I have been able to satisfy myself that the highest point of the fundus uteri usually lies about 4.5-5 centimètres below the line of the conjungata vera. For practical purposes, the position of the fundus may be given in relation to the symphysis pubis instead of the conjungata vera. The most convenient method is to suppose the subject in a horizontal position, with an incision in the middle line extending to the symphysis pubis through the abdominal wall. Measuring from the level of the skin of the abdominal wall immediately above the upper border of the symphysis, the top of the fundus uteri is found to lie, in a direction downwards and backwards behind the symphysis, on an average at a distance of 11-12 centimètres from the point above indicated. On distending the rectum by means of an India rubber bag filled with 360 grammes of water, the uterus was raised to within two centimètres of the lower end of the abdominal section; in other words, it was raised and pushed forwards to the level of the symphysis. As the bag was being filled, the fundus was observed to rise gradually upwards and forwards. In this subject, the bladder was empty.

In another subject, of which the bladder contained a small quantity of water, the distance of the fundus from the level of the symphysis was 11.5 centimètres when the rectum was empty; and, on filling the bag with 300 grammes of water, the distance was decreased to seven centimètres. The uterus was felt to be quite lax when raised by the distended rectum, and could be moved freely, thus showing that distension of the rectum does not interfere with its mobility. Besides these, I have made several observations, all of which have confirmed the results already narrated; and I have likewise demonstrated the effects of the rectal distension to several gynæcologists.

These observations show, I think, that, in the female as well as in the male, distension of the rectum might be used with advantage for placing the uterus within easier reach in cases where operation is resorted to on that organ, or on the ovaries, which are naturally drawn up along with it.

Professor Trendelenburg of Rostock has, I under-

stand employed distension of the rectum in the male with success in a case of suprapubic lithotomy; as far as I know, however, it has never been utilized in the female.—*British Medical Journal*.

A NOTE ON THE TREATMENT OF LOCOMOTOR ATAXY BY PRECISE NERVE-VIBRATION.—By J. MORTIMER GRANVILLE, M.D.

I do not think the evidence collected, up to this point, is sufficient to justify the assertion, that locomotor ataxy can be certainly cured by nerve-vibration; but the large measure of success I have recently obtained in dealing with some very advanced cases of this truly terrible disease, seems to render it incumbent upon me to place the facts before the profession. The cases I have had have all been clearly marked, with entire absence of patellar tendon-reflex, and with the characteristic impairment, in some instances amounting to almost complete loss, of the power of co-ordination. It is not my intention to report these cases at present, as I am anxious to extend the area of the observation, both as regards the number of cases and their duration, before committing myself to final judgment. Meanwhile, there are certain clinical facts which may be helpful to others, and ought, therefore, to be communicated. I will try to state them as tersely as possible.

1. In every instance, I find exaggerated reflex irritability on application of the percussor to the periphery. For example, when it is applied over the anterior tibial nerve, the foot is drawn forcibly up, which never happens in the case of a healthy subject. In some instances, the irritability is so great that the legs and feet may be turned or drawn in any direction at pleasure, by vibrating the appropriate branches of the nerves supplying them. No effect is produced by percussing the muscles: the effect follows only precise vibration of the nerves.

2. This reflex irritability, or excitability, seems to me to be the real hindrance to the walking; the loss of sensation, which is incident to the malady, being of comparatively secondary importance as regards the disability for locomotion. It is almost invariably confined to the nerves supplying the extensors. I have not in any instance met with more than a slight tendency to cramp, in the flexors, and that rarely.

3. By persisting in the vibration of the irritable nerves, their excitability becomes exhausted; and, in proportion as this happens, they obey the mandate of the will, and voluntary movements, in short, locomotive acts, are possible. Not unfrequently, some debility of the nerve-power and depression of energy in the centres follow immediately upon the exhaustion of their irritability; so that, for a few hours, or it may be days, the patient complains of stiffness, and, although he may have lost the jerky feeling in his limbs, he cannot move them more readily. They are heavy and powerless. This, however, quickly passes away, and the case is found to have more decided progress. The walking is easier and steadier, and control, generally, more direct and precise. At this stage, not earlier, it may be advantageous to percuss over the spines of the vertebræ, with the view of vibrating the nerve-centres. I do not think it is easy, or in many cases possible, to excite the centres except through the afferent nerves; but after the reflex irritability has been reduced, it then often happens that vibrations, which could not at first be propagated along the motor nerves, can be sent from the centres by percussion immediately, or as

nearly as possible, over the latter. I believe that it will be found that the mechanical vibrations excited in a nerve by percussion, invariably pass in the direction of its normal activity—in the sensory branch, towards the centre; in the motor, towards the periphery. There often seems to be a block, as it were, in the course of a nerve, whether motor or sensory, and, while this lasts, the impulse or depression is diverted, sometimes producing very curious results under vibration by percussion. When the block is broken down by mechanical vibration, the wave again passes in the normal direction. Practically, I do not find much amiss with the sensory nerves. The motor chiefly are at fault.

4. I have collected almost, though perhaps not quite, enough evidence to show that the syphilitic form of locomotor ataxy, or that which undoubtedly follows syphilitic disease, is not a localized, but a local affection. It is a specific inflammatory extension from the penis along the sheaths of the nerves to the proximate centre, and thence by particular fibres to other parts of the cord. The loss of sexual power which occurs, and which is rapidly followed by the indications of deficient nutritive action in the organs of generation, is the immediate consequence of an interruption, more or less considerable, in the nervous connections, consequent on the affection of the nerve-sheaths. The impairment of control over the bladder and the sphincters, causing either diarrhoea or constipation, is contingent on the local progress of the disease, which may generally be traced by the anatomical and physiological communications. It is intensely interesting to work out the details of a case in this class clinically; and no two cases, in my experience, have been alike, although as a rule they have surface-features of typical resemblance. For example, there is nearly always something wrong with one of the ulnar nerves, not as an accident of disseminated sclerosis, but as a specific extension along particular fibres. I am convinced that these cases of syphilitic ataxy ought to be studied apart, and treated as distinct, from the mass of ataxic disease. The two maladies have little, in anything, in common beyond the name; and that is, as regards both, I think, a misnomer. Moreover, the sensory fault is by no means the primary one, as generally supposed.

5. The sclerosis which occurs in the cord in the syphilitic disease, I believe, to be simply inflammatory thickening of a specific character. I do not think we need talk of "gummata" or "disseminated sclerosis." The malady consists in a direct extension of the local disease along the sheaths of particular nervous tracts. Syphilis is, of course, one of the blood-diseases; but I doubt whether syphilitic "ataxy" falls into that category. The interval which occurs between the healing of a chancre and the appearance of ataxic symptoms may be great; but, if we inquire carefully into the history of cases, we find that there have throughout been local symptoms—very slight it may be—of local nerve-disturbance. Nerve-vibration, unquestionably, does much for these cases; and among other effects which it produces, and for which it is well to provide, is that, in the course of the treatment, it every now and again revivifies the syphilitic virus, and thus at once renders it possible, and necessary, to treat the malady *de novo*, even in cases of very long standing, where there has been no thought of active syphilitic poison for years. Whether the mechanical vibration of the nerves with their thickened sheaths throws off particles of poisonous exudation which find their way into the current of the blood, as in the breaking down of an

It seems possible that the nerve-fibres, which have been mechanically blocked by the exudative processes of the specific disease may be, as it were, shaken loose from their entanglement, and thus become again vibratile. Perhaps it is in the course of this breaking up of the "block" *débris* are thrown into the circulation. However the revival of the original specific disease may be explained, it undoubtedly every now and again occurs.

I have thus jotted down briefly, and in no formal sequence, the leading facts which I desire to place on record, and to which I think the attention of the profession ought to be directed. One word only, in conclusion; nerve-vibration by percussion is undoubtedly a most useful adjunct to the ordinary treatment of many maladies, and of especial value in the diagnostic study of disease. It will be monstrous if this method be degraded to the level of a "cure," by placing percussors in the hands of patients, and allowing them to use them for themselves. Great harm will be done in some cases, in others there will be disappointment, and nerve vibration will be discredited. It is an agency for professional use exclusively; and against its employment by laymen, whether alone or under medical advice, I must most earnestly protest.—*Brit. Med. Jour.*

FORMULARY AND POINTS IN PRACTICE.

The following are useful expectorant mixtures in bronchitis:

℞ Carb. of ammon.	3 i
Fl. ext. of squills.....	} aa 3 j
Fl. ext. of senega.....	
Paregoric	℥ iss
Water.....	℥ i
Syr. of tolu	℥ v

M. Dose from three to four teaspoonfuls as may be required.

℞ Muriate of ammonia.....	ii 3
Ext. liquorice pulv.....	3 i
Mucilage of gum arabic.....	} aa 3 iij
Water	

M. Dose. A tablespoonful every two or three hours.

℞ Iodide of potassium.....	3 iiss
Syrup of tolu.....	
Glycerine	aa 3 ii
Sulph. morphia.....	gr. j

M. Dose. A tablespoonful once in four or six hours.

Wine of antimony.....	
Fl. ext. senega.....	
Sweet spirits nitre	aa 3 i

M. Dose. One to two teaspoonfuls as required.

℞ Syrup of ipecac.....	
Syrup of squills.....	
Paregoric	
Sweet spirits of nitre.....	aa 3 i

M. Dose. From one to three teaspoonfuls as required.

FOR WASHING OUT THE CAVITY OF PLEURAL
ABSCESSSES.

- R Liq. iodinii co..... i 3
 Aquæ..... 3 vj

M. For injection.

old cicatrix which has entangled the virus of rabies, I can only conjecture.

- R Chlorate of potash..... 3 i—3 iss
 Water..... Oj

M. Inject warm.

- R Salicylic acid.....
 Borax..... aa 3 i
 Water..... Oj

M. For washing out the cavity.

- R Permanganate of potash..... grs. xx
 Water..... Oj

M. To wash out cavity of abscess.

These injections should be practiced with antiseptic precautions.

ASTRINGENT IN PULMONARY HEMORRHAGE.

- R Acidi gallici..... 3 ii
 Acid. sulph. aromat..... 3 i
 Glycerini..... 3 i
 Aquæ..... q. s. ad 3 vj

M. Sig. Teaspoonful doses.

TO DISGUISE THE TASTE OF CASTOR OIL.

- R Olei ricini..... 3 2-4

Mix with a teacupful of well salted and peppered beef tea.

IN DYSENTERY WHEN THERE ARE SCYBALA IN THE
RECTUM. Also where AN APERIENT WITH A SED-
ATIVE IS INDICATED.

- R Mucilag. tragacanthæ..... 3 ii
 Aquæ cinnamomi..... 3 iii
 Olei ricini..... 3 xii
 Tinct. rhei.....
 Syr. aurantii..... āā 3 vi
 Tinc. opii..... min. xxx

M Sig—one-eighth part every three hours.

LAXATIVE FOR GOUTY AND RHEUMATIC SUBJECTS.

- R Pulv rhei.....
 Sodæ bicarbonat..... aa gr. xx.
 Infus. rhei..... 3 i

Make a draught to be taken early in the morning with two or three tablespoonfuls of water twice or thrice a week.

IN DYSPEPSIA WITH NAUSEA, CONSTIPATION AND A
DEPOSIT OF URATES IN THE URINE.

- R Ammon. carbonat..... gr. xxxiv
 Fellis bovini purificat..... gr. xxxvi

Make a mass, divide into twelve pills, silver them, and order one to be taken three hours after each of the principal meals.

WHERE THE LARGE INTESTINE IS TORPID AND THERE
IS DEFICIENCY OF BILE.

- R Jalapae resinæ..... gr. vi
 Fellis bovini purificat..... gr. xxiv
 Olei carui..... min. x
 Pil. assafoetidæ Co..... gr. xviii

Make a mass, divide into twelve pills, and order two to be taken every night, two hours after supper.

THE SELF-LIMITED DURATION OF PULMON-
ARY PHTHISIS.—*Read in the Section of Medicine
at the Annual Meeting of the British Medical Associa-
tion in Worcester, August 1882.*—BY AUSTIN FLINT,
M.D., LL.D.,

My object in this paper is to show that pulmonary phthisis may have a self-limited duration; that, in a certain proportion of cases, this disease ends favorably, irrespective of any appreciable extrinsic agencies, recovery taking place, provided the nature and extent of the local lesions be not such as to render them either irreparable or innocuous. If the doctrine of self-limitation as applied to phthisis not be entirely new, it has at all events, received as yet very little consideration in medical literature and in medical practice. If the doctrine in this application be true, it has important pathological and practical bearings, to some of which I shall briefly advert.

How is self-limitation to be proved as applied to phthisis or to any other disease? Facts pertaining to morbid anatomy and to therapeutics may render the application of the doctrine probable; but, evidently, positive and complete proof can only be afforded by a collection of cases in which the disease pursued its course without active interference in the way of treatment, either medicinal or hygienic, and without notable changes in habits of life, or in any of the conditions under which the patients were situated when the disease became developed. For obvious reasons these requirements for absolute proof are not easily obtained in cases of a disease like pulmonary phthisis. Yet cases involving these requirements occasionally come under medical observation. The hopeful mental state which generally accompanies phthisis sometimes leads patients to trust altogether to nature for restoration to health, and to continue their usual manner of living without any alteration. Some patients do this from a conviction that they have not a malady of sufficient consequence to claim attention, beyond, perhaps, palliative remedies; and some from circumstances which render it difficult to do otherwise. Again, there are phthisical patients who do nothing in the way of either therapeutics or hygiene from a thorough scepticism as to the advantage of doing anything.

In 1858, I had collected a considerable number of histories of cases of phthisis, recorded during the preceding twenty years of medical practice, and I was led to examine the collection for those cases in which there had been an arrest of the disease. Twenty-four cases were in this category. The histories of these twenty-four cases were analyzed with reference to points of agreement in the management; I assumed that in the points of agreement must lie the means by which the disease had been arrested, provided these points of agreement were not equally common in other cases in which the disease was not arrested. A striking result of this analytical study was, that in a few cases no appreciable influences, either of medication, diet, or regimen, had been brought to bear on the disease; the patients took no active remedies, and continued unchanged the same habits of living as before the development of the disease. It seems a logical inference that in these cases the disease was not arrested, but that the recovery was owing to an intrinsic tendency thereto. An abridged account of the histories of these twenty-four cases was embraced in a report published in the *American Journal of Medical Sciences*, January 1858.

In 1863, I had accumulated additional cases. The number amounted to sixty-two. These cases were

studied analytically in the same way as those analyzed in 1858. In severe cases, no medicinal or hygienic measures of management were employed. The recovery in four of these cases was complete. In three cases good general health had been regained and maintained for a long period; some cough and expectoration remaining. An abstract of the histories of the sixty-two cases was published in the *Transactions of the New York Academy of Medicine* for the year 1863.

In 1875 were published, in a work entitled *Phthisis in a Series of Clinical Studies*, the results of an analysis of the histories of all the cases of phthisis which I had recorded during thirty-four years, the number being 670. Of these 670 cases forty-four ended in recovery. Details of the history of each of the forty-four cases are given in the work sufficiently to render evident the recovery and the correctness of the diagnosis. In addition to these forty-four cases, there were thirty-one cases in which the disease ceased to progress, and remaining non-progressive for at least several months, and in most instances for several years. In these thirty-one cases, the phthisical disease was considered as having ended, complete recovery not taking place in consequence of irreparable lesions. As cases for analytical study with reference to the agencies which may have caused the arrest of the disease, these thirty-one cases of non-progressive phthisis seemed hardly less valuable than the forty-four cases which ended in complete recovery. Adding together the two groups of cases, out of the 670 recorded histories of phthisis there were seventy-five in which the disease either ended in complete recovery or remained for a long period non-progressive.

Of the forty-four cases ending in recovery, in twenty-three there was no medicinal treatment to which arrest of the disease could be attributed. In several of the twenty-three cases there was no medicinal treatment; in the remainder of the cases, the treatment consisted of simple tonics, palliatives of cough, or remedies to meet some other symptomatic indications. Of the thirty-one cases of non-progression of the phthisical disease without complete recovery, in fifteen there was no medication by which it might be supposed the disease had been controlled, and in several no medicinal treatment whatever. The two groups of cases—namely, those ending in recovery, and those becoming non-progressive without recovery—thus furnished about an equal proportion of those in which medicinal treatment was either wanting, or in no degree curative, the proportion in the first group being twenty-three of forty-four, and in the second group fifteen of thirty-one. In respect of hygienic or non-medicinal treatment, in some cases of both groups there was no change whatever in habits of life or other circumstances. In other cases there were changes involving improved hygienic conditions, but in a considerable number the changes were such that a potential influence could not be attributed to them. It is probably correct to say that the changes may have favored the recovery or non-progression, but that they were inadequate to arrest the disease. In my work is introduced a condensed history of each of the seventy-five cases, which form the two groups now referred to.

A self-limited duration cannot be inferred from a single case, or from a very few cases, for this reason: the course and termination may have been affected by influences which are extrinsic, but not apparent. In order to obviate liability to error on this score, the number of cases must be sufficient to render it impossible, or vastly improbable, that in all such influences

could have been overlooked. It is needless to say that the cases from which the inference of self-limitation is drawn must have been carefully observed and honestly recorded. Another requirement is essential—namely, there must be no room for distrusting the accuracy of the diagnosis. Assuming competency for observation and veracity, the diagnosis in each of the seventy-five cases is attested by the recorded histories, and it will be admitted that the number of cases is sufficiently large for the exclusion of error on the score of unrecognized extrinsic influences. The number of cases might be increased by the addition of those which have come under observation since 1875. This seems to me needless with a view to strengthen the conclusion respecting self-limitation. I therefore submit, as substantiated by the clinical facts which I have cited, the following facts—Pulmonary phthisis, in a certain proportion of cases, has a self-limited duration, the disease ceasing to exist after more or less progress of the local affection, all symptoms referable to the lungs disappearing, and recovery, as regards the general health, being complete. The disease is also self-limited in a certain proportion of cases in which lesions remain, giving rise to more or less of cough and expectoration, the persistence of these lesions not being incompatible with good general health and long duration of life.

It is an interesting fact that self-limitation is exemplified in the majority of the fatal cases of phthisis. As is well-known, the disease, as a rule, advances not by a continuous progress, but by a series of successive invasions, separated by variable intervals. After each invasion, or, as it has been termed, tuberculous eruption, there is a temporary self-limitation of the disease. I will not venture on a discussion of the question whether this fact be sufficiently explained by the statement that each eruption of tubercles for a time exhausts the tuberculous cachexia, or whether the fact be owing to the production of successive broods of the bacilli tuberculæ. It suffices to state the clinical fact. The fact suggests a capital object in the treatment, namely, prevention of a renewed invasion. The continuous advancement of the disease, as an exception to the rule, is the pathological feature of the so-called "galloping" consumption, or phthisis florida.

In the cases ending favorably, which have been referred to as furnishing proof of a self-limited duration, the diagnostic symptoms and physical signs were so well marked, as to leave no room for doubt as to the existence of phthisis. From cases which have come under my observation, I have been led to believe that not very unfrequently phthisis ends by self-limitation without having advanced far enough for the diagnosis to be considered as positive. A patient has had for some time a slight cough, either dry or with a scanty expectoration; there has been some loss in weight, and the body heat is somewhat raised, with, perhaps, spitting of blood. These symptoms, taken in connection with the age of the patient, and, it may be, grounds for suspecting a congenital predisposition, point to a tuberculous affection. But examinations of the chest in such a case may fail to reveal distinct physical signs. Very likely the problem, as regards the physical diagnosis, is to determine whether at the summit of the chest on the right side there are abnormal signs, or only the normal points of disparity between the two sides. There may be found only a subcrepitant *râle*, or slight pleuritic rubbing, or an interrupted respiratory murmur at the summit on one side, without conclusive evidence of tuberculous solidification. Under these

circumstances, the physician either commits his judgment to a diagnosis of incipient phthisis, or, as is more probable, he reserves an opinion for further developments. After a short time all the pulmonary and general symptoms disappear.

Now, if incipient phthisis have been diagnosed, the physician concludes that the diagnosis was erroneous. He feels obliged so to conclude, in consequence of the common belief that phthisis does not thus commence and end from self-limitation. But it is highly probable that the diagnosis was correct. Phthisis existed and ended in its incipency. It would be proper enough to distinguish these as cases of abortive phthisis. If I mistake not, all medical observers of much experience will admit that the foregoing sketch represents a class of cases not extremely rare. That they are not very rare is a fair inference from the frequency with which the traces of an old abortive phthisical affection are found in bodies dead with other diseases than phthisis.

A topic of practical importance is the bearing of self-limitation on the prognosis in individual cases of phthisis. The analytical study of my collection of cases showed that, as a rule, in those which ended favorably from an intrinsic tendency, the tuberculous affection was moderate or small in amount, but that there are exceptions to this rule. All observers of much experience will agree that the prognosis in case of phthisis is to be based more on the general condition of the patient than on the local symptoms and signs. To consider the elements of prognosis would be here out of place, even if time permitted. In general terms, the symptoms which denote tolerance of the phthisical affection are those which indicate a favorable intrinsic tendency, and, on the other hand, pyrexia, progressive loss of weight, frequency of the heart's action, and anorexia, point to an opposite tendency. Of special importance, in a practical view, is the bearing of the doctrine of self-limitation on the conclusions to be drawn from observations respecting the agency of therapeutic and hygienic measures in the treatment of cases of phthisis. How many and various are the remedies which have been supposed to have been sometimes curative in cases of this disease. Instances of their apparent curative power have been attested by honest observers. Making the fullest allowance for errors in diagnosis, I cannot doubt the credibility of more or less of these cases. Recovery has taken place under the employment of divers remedies; yet these remedies have so generally failed that, for the most part, they are now obsolete. The explanation of their apparent efficacy is to be found in the doctrine of self-limitation. The disease ended favorably, not from a specific influence of the remedies, but from an intrinsic tendency. This is not saying that the remedies may not have been, to a greater or less extent, serviceable. It may be laid down as a principle applicable to all diseases that, whenever experience has seemed to show success from treatment by a variety of remedies the efficient cause lies in the disease itself. This principle becomes more evident the more we become acquainted with the natural history of diseases. To accept this statement is not to disparage medical treatment. In certain cases of phthisis, as of other diseases, self-limitation is a factor co-working with curative measures, and, as perhaps may be added, sometimes effective in spite of measures which obstruct its operation. On the other hand, when this factor is feeble or wanting, curative treatment is not likely to prove of much avail. Evidently, in drawing conclusions respecting the curative effect

of remedies allowance is to be made for this factor. The extent of its cooperation, doubtless, differs much in different cases, in some being sufficient in itself, and in others either considerable, or moderate or slight,

The doctrine of self limitation bears on the climatic and other measures entering into the hygienic treatment of cases of phthisis with not less force than on the employment of drugs. As regards climate is there a practical theorem more perplexing to the practitioner of medicine than that of selecting the best resorts for phthisical patients, provided the selection be made on the basis of an impartial consideration of the reported results of climatic agencies in different situations? Underlying the exaggerations on the one hand, and on the other hand the depreciations of particular climatic resorts, founded on the different results in a few cases is the factor of unknown power, self-limitation, the existence of which is generally ignored. Here is the explanation, at least in part, of the discrepancies of testimony concerning the results of climatic influences in different situations.

The extent of influence attributable to self-limitation in phthisis is by no means as yet ascertained. There is ample room for observations bearing on this point of inquiry. Impressed with the importance of clinical studies having this direction I can not forbear the remark that they promise more in the way of practical utility than has hitherto been derived from the discussion of the histologico-pathological questions which, of late years, have engrossed so much attention and occupied so large a space in medical literature.—*Brit. Med. Jour.*

MEDICAL NOTES AND NEWS.

The seventh annual meeting of the American Academy of Medicine, will be held in the hall of the College of Physicians, 13th and Locust Streets, Philadelphia, on Thursday, October 26th, at 3 o'clock, p.m.

Amaurosis from Large Doses of Quinine.—One case is reported by Dr. Gruning in the person of a woman who took 80 grains in thirty hours, when she became convulsed and was subsequently blind and deaf. In 3 months her sight was restored completely, except that the concentric field of vision was limited. Michael records an almost exactly similar case; and Knapp reports three cases. In all of these cases vision was eventually restored to a perfect state, except that the concentric field of vision was permanently limited.—*Glasgow Med. Jour.* Aug. 1882.

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CHRONIC PLEURISY, WITH PHTHISIS.

A CLINICAL LECTURE.

BY

AUSTIN FLINT, M. D.,

Professor of the Principles and Practice of Medicine in Bellevue Hospital Medical College, New York.

The history of the case, as read, was: Patient is a man, 28 years of age and a native of Ireland. His father is dead and his mother is still living. He was admitted to the hospital on August 11. He was then suffering from palpitation of the heart and pain in the left side, which had troubled him more or less for the past year. He has been a hard drinker of whiskey for the past sixteen years, and he would often take it before breakfast in the morning. He easily becomes short of breath upon exercising. His urine is clear, acid, and has a specific gravity of 1012, and contains no albumen or phosphates. He has no elevation of temperature.

After having personally examined this case, the first gentleman in the section made the diagnosis of "hypertrophy and dilatation of the heart, with consolidation of the upper lobe of the right lung." The second diagnosed, "enlargement of the heart, with a mitral regurgitant murmur." The third, "consolida-

tion of the upper lobe of the right lung, with hypertrophy and slight dilatation of the heart." The fourth, "chronic pleurisy, with dilatation of the heart."

Gentlemen, I will now examine this man, and we will see which of the diagnoses of the several gentlemen will be confirmed by the physical signs. And first I notice that the apex beat is rather strong, and it is displaced to the left beyond the line of the nipple. Upon listening over the heart I can hear a soft murmur at the base, but this is probably a blood murmur, for the patient is anæmic, as you see. The chest upon the right side is contracted, and I notice when the patient breathes the left side expands considerably more than the right. I also find a circumscribed dullness on percussion just under the right clavicle, and over the same region I find the respiratory murmur feeble, and I am not sure but that the breathing is almost bronchial. Upon percussing over the posterior portion of the base of the right lung, I notice that the resonance is very much more diminished than upon the left, and it even approaches to flatness. When the patient was admitted to the hospital the dullness was more marked upon the right side than it is now, and it was at once supposed that there was fluid in the pleural cavity, but upon introducing a hypodermic needle for exploration no fluid was found. This was not positive evidence of the absence of fluid, because there might have been some effusion there which was too thick to pass through the needle, or the needle might not have entered at just the right place to meet the fluid, but upon ascertaining that the vocal resonance could be heard quite to the base of the chest upon the right side and quite distinctly too, there was in this positive evidence that there was not much if any pleuritic effusion. But yet the vocal resonance is somewhat greater upon the left than upon the right side showing that there is still some cause for this. This diminution of the vocal sounds may be caused by a deposit of lymph upon the pulmonary surface, and this was supposed to be the condition here brought about as a result of a chronic pleurisy, and that the lymph had been in a great measure absorbed. It was thought that he was now suffering from a remnant of the pleurisy, the lymph of which requires a considerable time to become absorbed. This is a most rational explanation.

But it is a question if this is not really a phthisical affection, for the existence of a chronic pleurisy is of itself suspicious of this.

The patient is broken down and anæmic and emaciated, and these with the cough and peculiar expectoration which he has, furnish strong grounds for the suspicion of phthisis, and phthisis of the fibroid variety. This diagnosis can not be made positively because the condition of the right lung is obscured by the effects of the pleurisy, and unless the change in the lung was considerable this would be

likely to prevent its detection. But against this diagnosis is the fact that he seems to have been improving latterly, or at least he thinks he has, and his cough and appetite are better and he takes more food and is not so pale as formerly, and all these are points which would do away considerably with the apprehension of phthisis. As the apex beat is misplaced to the left the suspicion may be entertained that when he had an effusion of fluid in the right pleural cavity the heart was thereby pushed over to the left and it has since remained there, held perhaps by adhesions of new fibrous tissue. I should feel some doubt in diagnosing an enlargement of the heart because of a simple misplacement of the apex beat. Well, gentlemen, this case has been one of interest and one for you to bear in mind in reference to showing him to you again a few weeks hence.

BRONCHOCELE

CLINICAL REMARKS.

BY

HENRY B. SANDS, M. D.

Professor of the Practice of Surgery in the College of Physicians and Surgeons, New York.

This is a case of bronchocele in a woman born in Würtemberg, and who came to this country twenty-five years ago. She is now fifty-six years of age, and she first noticed the appearance of a tumor in the neck about eighteen years ago. I want you to see this case to-day, for sometimes patients whom we let go away do not come back to us, and I do not like to lose the opportunity of showing you such an unusual case. This tumor, which you see on her neck, is about the size of a child's head, and to a practiced eye, it looks like a bronchocele. This is an enlargement of the thyroid body which appears in this situation, and is slow in growth, and shows a characteristic sign when the patient swallows. These growths are more common in Europe, and especially in some districts on the continent, than here. There are various tumors of the thyroid body, and there are two varieties of goitre. One is a solid tumor, composed of the normal glandular tissue, and is a simple hypertrophy of the gland itself. The second variety is a hollow tumor, and it contains a fluid, and it is therefore cystic in character. The size of these growths may vary from that of a lemon to that of a cocoanut, or even larger, and inasmuch as they are developed within the thyroid gland, and as this is attached to the trachea so the tumor will rise and fall with the larynx as it moves upward and downward in swallowing, and this is a characteristic sign of a thyroid tumor. This movement is not usually so marked in a tumor of this size as in a smaller one, but I dare say that if you watch closely as she swallows a drink of water you will see it here. Yes, you see there is a movement on swallowing, though it is not very marked. Yet I have no doubt that this is a bronchocele. I will call your attention to another feature of this tumor, and that is, that it consists of one principal mass more prominent on the left than on the right side of the trachea, and it is really developed from the left lobe of the thyroid body, and it is of even consistency throughout and firm to the feel, but not as hard as a scirrhus cancer. I do not think that this is a cyst of the thyroid body, but I am not sure about it. In some cases cysts are very difficult to diagnose, because they are filled with a fluid which makes the sac very tense.

It may be that this woman is annoyed by this swelling, or she may want to be rid of it because of the deformity it causes, or on account of the embarrassment to breathing which results from the pressure on the trachea, or on account of difficulty in swallowing from the same pressure on the œsophagus. But upon inquiry I find that she swallows with ease and she breathes without difficulty, and she only suffers from some cerebral disturbances such as pain in the head and vertigo. These symptoms might be caused by the pressure made upon the internal jugular veins. In some cases no inconvenience attends these swellings, but they are apt to press upon the trachea and so impede respiration, and upon the œsophagus so as to interfere with deglutition or they may entirely surround and constrict these organs. The trachea is in this woman thrust to the right of the median line, and it not infrequently results that the tracheal rings become changed in shape because of the pressure, and the cartilages may almost or entirely disappear. If this proves to be a solid tumor, in her case I would let it alone, because there is a good deal of risk attending the taking of it out. But we often do perform this operation in young ladies to improve the appearance or because of the symptoms produced by its pressure on the trachea. But in a woman of her age and circumstances, where it produces so little inconvenience I should hesitate to use the knife. But if the tumor were cystic in character the question of procuring relief by simple tapping would come up. And this measure has been known in many cases to be followed by a permanent cure. I will report the results of a more careful exploration of the contents of this tumor at some future time.

ORIGINAL ARTICLES.

ANALYSIS OF FIVE HUNDRED CASES OF LABOR AT FULL TERM OCCURRING IN PRIVATE PRACTICE, WITH REMARKS UPON THE MANAGEMENT OF LABOR.*

BY

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It is my intention to make my remarks of as practical a nature as possible, holding that it is simply our duty as brethren to communicate to each other any knowledge or experience we may have gained during years of practice.

At the same time let me disclaim at the outset any intention of enunciating new truths. These records are simply the result of my own experience. I find, as might be expected, that they agree in the main, in the sum of their conclusions, with the observations of former investigators in the same direction. Indeed, this field has been so thoroughly explored that we might almost think with truth that it contains no unexplored and hidden recesses in which unascertained truth may be found, none, at least, which the busy practitioner may hope to explore. Nowadays, observers are turning their attention almost exclusively to gynecological research, leaving the questions concerning the management of labor to the trained nurse from the schools or the junior practitioner.

This neglect may be carried too far, especially when

* Read before the East River Medical Association, October 10, 1882.

we think of the need of instruction in the minutiae of the practical management of labor, as often sadly apparent in the curricula of our best colleges. Many a student has graduated without ever having attended a case of confinement, and frequent and mortifying have been the blunders of our *own* earlier years of practice, as (if we are honest) we must all frankly admit.

Another and a very important consideration presents itself.

During the earlier years of the practice of the profession when, as we have stated, the need of full knowledge is most pressing, we find ourselves oftener called to the lying-in chamber than in our riper years. After a while the observant and thorough physician acquires the dexterity of manipulation and accuracy of diagnosis which he would have given much to possess, in some measure at least, at the outset of his professional life.

With this preamble concerning the importance of our subject, we will proceed with our analysis.

Instead however, of presenting a dry array of statistics, or of comparing our figures with those presented by others, we will endeavor to make our remarks as practical as possible by stating our results, with conclusions deduced therefrom, under each division of the subject as we proceed, not giving you simply a mass of figures as the end.

We shall first refer simply to the—

1. *Sex of child*.—There were of males, 265; females, 242, about evenly divided.

There were eight cases of twins—1, in 62.5—both female, 3; male and female, 3; both male, 2; 1 case of triplets, 2 male and 1 female.

2. *Age of mother*.—The youngest primipara was 16 years and 15 days old. She had given birth previously, at 14 years 8 months and 10 days, to a six months fœtus, which lived three hours.

The eldest primipara was 44 years of age. As often occurs, when we look for unusual difficulty, so in this case, the labor was exceptionally easy.

These are simply statistics which are more curious than of practical value.

3. *Hour at which labor is concluded*.—To arrive at this I divided the day into eight periods of three hours each. Between Noon and 3 P.M., there were born 65; 3 P.M. to 6 P.M., 60; 6 P.M. to 9 P.M., 43; 9 P.M. to midnight, 58; midnight to 3 A.M., 86; 3 A.M. to 6 A.M., 71; 6 A.M. to 9 A.M., 80; 9 A.M. to Noon 48.

As might be reasonably expected, these figures correspond with universal experience.

In other words, nearly one-third of all labors are included between 9 P.M. and 3 A.M. From 6 P.M. to 9 P.M. we find the lowest figure, 43—doubtless a wise provision of nature to allow the exhausted practitioner time to go home and get his dinner.

It is a singular fact that the proportion rises rapidly between 6 and 9 A.M., amounting to 80, or 1 in $6\frac{1}{4}$ cases, falling rapidly, however, to 48, or one in $10\frac{3}{8}$ cases between 9 A.M. and 12 noon, from which we might reasonably infer that it would not be safe to go home to breakfast until after 9 A.M.

To drop this view of the subject, I may say that I am not aware of any satisfactory explanation of the reason for these waves, so to speak, of uterine contractions.

It would conduce greatly to the satisfaction of the busy practitioner if some reliable indications *would* present themselves as to the advisability or safety of leaving his patient for a longer or shorter time, but so far as I am aware, little effort has been made to tabu-

late such rules. I have spoken of the waves of uterine effort. This is, of course, but a rude and uncertain guide. Generally speaking, a primipara may be seen safely at longer intervals than a multipara, but to this we have all seen exceptions. Another guide to some extent is found in the length of the intervals between the pains.

If these intervals tend to increase in respect of time, the patient meanwhile often becoming drowsy, and yet not losing strength, which is a very important point, as showing that the infrequency is not due to exhaustion, we are then warranted in inferring that the system is, as it were, gathering strength for a supreme effort.

We may leave such a case for awhile with a clear conscience.

After all, as I have said, there is no infallible guide—we must be guided by our experience. We may leave the most lingering case for a few minutes only; and yet on coming upstairs hear the shrill scream of the suddenly propelled unfortunate.

I leave this branch of my subject to you for discussion.

In an analysis of 1000 cases, published in the *Obstetric Journal* for April, 1879, by Atwater, the hour of birth is given as follows:

6 P. M. to 6 A. M., 523. One in 1.87 or 53.36 of all. 6 A. M. to 6 P. M., 457. One in 2.14 or 46.63 of all.

4. *Placenta Previa*.—This occurred four times, or once in 125 labors.

Case 1. Babe had been dead a long time—delivered by turning; 10th child; previous labors normal.

Case 2.—Delay in third stage; delivered by forceps; babe living; 5th child.

Case 3.—Shoulder presentation; still born; 11th child.

Case 4.—Vertex; still born; 3d child.

All pluriparæ.

Three deaths; one living child; mothers all recovered.

One case is of sufficient interest to report as illustrating gross malpractice, or rather ignorance, on the part of the medical attendant.

Mrs. F.—was seized with labor on the evening of November 10, 1871; 10th child. Being in very reduced circumstances she was obliged to apply to a medical college for attendance and her case was given to a third-year student. He saw her at eight o'clock in the evening and remained with her during the night. He made a correct diagnosis immediately upon his arrival, but instead of resorting to the usual treatment he applied ice and cold water to the abdomen and patiently awaited developments. The pains were very weak and inefficient and the woman continued to flow until about 2 A. M., when the friends becoming alarmed insisted upon the employment of counsel. I was sent for and found upon arrival the conditions as above stated—the patient rapidly becoming exsanguined, pulse scarcely perceptible and the physician still applying fresh instalments of ice to the naked and cold abdomen.

In answer to my inquiry as to the condition of the part he informed me that he had not examined her since eight o'clock of the evening before.

I found a partial implantation of the placenta, behind which the vertex could be felt presenting. Fearing to withdraw my hand I wrote with my left upon a slip of paper an order for my forceps, while I continued manipulation in the endeavor to excite uterine contractions. I was fortunately successful in arresting the hæmorrhage, and the forceps having arrived proceeded to deliver at once. The woman finally recovered after a tedious illness.

The attending student was exceedingly grateful for my assistance, and as he frankly acknowledged his indebtedness I improved the occasion and the case to give him some practical instruction in the obstetric art. This is, as I have previously stated, gross malpractice, and yet when we consider that it was the first case of labor which the medical attendant had ever seen, in connection with the fact that such cases, though rare, may occur at any time, the subject of their proper treatment is certainly important.

I have little or nothing to add to your stock of knowledge concerning the treatment.

We would remove the placenta from all its attachments if possible, endeavoring by any means to bring on efficient uterine contractions. The best agent for this purpose is without question the hand itself, but if time permits ergot is of value either by the mouth. Squibb's fl. ext., or better, a sol. of ergotine gr. j. to 3i. (water and glycerine equal parts) by hypodermic injection.

Deliver as soon as possible, either by bringing down the feet or if the head present by forceps. Afterward treat the case on general principles, that is, as one suffering from the effect of hæmorrhage. Recumbent posture absolutely; tonics; nourishing foods—milk one of the best.

I place but little reliance upon the tampon in placenta prævia.

Hæmorrhage may go on behind it unnoticed, and the patient become dangerously weakened.

Atwater's statistics give one in 119, all pluriparæ.

A few words with regard to the use of ergot in labor.

Dr. Johnson, of Washington, read a paper upon this subject at the recent meeting of the Gynæcological Society in which he is reported as follows:

"With reference to its physiological action there was an agreement that it produced in a uterus already in labor a persistent tonic contraction which finally became tetanic in character, and that this kind of contraction was diametrically opposed to the intermittent rhythmical contractions of the normal parturient uterus. The danger of long-continued pressure of the head of the child upon the soft parts of the mother was then referred to, and also the liability of producing still-births by the use of the drug to overcome uterine inertia. He did not believe in its efficacy in cases of retained portions of the membranes, and thought that the labor of their extraction was very much increased by its use. He believed that the human race would be better off without than with ergot in the management of labor; certainly it should never be given to a primipara."

I should certainly take exception to the last sentence. We should always be sure that, if I may so speak, the way is clear; that is, we must use it in labor only when we wish to produce a definite result: the speedy expulsion of the child; and when we are reasonably certain that nothing prevents this but the want of expulsive force. If it fails after having been fairly tried we must deliver as quickly as possible either by forceps or by turning if we would have a living child.

Duration of Labor.—

18 cases lasted 1 hour.

20 " " 2 "

23 " " 3 "

49 " " 4 "

58 " " 5 "

80 " " 6 "

52 " " 7 "

38 cases lasted 8 hours.

26 " " 9 "

21 " " 10 "

20 " " 11 "

18 " " 12 "

31 " " 12 to 18

27 " " 18 to 24

10 " " 36 hours.

8 " " 48 "

1 " " 63 "

1 " " 72 "

1 " " 100 "

Excluding the exceptional cases (over 36 hours) we find the average to be about 6 hours.

No. of Child.—

118 cases 1st child.

98 " 2d "

95 " 3d "

42 " 4th "

44 " 5th "

35 " 6th "

21 " 7th "

21 " 8th "

12 " 9th "

4 " 10th "

5 " 11th "

4 " 12th "

2 " 13th "

—
500

Almost one-third were primiparæ, while three-fifths of all births included the 1st, 2d and 3d child.

The obvious conclusions as to the smallness of families simply bear out current statistics, and though interesting, are yet too far-reaching for our discussion to-night.

The larger number of children were born of foreign parents. This has been frequently observed—but it is not a question of practical importance.

Nativity of Mother.

United States....263 Nova Scotia.....4

Ireland.....177 Wales.....3

Germany.....25 Newfoundland.....3

England.....16 East Indies.....2

Scotland.....4 France.....1

Canada.....1 West Indies.....1

The use of the Forceps.—38 cases, or one in 13½ (Atwater, gives one in 14½%). I find it exceedingly difficult to lay down any rules for the use of the forceps. I do not know of any. I would say the supreme indication is the effect of the labor upon the mother. I use them for her sake. If she is getting tired out, if the pains seem to be diminishing in force, and if besides the sounds of the foetal heart are evidently growing weaker, I should endeavor to deliver at once.

I will leave the discussion of this branch of my subject to the members of the Association.

I will only add that if we fail to deliver, notwithstanding the forceps are well applied, repeated attempts will only do harm to mother and child. We had better turn and deliver at once.

Prolapse of the Funis.—This has occurred in two cases. One of which is deserving of special record, as possibly suggesting the cause of the accident. The accepted treatment (placing the patient in the knee and elbow position and putting the cord *well up*, retaining it for a few moments during the absence of pain) was adopted in both cases with satisfactory results.

Mrs. S. was seized with pains June 18, 1878, at one P. M. The labor was tedious, the cord becoming prolapsed. Careful examination showed an unusually projecting sacral promontory. The cord was readily replaced as related, and the labor, which lasted 18 hours, terminated with forceps.

Again becoming pregnant, she was delivered August 8, 1880, by my friend, Dr. Hunter, during my absence from the city. He found the same deformity, and also met with the same accident of the prolapse of the funis. The labor was tedious, but the child and mother finally did well.

Becoming pregnant a third time, she fell in labor on October 2, (Monday of last week). She is suffering from advanced phthisis.

The pains were feeble from the first; the right shoulder and arm presenting.

Dr. Hunter was called in consultation with me, and succeeded with considerable difficulty, owing to the malformation of the pelvis, in turning and delivering the child.

Both mother and babe have done well.

This case is peculiarly interesting, as showing the possible relation between the prolapse of the funis, malposition of the child, and malformation of the pelvis.

I will just allude in closing, Mr. President, to the question of the proper food for the mother.

We are all coming, I think, to take a more rational view of this matter. Maternity is not a disease, but rather a natural physiological function.

We ought not to condemn a woman to a low diet simply on account of child-birth. I believe in feeding the mother well from the first.

With these hastily prepared notes, I leave the continued discussion of the management of labor to you.

ABOUT BOOKS.

Syphilis. By V. Cornil, Professor in the Faculty of Medicine of Paris, and Physician to the Lourcine Hospital. Translated, with notes and additions, by J. Henry C. Simes, M. D., Demonstrator of Pathological Histology in the University of Pennsylvania, Philadelphia, and J. William White, M. D., Lecturer on Venereal Diseases, and Demonstrator of Surgery in the University of Pennsylvania; with Eighty-four illustrations—Henry C. Lea's Son & Co., Philadelphia, 1882.

Perhaps we may be able to convey the most accurate conception of the scope of this work by some extracts from the author's preface in which he defines his aim in writing the book, and the point of view from which he has taken up the discussion of this most comprehensive subject, syphilis.

"These lectures, (the author states), "may be said to form an elementary manual of syphilis based upon a minute knowledge of histology. The most recent publications show that we are far from having a correct idea of the minute anatomy, or of the histological evolution of the various lesions of this disease, from the initial chancre to the gumma, including the mucous patch, the superficial and deep cutaneous syphilides, the osseous and visceral affections." I have endeavored to supply this deficiency not only by relating, arranging, and interpreting what has been written, but also and chiefly by adding some new observations." "It

is not my intention to publish a complete treatise, but only a series of lectures upon the essential points of syphilis, and particularly upon its general pathological anatomy." "I have especially endeavored to describe the histology and evolution of the several varieties of chancres, of cutaneous and mucous papules, pustules and tubercles, of cutaneous and visceral gummata, etc. The original portion of my investigations consists in the histological descriptions." The author adds the trite but specially pertinent truth that "pathological anatomy, as revealed at autopsies, is the fundamental basis of nosology and scientific medicine." The lectures which comprise the book were delivered during 1878 in the Lourcine Hospital. Their publication grew out of the desire of the author to take advantage of the material which was there at his disposal, by recording the opinions formed as a result of his extensive observations.

It will at once be asked what are these opinions? Do they differ from those held by our own and other authorities? Are they worthy of consideration? Let us answer these questions as briefly as we may, and in general terms—and here again we will let the writer speak for himself. On page 27 in summing up the discussion of the different theories of syphilis the following is stated, viz. "It seems probable that in the light of our present knowledge, syphilis can not be considered as *exclusively* a disease of either blood, lymphatics, or connective tissue, but rather as one involving commonly these and all other tissues, its symptoms in the early stages resulting from the absorption and proliferation of certain contagious immature cells or protoplasmic masses and in the latter or "tertiary" period, possibly from the accumulation at certain points of normal nutrient material and tissue-waste which the thickened or obliterated lymphatics are unable to remove."

Is not this an abandonment of the old mystical, improbable, inexplicable theories of syphilis and a proclamation of adherence to the entirely natural, rational, common sense, and strictly scientific theory which was first taught by Dr. Otis, of New York, and which, though combated so long, is now meeting with that more mature consideration which its incontrovertible argument has at length commanded, and as a consequence of this with the more general acceptance that has become inevitable from its careful study and application to the hitherto inexplicable phenomena of syphilis.

This tendency, which is everywhere noticeable throughout this book, to explain the various syphilitic phenomena by attributing them to the results of mechanical pressure, which is, in brief, substantially the theory so ably maintained by Dr. Otis, is the key note to a proper interpretation of the work, and will be to English readers its most interesting feature, as it is the most novel. Certainly our own authorities, with few exceptions, have failed in stating so fairly this theory. The remarkable substantiation of Dr. Otis's views, which the carefully recorded observations and deductions of so high an authority as Cornil form, would seem to indicate that these views have passed through the first stage of all new theories, viz., opposition, and are to meet with fairer consideration and more general acceptance.

As supporting the view we have taken of the work, we would like to quote many passages in full, but we must refer those interested to the book itself and be content with a simple statement of what has impressed us as the motive tendency uppermost in the mind of the author in its evolution. We cannot, however, refrain

from quoting a letter of Dr. Otis, bearing on the reinfection of syphilis, which the translators and editors have embodied in the work. It is as follows:

"Mr. Hutchinson, of London, who is chiefly responsible for the theory, or rather for the assumption, of a similarity in nature between syphilis and variola, scarlet fever, etc., distinctly claims this peculiarity of certain contagious diseases (*i. e.*, protection against reinfection) as proof of the correctness of his views. In a cursory examination of the question this allegation seems quite plausible. But the degree of protection afforded by an attack of syphilis against subsequent reinfection is by no means well settled. The published instances of reinfection of syphilis are much more numerous than of reinfection after the acute exanthemata, and when we consider the frequent epidemic prevalence, and the greater liability to infection through the atmosphere, through fomites and through actual contact, in the latter diseases, the contrast becomes so great as to cast reasonable doubt upon the claim of a protective influence for syphilis. What physician, in his own experience, has been able to record a dozen cases of the reinfection of variola, and yet Diday and Gascozen each report twenty cases of the reinfection of syphilis in their own experience; Koebner reports nearly fifty cases. Tollin, Bouley, Caspary, Hutchinson, Ricord, and others have also reported well-authenticated cases. We have hasty access to more than a hundred published instances of the re-infection of syphilis, and *all quite accidental*. We have not, as far as I am aware, a single record of systematic, carefully-conducted experiments bearing on this point. Even the extensive experience of Prof. Boeck, in his so-called syphilitic inoculations, is valueless in this as in almost every other respect. It is true that he demonstrates a tolerance of the integument to the influence of chancroidal virus through repeated inoculations, and falsely claimed it as a protection against the re-infection of syphilis; but the same sort of tolerance was subsequently established by inoculations with the tartrate of antimony. Admitting, however, that the occurrence of syphilis in an individual *does* protect against re-infection, this does not necessarily connect syphilis with the acute exanthemata any more than with contagious parotitis. It appears to me that the only valid deduction to be drawn from the apparent protection claimed after an attack of syphilis, is that this is *similar* in some respects to the protection afforded by the acute exanthemata under like conditions. But it has been shown that this protective property is *not* confined to the acute exanthemata; hence it cannot be claimed as establishing any necessary connection between syphilis and these diseases. When we are able to explain *why* the occurrence of small pox or scarlet fever protects against re-infection, we may then, perhaps, be able to ascertain why a similar protection is exercised in *mumps*, in *yellow fever*, and in *syphilis*."

Hygienic and Sanatative Measures for Chronic Catarrhal Inflammation of the Nose, Throat, and Ears; Sixteen illustrations. Second Edition. By Thos. F. Rumbold, M. D., Professor of the Diseases of the Nose, Throat, and Ears in the College for Medical Practitioners of St. Louis, Mo. Medical Journal Publishing Co., St. Louis. 1882.

In the second edition of this book has had introduced many new suggestions regarding the hygienic treatment of chronic catarrh.

The author's views on some hygienic and sanitary measures are quite opposed to those which generally

receive credence. They are, however, interesting from their novelty, and are presented with earnestness and based on an experience in the treatment of this class of affections extending over many years.

SELECTIONS FROM JOURNALS.

EUCALYPTUS GLOBULUS IN GYNÆCOLOGICAL PRACTICE, TOGETHER WITH AN ACCOUNT OF SEVERAL CASES IN WHICH IT WAS USED. BY ANDREW F. CURRIER, M. D., of New York.

This drug is destined to play an important part in gynæcological therapeutics. It is only since 1865 that its therapeutic action has been tested, and, with the cloud of new remedies constantly before the attention of the profession, it has not received the full trial which it is sure to get eventually. (See an article upon the subject by Vogl in *Real-Encyclopädie der Gesamten Heilkunde*.)

It first excited investigation on account of the real or supposed action of the growing tree in countries where it is indigenous, as a dissipator of *malaria*. From Australia, its home, it has been transplanted to other countries, primarily on this account. Its transportation to the domain of experimental medicine was an easy and natural step. An oil was extracted from its large and beautiful leaves, fragrant and powerful. The physiological experimenters, chief among whom was Mosler, found that it was useful not only on account of its antiperiodic effects, but as an antiphlogistic, its function being to diminish the action of the heart, and the blood pressure. When applied to the mucous membrane of the mouth, it caused a sensation of heat, followed by that of dryness. On mucous membrane, in general, it was found to be stimulant, astringent, and antiseptic; hence a wide variety of uses was suggested, as in diphtheria, various lung troubles, gonorrhœa, and, in general, inflammations of the mucous membrane of the bladder, vagina, and rectum. Mees affirmed that it held the highest place as an antiseptic (*loc. cit.*). Schultze says its oil is not only a powerful antiseptic, it also stimulates granulations. Its solution not being readily effected, he gives, as a formula for an emulsion: Ol. eucalypti, 3 parts; alcohol, 15 parts; water, 115 parts. (*Centr. für Gynäkologie*, No. 34, 1881).

In May, 1881, at a meeting of the London Clinical Society a fatal case of carbolic acid poisoning was reported, following an operation done with antiseptic precautions. Mr. Lister was at the meeting, and admitted that the facts were undoubtedly as stated. He then announced that in *Eucalyptus Globulus* was found an antiseptic almost entirely free from danger, with an agreeable aromatic odor, and without many of the objections which pertain to carbolic acid.

We could not expect such an agent to be absolutely free from danger, for the laws governing the action of antiseptics are doubtless similar or nearly so in their application to low forms of animal life and to the cellular organization of the human being, which causes us to wonder that accidents from their use are so comparatively infrequent. The objections to preparations of *Eucalyptus* are their expense, their insolubility in water, and their volatility. The oil combines very well, said Mr. Lister, with resin and dammar gum. (*Lancet*, 1881, vol. i., 837). The literature of the subject is very meagre, and I could find but one reference

to its use in gynecological practice. (*De l'hydrate de chloral associé à la teinture d'eucalyptus dans la traitement du cancer de l'uterus.*—*Gaz. Obstetricale*, vol. v., 682).

I was directed to use the drug by Dr. James B. Hunter as an anæsthetic in several severe cases of ovaritis in his service at the Woman's Hospital, during the winter of 1881-2, at which time I was serving there as house-surgeon. The results were very satisfactory, as I shall endeavor to show. The preparation used was a solution composed of equal parts of the fluid extract of eucalyptus and glycerine. Dr. Hunter told me that he sometimes used the unmixed and undiluted oil in his private practice upon gynecological patients, its effects being very satisfactory. Dr. Frank P. Foster has had a preparation made, composed of the oil of eucalyptus and iodoform, with the happy result of entirely destroying the disgusting odor of the latter drug. The combination will undoubtedly be a very efficient one. The cases upon which the observations were made were the following:—

CASE I.—Mrs. M., aged 33, admitted to the Woman's Hospital September 22, 1881. She has been married nine years, and was never pregnant. She has been complaining for four years, especially with pains in the back, extending to the sides and down the thighs. Menstruation began at thirteen, was scanty in quantity until two years since, when it became more profuse. It usually lasts four days, and is accompanied by bearing-down pains in the abdomen and right thigh. For two years she has had attacks of pelvic inflammation during the months of January and February. Micturition is painful and frequent, and sometimes bloody. Walking causes pain in the right side. The bowels are constipated and movements are accompanied with pain in the rectum and womb. A diagnosis of retroversion, prolapse of the left ovary, and cellulitis was made, and during the next five months in addition to the usual vaginal douches of hot water, twice daily, numerous pessaries were tried and removed after a short time, on account of the irritation and pain which were caused by them. When the uterus was not sustained by a pessary, cotton pads soaked in glycerine were used for the purpose. At times the patient seemed much benefited and could go about very comfortably; then the old condition would recur, and as much pain and discomfort be present as before.

About the 1st of March the eucalyptus preparation was tried, about half an ounce being distributed upon several pledgets of cotton with which the vagina was lightly tamponed. This was repeated every day or nearly every day, for several weeks, with great relief from the local and reflex pain. She became more comfortable than she had been with the applications previously in use.

CASE II.—Mrs. R., aged 31, admitted Nov. 5. She was married eleven years ago, has had one child, and her labor was very severe. It was three days in duration, and the child was instrumentally delivered. Since that time she has been sick continually. Menstruation began at seventeen, lasts from three to four days, is normal as to quantity, and is preceded by pains in the sides, abdomen, and back before the flow appears. This pain continues during the period, and does not cease until several days after that has ended, being of very severe character.

Diagnosis—Retroversion—Sub-involution of the uterus—Prolapse of the left ovary. Very much the same treatment was adopted as in Case I., with very little benefit, until the eucalyptus was tried. This had a very satisfactory effect in subduing the pain, and if,

for any cause, the daily application were omitted, the pain and discomfort returned.

CASE III.—Mrs. F., readmitted Nov. 7, aged 29. She was in the hospital a year ago, and was operated upon for laceration of the cervix. The operation did not bring the hoped-for recovery. The uterus remained large and exquisitely tender, and there were severe pains in the back and left side, exaggerated at the menstrual epoch. Menstruation takes place every three weeks, and is scanty as to quantity. She also suffers from pain and a burning sensation during micturition. Examination showed the womb to be retroverted, firmly fixed, and much enlarged. The left ovary was enlarged, prolapsed, and excessively tender. For treatment, she received the hot-water vaginal douches twice daily, iodine was applied to the vaginal vault, and the uterus was supported by a cotton tampon. In three weeks the uterus was quite movable, but the patient still complained of almost constant pain. This treatment was continued for the following three months, resulting in bringing the uterus back to its position, reducing its size, and relieving the pain to a certain extent; then the eucalyptus mixture was tried, applied daily, and its anæsthetic effect was very marked. The cotton pledgets were applied while the patient was in the knee-chest position, and pressure was brought to bear directly upon the prolapsed ovary.

CASE IV.—Mrs. S., aged 30, admitted January 20. She has been married fourteen years, and has had one child, which was born twelve years since. She has been complaining since her confinement with pain in the hypogastrium, back, and thighs. Menstruation began at twelve, and was regular and normal until the birth of her child. At the present time the flow is scanty and of offensive odor, accompanied with pain during the first day. Walking is painful, and so are movements from the bowels. The uterus is retroflexed, and both ovaries are prolapsed, the left one more than the right. Improvement was marked at the end of a month, under the same treatment as that received by the other cases detailed. The use of the eucalyptus was begun when it was begun with the others. The effect was not so positive, probably because the woman did not suffer such acute pain as Cases I., II., and III.

CASE V.—Mrs. G., aged 36, admitted February 16. She has been married eleven years, has had two children, the last of which came five years since, and was delivered with forceps. Her menstruation has been regular. She has pain in the back and hypogastrium, also nausea and vomiting for a week before the flow comes. The flow lasts two days, and is scanty as to quantity. She is obliged to pass water frequently. Walking causes pain in the hypogastrium. The bowels are constipated. A laceration of the cervix was closed two years since.

Diagnosis—Retroflexion and prolapse of the left ovary. The case was treated precisely like the others, and with the same satisfactory relief to the pain when the eucalyptus was used.

In none of these cases which have been described, is it claimed that a cure has been effected by the use of the substance under consideration. They were selected because they were typical cases of a disease in which pain is a constant and harassing feature. This must first be met, and then, in conjunction, the mechanical and constitutional means of treatment. Every substance which lessens the amount of pain in the universe, and which may be safely used under proper restriction, is a boon to humanity. The number

of such substances used in gynæcological practice is quite small, and I consider eucalyptus a valuable addition. Besides its anæsthetic effects, it is, as we know, antiseptic and antiperiodic, and hence it will be of use in that large class of cases where foul-smelling discharges exists, and also as an adjuvant in the treatment of malaria. The absorptive function of the vaginal mucous membrane has been comparatively little employed in constitutional treatment, and this is a field which yet remains to be worked up. A daily application of this substance must have more than a local influence. It will usually be difficult to give treatment so frequently, excepting in hospital practice. Much better results would follow could a continuous effect of this, as well as of some other means of treatment be obtained, but the expense and the annoyance, and in many cases the dread of pain prevent. The very fair degree of success obtained in treating the cases described in this paper, leads me to believe, that in less severe cases we can feel almost positive that we can give great relief, indeed, my experience in private practice confirms that belief. In a quite different class of cases eucalyptus will also be serviceable. I refer to wounds of the breast after the removal of tumors. With the increasing favor of the open method of treating such wounds, especially when the growth removed has been of a cancerous nature, its stimulant and antiseptic properties will prove very acceptable.—*Am. Jour. Med. Sci.*

FAMILY HISTORY IN RELATION TO CON- TAGION IN PHTHISIS PULMONALIS.—By ROBERT ROBERTSON, M.B. & C.M.ED.

Clinical inquiry into the family history of consumptive patients has hitherto been directed mainly to the question of the possibility of hereditary influence having favored the development of the destructive process in the lungs. The frequency with which case after case has occurred in the same family, with which indeed whole families have been destroyed by this fatal malady, has fully warranted the assumption that, if the disease has not been directly transmitted from parent to offspring, there has been at any rate a transmission of a special liability to it, so marked as to modify materially the "expectation of life" in the progeny of a consumptive stock. That phthisis pulmonalis may be communicable is, of course, no new idea; probably there are few medical men who have not seen cases that have suggested such a notion. The evidence has not, however, been such as to give prominence to the view, even as an occasional mode of origin of the disease; and few persons would have been prepared, a few months ago, to assert that it was invariably communicated.

The exponents of the germ-theory of disease have accustomed us to revolutions; one after another position has been turned by them, until it has become more difficult to adhere to than to abandon opinions sanctioned by the experience of the past, and consecrated by the approval of great minds we cannot cease to venerate. It may be doubted, however, if, in any other instance, there has been so sudden and complete a casting aside of tradition. Koch's researches have apparently carried conviction to the public mind, wherever they have become known; and already the proximity of a consumption hospital has seemed to some minds as alarming, or more so, than one for small-pox; and the predominant symptom of such a

belief, a newspaper protest, has not been wanting. Nor, if the tone of the medical press be considered, can this be termed a sensational or an unwarranted development. For, in a recent medical publication, we are told that, "if we accept, as it seems in every way probable that we must, the conclusion that the very breath of such tuberculous subjects may carry infection with it, a new terror is added to life," etc., an estimate of the doctrine certainly not wanting in gravity. The value of the germ-theory of this disease, from a preventive and remedial standpoint, cannot yet be fairly estimated; but it is more apt to be under than over-rated in the face of the slight success of antiseptic treatment hitherto; yet, in some susceptible minds the doctrine is adding "a new terror of life," it may safely be predicted that a calmer consideration will enable many to rejoice that the fiat of heredity is of less serious omen than it may hitherto have seemed to them. It is, at any rate, only reasonable to assume that the extension of our knowledge of the etiology of the disease, as in the past, will in the future continue to diminish the number of its victims.

As medical men, called to deal with disease as it occurs in actual life, we have to acknowledge that we are in arrear of laboratory teaching, and that the whole clinical field will need revision by the light of the knowledge thus obtained. It is as a small contribution to that revision that I venture to present, for your consideration, the results of some inquiries into "family history in relation to contagion in phthisis."

One hundred cases have been taken from those coming under observation while writing this paper; for, although a very much greater number might have been collected from the records of the hospital, cases so collected would be wanting in that completeness which, in the present inquiry, it is desirable they should have. The objects held in view in the investigation have been: 1. To ascertain how far direct exposure to the disease by intimate association with known phthisical persons has preceded its onset; 2. To determine how frequently a presumption of exposure, from the family relations of the individuals, has been unattended with a development of the disease; and 3. To ascertain how far an inherited liability to the disease influenced the results of exposure. In one or two cases of deaths of adults under forty years where asthma or bronchitis has been assigned, and in one of "consumption of the bowels" with cough, phthisis has been assumed.

In inquiring into the history of exposure, so great an interval of time elapsed in many cases before symptoms of illness appeared in the patient that it is difficult to believe that the exposure had any connection with the onset. It is true that, in a disease so insidious, its commencement may have been at a period considerably antecedent to the development of symptoms that the patient would recognize. Still this must at most be a question of a few months, even if we believe that a survival of specific bacilli inhaled long before has continued, though giving rise to no symptoms of importance until some favorable opportunity of prostration of their host has occurred, when they have been able to produce a more evident impression. The following case may illustrate this possibility.

CASE I.—W. P., cheesemonger's assistant, was married a second time, and his second wife was healthy. His first wife died of consumption two years and three months ago. Before his wife's death, and while she was ill, the patient had a slight "hawking" in the throat, and the medical man treated it with benefit as a "relaxed throat." He continued as well and fit for

work as ever, free from cough, etc., for fifteen months after his wife's death; then, having got wet through, he was laid up for a fortnight with "inflammation of the lungs;" cough has never left him, and he has steadily got worse, until now he has well marked and active disease in both lungs. His relatives were free from suspicion of chest-affection, and he himself indisposed to believe that he caught consumption from his first wife. The wetting and subsequent acute illness undoubtedly, however, correspond with what, without the coincidence of his wife's illness, would have been deemed the commencement of the disease.

Delay in the development of lung mischief may perhaps also occur in consequence of some other structure being first affected, an affection of gland or joint, or perhaps abscesses elsewhere, as in the two following cases, may have been the original seat of mischief.

CASE II.—J. W., aged 38, carpenter, with no phthisical antecedents, and no history of exposure, began to be troubled with ischio-rectal abscess three years ago. For a time the swelling, etc., seemed to be going away, but ultimately it reached the surface, and a fistula was established, for which he was operated on seven months ago. Since the operation, slight cough and pain in the right side have manifested themselves, with occasional streaky hæmoptysis, and he has been too weak to work. The apex of the right lung is affected to the second lobe.

CASE III.—A G., clerk, aged 21, whose father and two brothers died ten years since of phthisis, and whose mother (living) had suffered with "abscess of the lung" for two years, and is much emaciated, had always enjoyed good health until thirteen months ago. Then abscess of the lower jaw developed in connection with a diseased tooth. The sinus through the cheek continued to discharge for seven months, and it was during this period that lung-symptoms began to show themselves. He has now cavities in both lungs.

In both these cases, the source of infection may have been other than that assumed, but the possibility of self-infection suggested in these and similar cases will have to be borne in mind; for it seems only reasonable to believe that an organism capable of setting up inflammatory and destructive processes in lung, gland, or joint under suitable conditions, may under similar conditions do so in other tissues.

The analysis of one hundred cases as to the evidence of exposure is as follows. In thirty-six cases, no exposure could be ascertained. In sixty-four cases, exposure at some time or other was made out (including seven uncertain). Taking these sixty-four cases, however, in reference to time of exposure, we find twenty-six were living exposed at the time their illness began; six showed symptoms within twelve months of exposure; twenty-four had not been exposed for periods varying from fifteen months to twenty-three years; one not for a long period (time uncertain); and in seven the fact of exposure was doubtful. It must further be noted that twenty-two of the twenty-four cases were exposed at periods of more than two years before the beginning of their own illness.

Thus, if we allow that all who showed symptoms of illness within twelve months of association with a phthisical person may have been infected at the time of such exposure, thirty-two per cent., or about one-third of the whole may be so classed. Yet, strong as the presumption may seem for the contagiousness of phthisis from so large a proportion presenting evidence of recent exposure, very few of these cases occurred without what would have been previously recognized

as a sufficient cause for the disease. Two cases may suffice to illustrate this.

CASE IV.—A. R., aged 39, bookseller, with no phthisis in his family, had for nineteen years been employed in an establishment where thirty people were occupied, and, latterly at any rate, he had been practically the manager of the place. The premises were badly ventilated, and the workpeople were working either in draughts or in a close hot atmosphere. The patient has always been dyspeptic, and, during a period of overwork and unusual mental worry, he got into a low state of health; cough then developed, has continued since, and he is now in an advanced stage of disease. While he was there his employer was known to be consumptive, and, since he has left, three others have succumbed to the disease.

CASE V.—S. G., aged 15, of no occupation. His father, and five or six of his brothers and sisters, all died of consumption. His mother's family is not consumptive. His father, who had been ailing for eight years, died seven years ago. His mother, still living and quite healthy, has had fourteen children. Of these seven died in childhood, and four, adults, have died of consumption within eight years, the last six weeks ago. The patient, who had not previously been under medical treatment, and who denied that there was anything wrong with her, has consolidation of the apex of the left lung. The village in Norfolk where this family lives, I am informed by their medical attendant, is without drainage; the water rises to within a few inches of the surface of the soil, and hence the houses are very damp.

In the first of these cases, the long period of immunity, in spite of dyspepsia, draughts, and foul atmosphere, and the coincident debility from mental and bodily overwork at the time of development of lung symptoms, cannot be left out of count, though the probability of communication seems so strong. In the second case, the continued exemption of the mother, sleeping night after night for eight years with the consumptive husband, and during that time, and the succeeding seven years, nursing under the hygienic conditions given, her husband and four of her children, certainly warrants the assumption that other factors than bacteria were busy in the extermination that went on around her, and to which thirteen out of sixteen of the family have succumbed.

But the evidence of the failure of exposure where a presumption of its occurrence has existed must be carried further, for this failure has been the impediment to a clinical acceptance of the doctrine of communicability.

Of the 100 cases, 40 were or had been married, 27 men and 13 women. Of the 27 men, the wife had also suffered from lung-disease in two, one dying fifteen months before her husband fell ill, the other beginning to suffer from cough, etc., twelve months after her husband. In both instances, the second person affected had no phthisical relative. Among thirteen women patients, four are said to have had phthisical husbands. One had nothing wrong with her chest until three years after the death of her husband. Both lungs are now in an early stage of disease. A second, of consumptive stock, began to suffer with chest and throat about twelve months after her husband's death, and has now, three years after, slight mischief at the right apex. A third had glandular abscesses of the neck before marriage. Eight months ago, has had the right elbow-joint recently excised for strumous disease, and has quite lately become affected with cough, pains in the chest and night sweats. She has incipient mischief of

right apex. Her husband is of a very consumptive family, and has had a severe cough as long as she has known him. In the fourth case, the husband is said to have spat a little blood some time before marriage, but has shown no signs of chest affection since. The patient, whose brother and sister have both had hæmoptysis, was quite well until six months after marriage, when she had an attack of bronchitis, and there is at this time considerable mischief in both of her lungs. It may well be doubted if any one of these four can justly be counted as instances of communication of the disease from husband to wife. But, assuming that they are undoubted cases, we have still among forty married couples thirty-four instances (eighty-five per cent.) of the most intimate association of a phthisical and a healthy person with complete immunity from disease.

Consumption occurred in thirty-seven instances among the parents of the one hundred cases taken. In nine, both had been affected; in six of these the second parent lived from five to ten years after the death of the other. In one, no information as to the relation of one to the other could be obtained; in two, husband and wife died within six months of each other. But, counting these also as examples of communication, the immunity among parents amounts to seventy-six per cent. where one of the two has been consumptive. In three out of twelve instances of consumption in the grandparents, both husband and wife suffered, or immunity in seventy-five per cent. Thus, in the whole of the eighty-nine instances where a husband or wife has been consumptive, we find there has been immunity in the other eighty per cent. If we exclude fourteen cases in which either the information is insufficient, or the interval which elapsed before the second individual became affected, appears to have been too great to render its communication probable, it is found that there has been an immunity from disease in 94.6 per cent.

These 100 patients further represent families of children, amounting in the aggregate to 698 individuals. About 15 per cent. of these (from a calculation based on 54 cases) died in childhood; and, of the remaining 593, less than one-third (185) became consumptive. If the immunity from disease is here less striking, as compared with statistics of married people, it must be remembered that the brothers and sisters of consumptive patients are liable to similar inherited constitutional defects; that the exposure to the disease has been probably during a period in which most have been undergoing critical developmental changes; that accidental influences, favoring the onset of lung-mischief, have probably been more common.

In tracing the influence of heredity on the results of exposure, we find that, in 60 cases, consumption had occurred in the preceding generation (*i. e.*, in father, mother, or their brothers and sisters); in seven, the information obtainable was incomplete; in 33, no case of consumption had occurred in parents, or their brothers and sisters. Among the children of the 60 families, the disease manifested itself in 34.72 per cent.; among the 33, in 21.76 per cent.; or a difference of nearly 13 per cent. between those with and those without phthisical antecedents. How far increased risk of exposure influenced this difference may be judged perhaps from the fact that, in 60 cases, it occurred in 30.8 per cent. of parents' relatives, and in only 22.48 per cent. of the parents themselves. The disease also occurred in the two previous generations, with considerably greater frequency among the men than among the women.

The following is a brief summary of the results in

relation to the infectiveness of phthisis pulmonalis.

1. Among 100 individuals affected, about one-third have recognizably been exposed to the disease within a period having an appreciable connection with the onset of their own illness.

2. Among married couples, of which one person has been affected, there has been immunity from disease in the other person in, at least, 80 per cent. of those inquired into; and that, among the children in the families represented by patients under observation, immunity from disease occurred in nearly 69 per cent.

3. The existence of phthisis in members of the preceding generation was attended with an increased frequency of its occurrence in the succeeding one, amounting to nearly 13 per cent. Hence it may be concluded that:

1. Probably, in every case of phthisis, the inception and presence of a specific bacterium is essential to the destructive process.

2. Probably there is a certain risk of communication of the disease to unaffected persons, and *ceteris paribus*, the greater, the more intimate the association.

3. Continued association with a consumptive person is probably not in itself sufficient to originate the disease in any instance.

4. The preparation of the lung-tissue by a chill, debility, etc., is probably as essential to the destructive process as the presence of the specific bacterium itself.—*British Medical Journal*.

EYE DISEASE DEPENDENT UPON SUPPRESSION OF MENSES. BY READ J. MCKAY, M. D. of Wilmington, Delaware.

For several years past, it has been my endeavor to present to the annual meeting of the Delaware State Medical Society (where I had expected to read this paper this year, but was unable to attend to do so), practical papers upon eye or ear diseases, hoping thereby the more readily and promptly to promulgate the frequent and important relations existing between those diseases and general diseases, as our knowledge of special diseases increases in extent and exactness; and I have attempted to use language free from obscurity and mystifying technicalities, in order that the observations might be fully comprehended, for I have frequently thought specialists generally, by the manner in which they present important medical topics to their professional brethren in general practice, and to students in the lecture-room, fail to make the agreeable, intelligent, and lasting impressions which are always desirable and appreciated.

I now desire to present for consideration some clinical histories and practical remarks upon cases of eye diseases dependent upon abnormal menstruation, which have been under my care during the past nine years. As they are not very numerous I venture to report them fully, so that they may be studied critically. They only include cases of *eye disease caused or complicated by suppression of menses*.

CASE I.—Fannie R., aged 22 years, single, domestic United States, first came under my care at out-door department of Bellevue Hospital, New York City, June 30, 1873. She had had double sight at intervals for two weeks past, and could not read or sew. She suffered with supra-orbital neuralgia. Two years previously she had suppression of menses. Since then her menses have been irregular, and the flow diminished in quantity. Vision of R. E. = $\frac{1}{200}$, of L. E. = $\frac{1}{100}$, and

she could see small type ten inches. She was slightly myopic, but did not require glasses. Her pupils acted sluggishly under light. Ophthalmoscopic examination manifested appearance of well-marked neuro-retinitis. Free catharsis and bleeding of temples promptly improved her vision somewhat, and tonics her general health, when her menses became regular she could again use her eyes. This improvement continued for several months, until suppression again occurred from getting her feet wet during "the flow," and again her eyes could not be used as desired. Several months later her menses again appeared and her eyes regained their normal condition. In March, 1875, she reported she had had a recurrence of partial suppression and eye troubles. In October 1876, reported menses regular without any eye trouble, and her general health good, which continued a year later, the last report made to me.

CASE II.—Elizabeth H., German, aged 19 years, single, domestic, had been in United States over three years, came to "Bellevue Out-door Dept." July 6, 1874, for treatment for her eyes. At 14 years of age first had her menses, and not again until she was 18 years old, and the last time six or seven months previously. Eight days ago she began to have severe headaches, which prevented her sleeping well for several nights. She reported that when her headache was severe she had intense dread of light, but none without the pain in her head. Her near vision was good. Ophthalmoscopic examination revealed optic neuritis and retinal hyperæmia, which were more marked two days later, when she manifested symptoms of brain and spinal cord disease, and was sent to the hospital, passing from under observation.

CASE III.—Lucy J., aged 15, resident in New Jersey, came to the clinic at "Bellevue Out-door Dept." August 19, 1874, for dimness of her eyesight. She was very tall and large for her age. When five years old she had a severe attack of external inflammation of her eyes (probably phlyctenular conjunctivitis). She has not been sick otherwise, excepting a weakness of her back, which began at 12 years of age. It was worse at time of menstruation, which began at 14 years of age, and she reported she had always been regular. About a year ago, when her menses first appeared, her eyesight began to grow dim, and has gradually grown worse. Six months ago frequent attacks of severe headache commenced, which lasted from half an hour to one hour. She had recently been treated at an eye infirmary by hypodermic injections of strychnia without beneficial effect. The vision of her R. E. = fingers ten feet, and read Sn. X—4" to 6", L. E. V. = $\frac{2}{3}$, and read Sn. III. Ophthalmoscopic examination manifested floating opacities in the vitreous humor of both eyes, which was much worse in the R. E., rendering its fundus somewhat indistinct, although its optic nerve looked very white. The L. E. manifested incipient disease of optic nerve and choroid. Leeches were ordered to be applied to her right temple. Two weeks later R. E. V. = $\frac{2}{10}$, and L. E. V. = $\frac{3}{8}$. Leeches applied to both temples, and tonic of syr. phosphate of iron, quinia, and strychnia ordered. Three weeks thereafter R. E. V. = $\frac{2}{3}$, and its fundus much more distinct, the floating opacities of vitreous smaller and less numerous. L. E. V. = $\frac{2}{3}$ minus, and its fundus clear. Leeches were again ordered to right temple, and to continue the tonic.

February 12, 1875, R. E. V. = $\frac{2}{3}$; L. E. V. $\frac{2}{3}$, with fields of vision of both eyes limited above and internally. She reported that she had her menses last week, with severe headache for several hours daily for

three days, and after it had great dimness of vision of L. E. for half an hour. July 21, 1876, she reported she had married and has a healthy baby. Vitreous of both eyes were clear, and R. E. V. = $\frac{2}{3}$; L. E. V. = $\frac{2}{3}$ minus.

CASE IV.—Miss B., aged 18, born in United States, was brought to my office by her family physician December 23, 1878. About seven months previously she began to have suppression of menses, which continued three months, when her eyes commenced to pain and manifest intolerance of light. Blistering her temples had been of temporary benefit, but relapses occurred at menstrual epochs. She has had double sight. Has now photophobia. Her pupils react fairly under light. R. E. V. = fingers five feet; L. E. V. = fingers six feet. Fields of vision of both eyes contracted, the L. E. more so than R. E. Ophthalmoscopic examination showed well-marked neuro-retinitis of both eyes, the fundus of L. E. being the one most inflamed. Advised leeches to temples, continuance of tonic, and an endeavor to secure a more free menstrual flow. She improved very little, and subsequently went to Philadelphia for treatment, where she unfortunately received no greater benefit, and her vision continues to be very greatly damaged.

CASE V.—Miss H., compositor, aged 18, born in United States, was brought by her father to me April 19, 1879, for painful and blurring vision, with frequent disturbances from double vision, which had prevented her using her eyes with comfort for months past. She had had a great deal of headache of late. Ascertained her menses were scanty and irregular, and she was subject to hysterical attacks. She had double sight (diplopia) to the right and left, and with R. E. alone. Her accommodative muscles were strained, as well as her internal and external recti. Ophthalmoscopic examination revealed congestion of her optic disks, also farsightedness with astigmatism. Glasses could not be selected without suspending accommodation with a solution of atropia, which was done after five days' use of it. They relieved her of all double sight, and greatly improved her vision for all distances, but her eyes would not permit her to resume her work (type-setting) for fifteen months or longer, not until her menses were established regularly.

CASE VI.—Miss W., aged 29, born in United States, domestic, came to me January 5, 1881, for dimness of vision and pain in her L. E., which began two weeks previously. A week later it pained all day, and three days later its sight became decidedly dimmed.

Her menses were irregular and scanty. They came on the day before the sight was affected. When first examined the vision of her R. E. = $\frac{1}{2}$ in the poor light of a dark rainy day, and the L. E. could only see the hand indistinctly one foot distant. Ophthalmoscopic examination showed inflammatory deposits upon the posterior layer of cornea and opacities of the vitreous humor. Dilated the pupil at once with a solution of atropia, which promptly relieved her pain somewhat, and continued its use. Ordered smoked glasses, bathing the eye with hot water, and leeches applied to her temple on several different occasions, and internally bichloride of mercury, as well as directions to promote free menstrual flow, which was continued for several months. Her menses became free and regular, and she fully recovered her eyesight.

CASE VII.—Miss M., aged 26, school-teacher, presented herself in June, 1881, with asthenopia (weak and painful eyesight), and blepharo-spasm (frequent and spasmodic closure of her eyelids), due to straining of her accommodation. She had congestion of optic

disks and refractive eye trouble, profuse leucorrhœa, and scanty menses. Suspended her accommodation and selected glasses for her, which promptly and greatly relieved her eye troubles, and advised her to have her uterine troubles attended to, which was done with benefit. In the fall she resumed her school duties. Six or seven months later, after mental worry and return of womb troubles, she reported, by letter, that her eyes again annoyed her, but she has not been able to visit me again.

CASE IX.—Miss W., aged 24, a school-teacher, on December 24, 1881, called to have me examine her L. E., which manifested a sub-conjunctival hæmorrhage, that had occurred eight days previously, during the time of her menstrual flow, which was scanty. She stated she had had partial suppression of menses for many months past. Lately, at those periods she had experienced great and unusual fulness about head and eyes. Her vision was good for all distances. No intraocular hæmorrhage was found by ophthalmoscopic examination, but a slight haziness of both retinae and congestion of optic nerves. Advised rest of eyes, and bathing with hot water, and to consult her family physician about re-establishing normal menstruation.

CASE X.—Miss P., aged 17, a school-girl, was brought to me January 27, 1882, by her mother for weak and painful eyes when used. Externally they looked well and healthy, and she was plump, rosy, and quite strong-looking. Two years previously she began to have great annoyance from headache and pain in her eyes, and she has had to stop going to school twice within that time on account of those sufferings. She had double-sight at times. Has suppression of menses. Vision was good, but she could not continue the use of her eyes more than a few moments with comfort. She was far-sighted, and trial of weak glasses improved her vision promptly, and gave comfort to her eyes; they were ordered for her, and it was advised to have the family physician correct her suppression. Not having heard further from her, I presume she progressed favorably.

CASE XI.—Mrs. B., aged 20, married fifteen months, called to see me March 28, 1882, about "a mistiness of sight" and intolerance of light, of two weeks' duration. She had slight conjunctivitis, and so much hyperæsthesia of retinae that her pupils contracted to such a small size, that ophthalmoscopic examination was impossible until they were dilated with a solution of atropia, when a haziness of the retinae and congestion of optic disks were manifested, with far-sightedness. She had had suppression of menses for seven weeks. Local treatment of conjunctivitis gave her only partial and temporary relief. April 28th began an alternative course of internal treatment, which afforded her marked relief until the time her menses should have occurred on May 8th, but they did not, and she relapsed. She then had had suppression three months, but no other symptoms indicating pregnancy. Leeches were ordered to her temples, and a continuance of the medicine internally. May 30th she reported the leeching relieved her eyes and head considerably, and on the 22d, her menses came on, and she has felt still more improvement. Examination shows less retinal haziness, and less congestion of optic disks.

CASE XII.—Miss N., aged 15 years, came to see me April 29, 1882, with double-sight of five months' duration, and inability to use her eyes longer than a few moments on account of spasm of accommodative muscles. She had not been able to go to school for

past five or six years because of headache. Two years ago she had suppression of menses for three months, and then a severe spell of sick headache, since which time her eyes have troubled her. She had congestion of optic disks. Suspension of accommodation, with a solution of duboisia for selection of glasses to correct her near-sightedness, promptly relieved her of double sight, spasm of accommodation, and headache, and seemed to afford her much comfort.

It will be observed that all the successive foregoing cases were unmarried persons, except No. XI., and she was pregnant. That the majority of them experienced their troubles near the beginning of their menstrual functions, or shortly afterwards. That all but one of them, No. IX., which had the subconjunctival hæmorrhage, manifested diseases of the interior of the eye, and generally of the fundus, the optic nerves or retinae or both of both eyes, the most sensitive and important parts of the eye. It is recorded that five of them manifested double sight, and it is remembered that several others did also. Relapses occurred so often at the time of menstrual disturbance that the connection between them seems most conclusive. Also, when normal menstruation was re-established and maintained, their eyes gave them no further trouble. They were all relieved except Cases No. II. and No. IV. The former soon passed from observation with grave symptoms of a cerebro-spinal character. The latter, when first examined, manifested the greatest loss of vision of any of them; fingers could be counted from five to six feet only, and internal examination revealed considerable inflammatory exudation into pupillæ and retinae, which threatened their atrophy with loss of function beyond recovery. Cases of this kind demand prompt recognition as to their etiology (before vision is too much impaired by the internal eye disease) in order that they may be successfully treated and relieved. Partial loss of vision, and inability to use the eyes in young healthy-looking females, without external eye disease, always suggest to my mind the probabilities of menstrual disturbances, and it is inquired about. As many more cases could be presented as the foregoing; but it is decided not to do so because they were not fully recorded, and could only numerically enlarge the observations I wish to present. Young school-girls often manifest asthenopia (weak and painful sight) about the time their menses are being established, and especially if their menses become irregular from any cause, which may produce partial or complete suppression for an indefinite time. I will no further pursue this subject to present illustrative cases; but state that sometimes they manifest decided congestion of optic papillæ and retinae, and others no internal eye lesion with the exception of strain of their accommodation, which is common to all these cases, for they have some refractive deformity of their eyes, which, sooner or later, causes their muscles of accommodation to rebel from their over-taxing and too continuous work.

The irregularities of the menopause period is often complicated with asthenopia and pathological lesions of the fundus of the eye. Several cases of this nature with disease of the optic nerve and retina from their incipency to their complete atrophy, have been under observation recently.

Only uncomplicated cases as to their etiology have been selected for this paper, and all others excluded for various reasons, but especially for brevity, and to definitely establish the intimate and practical relations existing between eye diseases and menstrual disorders. *Am. Jour. Med. Sci.*

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EDITORIAL.

THE ADVANTAGES OF THE NEW YORK POLYCLINIC.

We have before announced to our readers the establishment of this new school. We have congratulated the profession of this country on this latest outgrowth of scientific enterprise, which has come into existence at a time ripe for its reception, when general recognition of what is most needed in our system of medical

teaching has borne its appropriate fruit, and the medical press, that ever-truthful reflex of medical opinion, is everywhere clamorous for reform.

And now the reformation demanded has come. No more need our graduates of means seek further culture in a foreign clime; no more those with more slender purse, but equal appreciation of their deficiencies, go unequipped to cope with fell disease. For in our midst we have a school offering all the boasted advantages of those of Vienna, Paris or Berlin. It will be asked to whom is due the honor of founding this polyclinic, and what guarantee have we that its great objects will be achieved, that its promises will be fulfilled? We who come from the remote regions of the West or South or North to this Eastern centre do so at a sacrifice of time, money and convenience, and must needs have assurances of what manner of instruction this is we are to receive.

To these we would say, that the gentlemen who are identified with this enterprise are not unknown to fame. Some have already taken high rank as skilful and accomplished teachers; all are enthusiastic workers in their specialties, fully recognizing the requirements of those they propose to instruct and what will be exacted of them as teachers. Each one of them is identified with some large hospital and will thus have at his command a mass of material from which to select the best illustrative cases. And still further to aid the faculty in presenting appropriate cases for observation and study, it is proposed to establish a dispensary in the college building, and from the large and varied field of patients there presented it is not too much to say can be gathered cases typifying not only every malady, but each stage of every malady from its inception to its termination.

If scientific attainments, culture, thorough earnestness, and exceptional opportunities for utilizing the clinical materials offered by a great city, constitute qualifications for clinical teaching, we may rest assured the New York Polyclinic will rival if not excel its Viennese prototype.

If around this great progressive step in medical teaching is thrown the glamour with which appreciative enthusiasm loves to invest the objects which justly inspire it; if the future of this school, and its pre-eminent advantages, are pictured in too roseate hues, let us rub off all color from our canvas, and simply state what must be a reflex of the thoughts of every true lover of medical progress in our land. That the founding of this new school ushers in a new era in medical instruction in this country, an era in which the ghosts of ignorance and incapacity will vanish, dispelled by the forces which are now conspiring to render practical ability the only open sesame to the portals of medical practice; an era in which the title M.D. will be significant of the possession of a high degree of medical knowledge and skill, and a passport to the

respect and confidence of the best circles, scientific and social, on the globe.

As an earnest of the work to be done by the Polyclinic, we append the names of the gentlemen comprising the faculty:

General Medicine, Drs. J. R. Leaming and E. D. Hudson.

Diseases of Children, Dr. J. H. Ripley.

Throat Diseases, Dr. Louis Elsberg.

Gynæcology, Drs. P. F. Mundé and W. G. Wylie.

Throat and Ear, Dr. R. C. Brandeis.

Neurology, Dr. L. C. Gray.

Ophthalmology, Drs. D. Webster and E. Grüening.

Diseases of the Skin, Drs. A. R. Robinson and E. B. Bronson.

Veneral Diseases, Drs. J. A. Wyeth and A. G. Gerster.

Orthopædic Surgery, Dr. V. P. Cibney.

To these may be added a corps of eighteen assistants.

ESMARCH'S OPINION OF THE SURGICAL TREATMENT OF PRESIDENT GARFIELD.

To the laity, and indeed to many in the profession, the pertinency of the question, "Who shall decide when doctors disagree," must have been especially apparent when reading the variety of opinions expressed by eminent surgeons regarding the treatment of our late President.

Were it not that this matter involves a most important point in medical ethics, of which Esmarch's criticism seems to us to be a conspicuous infringement, we would not again draw attention to a subject which one would think might have been safely left to the good sense of the profession to decide in harmony with truth, equity and courtesy.

The burden of Esmarch's criticism was that the surgeons attending the President were constrained by public opinion to do too much. In his own words, "If they had entirely omitted the search after the bullet, and immediately after the injury dressed the wound in a real antiseptic way, the President might perhaps be still alive, like our Emperor, from whom Von Langenbeck did not cut out a single one of his many small shot."

In view of the fact that Esmarch's opinion was made up from data gleaned from reports of the case, and not from personal appreciation and study of the various phases it assumed, we must believe the great surgeon's opinion, or at least the expression of it, presumptuous in the extreme. It is moreover the height of surgical absurdity to compare the wounds of the Emperor (slight superficial shot wounds) with a gunshot wound of the spinal column. And besides the assumption that antiseptic precautions were omitted is entirely gratuitous, as every authorized history of the case shows that *strict antiseptic measures were adhered to throughout*.

But beyond the fact that this published opinion was unsurgical, if we may use the word, and in extremely bad taste, it was more than this, a direct infringement of both the written and unwritten laws which govern, or should govern, the relations between members of the profession.

But it is not alone our distinguished German *confrère* who has erred in this direction. Most of us are too apt to forget the rights due our brother and attempt to magnify our own professional importance at his expense.

It is this tendency we would deplore. The temptation to publicly criticize a professional brother, espe-

cially if his action seem to us fairly open to criticism, is great, but not unconquerable. Granting that no surgeons are infallible, the opportunity for the application of the golden rule in cases where we feel like openly criticizing, should not be lost.

We would not be understood as advocating the repression of opinion, but rather the discourteous and injurious expression of it.

It was to be expected in the case of the late President that surgical opinion of the proper treatment would differ. But once for all let it be said, and no candid man will gainsay it, that those directing the treatment of Garfield were surgeons of unquestioned skill and discrimination, whose reputation was world wide, who had every incentive to do all that human skill could do to save the life of their distinguished patient. Is it not then fair to presume that all was done that could be done? Is it not folly in the light of *post mortem* revelation to speculate on what might have been, had the surgeons possessed divine instead of human power? Justice, courtesy, humanity demand that honor be given to whom honor is due, that at length a veil be drawn over this sad event, and no longer ill-balanced minds be furnished from professional sources with the excuse for stirring up dissension, marring the fair face of medicine herself, with their poisoned shafts, and defaming the justly-acquired reputation of her votaries.

LECTURES.

A CLINICAL LECTURE ON CHRONIC GASTRITIS.

BY

AUSTIN FLINT, M. D.

Professor of the Principles and Practice of Medicine in Bellevue Hospital Medical College, New York.

The history of the patient as read by a member of the clinical section was as follows: His name is P. M., he is 49 years of age, a native of Ireland, and he came to this country twenty-six years ago. He is a laborer and has been accustomed to working out of doors in all kinds of weather. His family history is good. His father is still alive, and his mother died of inflammation of the bowels. Six or seven years ago he says he was troubled a good deal with pain in the head, and since then he has been a little hard of hearing, and for the past five or six years his health has been gradually failing. He is not a hard drinker he says, but he is accustomed to taking one or two glasses of beer every day, and sometimes he takes more. He uses tobacco in all its forms but he does not swallow the juice. Two years ago he came into this hospital complaining of vomiting, flatulence and pain in the stomach, and again five or six weeks ago he was admitted a second time. He now complains of pain in the epigastrium, and of general nervousness, and he worries easily about little things and he feels dull and stupid, and has a distaste for food, and he is troubled by constant thirst. There is a tendency to the regurgitation of food and his tongue is a little coated and he has a bad taste in his mouth and he vomits about

fifteen minutes after each meal. He sometimes passes blood in his stools and he is troubled with tenesmus, and he finds it easier to lie upon his left side. His urine is increased in quantity and he gets up to pass it five or six times in the night. The right leg was slightly swollen at the time of his admission.

The diagnosis made from these symptoms by this gentleman was "chronic gastritis." A second gentleman made the diagnosis of a "small granular kidney together with a chronic gastritis." A third diagnosed it as a case of "cancer of the pylorus," and a fourth coincided with the first in the diagnosis of it as a "chronic gastritis." He also found the specific gravity of the urine to be 1020 and he detected some fluid in the abdomen, besides an œdema of the right ankle.

Gentlemen: From the reports of the members of the section we are led to conclude that this patient is suffering from several abnormal conditions and that he is a very sick man. But there is one point not mentioned by any of the gentlemen, and that is, the amount of weight which he may have lost since his difficulties began, and this has an important bearing upon the diagnosis. He says, however, that he has not lost much he thinks, but perhaps it may be about ten pounds. I will say to you now, gentlemen, that this has been a case which has given rise to much doubt as to the diagnosis in the hospital. The symptoms point especially to the stomach. As far as I can learn, the vomiting occurs shortly after taking food into the stomach, and not before meals or when the stomach is empty, I believe. This has an important bearing in reference to the possibility of the vomiting being uræmic in character.

One of the section spoke of chronic uræmia, and he based this diagnosis upon facts irrespective of an examination of the urine. The occurrence of vomiting should always excite your suspicion, for it renders the possibility of the presence of this form of kidney disease most likely because you may not get any appreciable amount of albumen, or any casts at your first examination. Here, however, the normal specific gravity of the urine and the absence of casts or albumen are against this diagnosis. I will call your attention here to the fact that the vomiting always occurs after the taking of food and not in the morning before eating as is commonly the case in uræmia, so for some reason the stomach is intolerant of ingesta. This man's age might excite the suspicion of cancer of the stomach but the long duration of these troubles is a good point against it. Yet he has lost weight to a considerable extent, and he presents an aspect which is rather sallow and somewhat suspicious of carcinoma. But, on the other hand, the vomiting is not such as usually occurs in carcinoma, where it is usually dependent upon an obstruction of the pylorus, which therefore allows of an accumulation of ingesta, and these undergo chemical changes, and hence give rise to vomiting; but this does not take place until a considerable time after meals, and not so soon as in this man. Another point, too, is that latterly he has improved greatly, and if the vomiting had been carcinomatous you would not expect that. Yet I have sometimes seen cases of carcinoma where the patient went on taking food perfectly well, and such cases give rise to doubt in the diagnosis. The important point in the diagnosis of cancer of the stomach is, however, the presence of a tumor, yet there may be one so situated sometimes that you cannot make it out, while if you can do so it is a most conclusive point in the diagnosis. I suppose there is no tumor here for no one of those who have examined for it in the hos-

pital has found any. Yet the rectus muscle, because of its firm contraction, was mistaken for a tumor of the stomach by one of the members of the section; and let me say that you are very liable to be deceived thus by a localized contraction of the rectus muscle, and cases of doubt have thus arisen in the practice of persons of large experience. Altogether then, I think there is no good evidence for making the diagnosis of carcinoma, and he has not the characteristic pain of cancer.

There is one condition which we might have here which was not mentioned by the section, and that is an ulcer of the stomach. The character of the vomiting here would point to an ulcer rather than to a cancer, for the vomiting in ulcer of the stomach often occurs shortly after taking food. But ulcer of the stomach in a man of his years is not very common. But the symptom which would make the diagnosis of ulcer altogether probable would be the occurrence of hæmorrhage into the stomach, and if this man had vomited up blood at any time I would not hesitate to make the diagnosis of ulcer, but there has been no such vomiting, and the gentleman who stated that there had been was mistaken. It is also possible for hæmorrhage to take place in cancer. One gentleman stated that the patient had some fluid in the peritoneal cavity, but none was found by the others or by those who examined him in the hospital, and though I have not tried to find any, yet I don't think that there is. I will, however, try the percussion test to settle the question. Yes, upon percussion I find that he has fluid there, and this is an important point in connection with the presence of a little œdema of the lower extremities. I will now percuss over the liver to determine its size. If I measure the distance here between the point where pulmonary resonance ends and tympanitic resonance begins, I find that it is only about two and a half inches, while it should ordinarily be four and a half. I am therefore inclined to think that the liver is a little smaller than it should be, and it is highly probable that there is a certain amount of cirrhosis which has given rise to the hydro-peritoneum. We will now fall back upon the stomach again and inquire what is the cause of this vomiting. As we may exclude cancer and ulcer, I think that the most rational conclusion is that he has had, and still has, a chronic gastritis.

If this vomiting continues I propose this treatment: Let him be nourished for a week or ten days principally by the rectum so as to give the stomach a rest, and then see what this will do for his relief. This has been an interesting case, gentlemen, and one that has with good reason given rise to some difference of opinion as to its diagnosis.

A CLINICAL LECTURE ON DYSPEPTIC VERTIGO.

BY

ALONZO CLARK, M. D.,

Emeritus Professor of the Principles and Practice of Medicine in the College of Physicians and Surgeons, New York.

This man is a German, about 50 years of age, and he complains of feeling very dizzy for the past four weeks. He says he went to bed one night feeling all right, and when he awoke in the morning he was unable to get up, and he could not get out of bed for two days; and since that time, though he can get around, yet he has not been able to walk ten feet, he says, without feeling as if he should fall. He has had a pain in his side ever since the war, but he has never

been really sick until about four weeks ago. He does not complain of any gastric symptoms, such as belching up of air or passing wind by the bowels, or of any disagreeable sensations after taking food. He has had piles, but they were tied off. He also has peculiar feelings in his hands, and they are weaker than natural, as are also his legs below the knees. But when he closes his eyes and a pin is put between his thumb and fore-finger, he is able to distinguish the head from the point. He is also able to carry his finger to his nose with his eyes closed, without much hesitation, and he can stand steadily with his eyes shut, though not quite as firmly as is natural. He has not been able to work much for the past five or six years, because of the pains in his arms, and he also has a good deal of pain in the upper occipital region of the head. He says, too, that he has had a rheumatism in the legs for two years, and a sensation as if from a thousand stitches begins in his hand and runs up his arm.

There does not seem to be here any pathological change which we can refer to the brain directly, but possibly there may be a congestion of the spinal cord high up where the nerves which go to the arm are given off, and this would account for his peculiar pains in the hands.

A good many years ago Mr. Bird found that nitro-muriatic acid would aid digestion, and he found that two or three drops of the strong acid would relieve dizziness from a disordered stomach, if given at the beginning of a meal. He published a report of his successes, and then I made a trial of this remedy, but I did not administer it just as he directed, but gave it after meals, and in five-drop doses in five tablespoonfuls of water, taken through a tube in order to preserve the teeth from the action of the acid, and I often gave ten or fifteen grains of pepsin with it, to aid digestion. I can hardly tell you how many cases of dizziness I have seen cured by this administration. One case I remember was that of a man eminent in politics, who came to me fifteen years ago complaining of dizziness, and I gave him this acid for it. In ten days he came back, and told me that he was now well. He then discontinued the use of the remedy, and in three or four months he came back and asked me for the same prescription, and when he began using it he was cured again.

At another time I was riding in a Third avenue surface car and I noticed that the conductor looked at me very intently, and at last he came up to me and asked if I was not Dr. Clark. I answered, yes. Then he asked if I did not know him, and I said No. Then he said: "Four weeks ago I came to you because I was dizzy most of the time, and you gave me some acid, and in four or five days I was completely cured." This remedy for dizziness is not in very general use, and it is worthy of being employed far more extensively than it is now I believe. I am disposed to try this here, though this man does not give us all the symptoms of dyspepsia. He does not give the very common symptom of belching up of wind, but he does complain of a pretty constant pain in the left side, in the region of the stomach. He also speaks of passing balls from his rectum, by which he means, I suppose, sycalious accumulations of feces, so I would give him laxatives and direct him to eat such things as would aid the action of the bowels. The best of such foods is Graham bread, which is wheat flour ground and not bolted, and it is an excellent laxative. He should eat fruits, too, and perhaps the best are apples, especially if they are baked, and these may be sufficient to keep the bowels in proper condition. These, then, are the

two things which I believe he requires. I became very much interested in this class of cases after I had heard of Dr. Bird's plan of treatment, and now I like to see them because I feel that I can give them relief.

FRACTURE OF THE ODONTOID PROCESS.

A CLINICAL LECTURE.

BY

STEPHEN SMITH, M. D.,

Professor of Clinical Surgery, in the Univ. of New York.

Here is a man whom I show you because he presents an interesting example of a form of fracture usually fatal, but here resulting in recovery. This man broke his neck last year, and that, too, in a very dangerous place, namely: about the location of the first cervical vertebra; and now if you will put your finger into his throat you will be able to feel the first cervical vertebra projecting into the back part of the mouth. This is probably a case of fracture of the odontoid process, and most cases of this kind have been fatal until lately, and death was instantaneous, just as it is in an animal whose medulla has been broken up by the operation of pithing, as it is called.

The history of this case is, that last December this man fell from a height upon the deck of an ice barge, and he struck on his neck, and when he was taken up he was found to be partially paralyzed in his arms, and now he is bearing the effects of this paresis in a permanent contraction of the muscles. He was taken to the hospital and he was so paralyzed that he could not sit up in bed, and quiet was insisted upon. He gradually, however, gained more and more use of his limbs, and his head became firmly fastened to his neck with the chin bent downward upon the chest, and so rigidly that he could not move his head from side to side, or up and down. These cases of fracture of the neck present a very peculiar history. It was once supposed that fracture of the odontoid process was always immediately fatal, and that this was the real cause of death in cases of hanging; but it has recently been proved that the accident may occur and the man still live and go about his business, and yet, finally, die suddenly from some accident, such as being hit upon the head. Thus Dr. Parker tells of a case of a milkman in this city who came from Long Island to sell milk. One day he was thrown out of his wagon upon his head, but he got up and then found that his head was loose and that he could not hold it up nor turn it from side to side, but he steadied it as best he could with his hand, and then got into his wagon and drove home again. For the next three or four days he could not lie down or get up without his head moving about, unless he steadied it with his hands. He then went and saw Dr. Parker, and he, and all who saw the case, were greatly surprised because this accident had always been thought to be fatal. That man finally got so well that he resumed his milk business, and as he drove around he would have to hold his hand upon his head to steady it whenever he drove over a rough place where there was much jolting. So he went on for six months, and then after a hard day's work he suddenly fell dead at the table, his head dropping forward upon his chest. The specimen of this fracture is now preserved in a museum.

Recovery takes place in these cases by the formation of an ankylosis between the vertebræ at the seat of the

fracture, so you might easily kill this man instantly by striking him upon the head, and so breaking up the adhesions which have formed. In this case we have exactly the same condition that existed in a case in this hospital, which I found when I came on duty here five years ago. I found his head drawn up with his chin projecting, and he was paralyzed from his neck downwards, and he was emaciated almost to a skeleton, and was suffering intensely. He had fallen in some way and struck upon his head, and immediately afterwards he felt this peculiar looseness of the head, and he went home, and after resting for three or four days he resumed his business at the carpenter trade for a time. Then the paralysis came on, and he went to the hospital, where he stayed for the next six or eight months, and then he died with his head thrown back and his chin out. I found upon examination that the atlas had slid forwards so that the spinal cord was pressed upon, and this caused his death. But he had a fractured odontoid process, and yet he had continued his work for some time, so it was proved that a man may recover from this accident. At that time I collected a series of thirty-two cases of this nature which had been overlooked in the medical publications, and in some of these no odontoid process could be found, and there were two or three cases among them where the odontoid process was perfectly movable upon the atlas by an articulation with it.

It seems to me perfectly evident that this man is suffering from a fracture of the odontoid process. In treating this fracture we have tried a number of different splints, but we have found none which answers so well as to keep the patient sitting in a chair with a cross piece behind him to which his head is bound so as to steady it. This man was treated so until he gradually became so improved that he could walk around the wards without his head becoming loose, and now he can even run a little.

Observe the evidence of spinal injury presented by his hands. You see there is an unusual thickening of the joints of the fingers, and a loss of action with permanent contraction of some of the muscles, due to the injury of the spinal nerves. You see the man cannot turn his head around at all, and this is diagnostic almost of these cases. If he should accidentally trip and fall there would probably be a sudden displacement of these bones resulting in immediate death.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, OCT. 19, 1882.

The President, Dr. Fordyce Barker, presided. The minutes of preceding meeting were read and approved. The report of the Corresponding Secretary and of the Librarian were approved. The Section of Practice of Medicine reported that a meeting had been held October 17, at which Dr. E. C. Seguin read a paper on "Myelitis Following Intoxication by Paris Green, (Arsenical Paralysis)."

The next order of business was the scientific paper of the evening, entitled,

"CONSIDERATIONS ON THE ORIGIN AND NATURAL HISTORY OF TUBERCULOSIS,"

Which was read by its author, Dr. T. E. Satterthwaite, and discussed by Drs. Delafield, Jacobi, and Welch.

The following is a resumé of Dr. Satterthwaite's paper:—

Mr. President and Fellows of the Academy: The study of tuberculosis has always attracted profound interest on account of its relation to pulmonary consumption. More recent study of this subject has been based on experimental pathology, but before this morbid anatomy was the basis of study.

It is maintained by some that any tissue may be the seat of this disease. We have then at our disposal a vast mass of accumulated facts, from which we will attempt to sift out the present condition of this question. Let us glance first at the histology of phthisis, then inquire as to its unality or duality—next taking up the question of its infectiousness, and finally discussing how it originates and the infecting origin.

By the term tubercle we understand miliary tubercle, which was first described as long ago as 1700. Bayle in 1789 describes tubercular phthisis. Lænnec was the first to describe its morbid anatomy. He maintained, however, that pulmonary phthisis was not inflammatory, and this view was also held by Louis. It is interesting now in analyzing the natural history of this disease to weigh well the remarkable works of Louis and Lænnec. Rokitansky even before this time had spoken of tubercle corpuscles. Virchow at length stepped in and though simplifying the mingled views held, by his rigid requirements raised an insuperable barrier to the usual theory. Niemeyer connected phthisis with pneumonia and his views received a wide consideration, but again opinion was turned back to the French school. Villemain inoculated animals with the cheesy matter deposited in human phthisis and developed the disease in them. His doctrines however were not favorable received. Burdon Sanderson and others argued that although the lesions of phthisis were produced by such inoculations they were the result of irritation, not of specific poison. Waldenburg proved this to be true by producing the same lesions with different kinds of irritants. As a result of these conflicting experiments observers were in the dark as to the genuineness of the real or artificial disease. It was thought tubercular deposit could originate only at a certain point but we have learned now that it may originate at different points. The histological structure of tubercle is complex but about the true nature of the granulations there is no room for doubt.

As to the question of the specific nature of phthisis the testimony of scientific experiments is diametrically opposed. The experiment of inoculating rabbits with tuberculous matter and thus developing the lesions of the disease was negatived by that of another experimenter who by a process of forced inhalation of various substances found that while many substances could be inhaled with impunity those in a state of decomposition produced lesions which to the microscope were tubercular. Some dogs were forced to inspire an atmosphere impregnated with phthisical sputa, others with other irritants, the same results being produced in each case. The most recent experiments seem to sustain the specific theory. Thus one class of observers claim that the inoculation of tubercular matter produces tuberculosis, while others oppose this view. The truth remains that the results from the same experiments are diametrically opposed.

Experiments made in consumptive hospitals to elucidate this point of the specific origin of the disease have not been favorable to the specific theory. We claim, with Virchow, that no decisive facts have yet been furnished, and that hazard plays a most import-

ant role in the results obtained. When one experiment negatives another it is difficult to believe that we are in the presence of a specific contagious disease. Wolfe's experimenting of inoculating the eye with tuberculous matter, and after a period of incubation producing miliary tubercle was most striking. Another experimenter fed five lambs on tuberculous matter and on examination after post mortem they were found to have tubercle, but on killing five lambs not fed on tuberculous matter, these were equally found to have tubercle. It has been concluded, therefore, that under the influence of confinement, certain foods produce phthisis in animals; long continued lactation also predisposes to the disease. Cattle apparently healthy are contaminated by cohabitation with those diseased.

Bovine tuberculosis differs from human tuberculosis in that the tubercle in man becomes cheesy, in cattle cretaceous. Also, while ulcers and cavities are the signs of advancing tuberculosis in man, they do not occur in cattle. In the latter the glands often become of enormous size and as hard as stones. (Specimens exhibiting the lesions of human and of bovine tuberculosis were passed to show the great difference between them.)

Dr. Charles Creighton, of England, believes that there is a human form of tuberculosis like that which affects cattle, and bases his belief on a study of twelve cases of this variety of tuberculosis.

Hogs, rabbits, and guinea pigs are unsuitable for experimentation, since they are predisposed to tuberculosis.

The theory of Koch, with which we are all familiar, is that a peculiar microphyte may be found in every form of tuberculosis. He cultivates it in the blood and isolates it and performs inoculation. I have not been able to discover the bacteria of Koch, but only ordinary forms of bacteria. By a process of staining with anilines I have found a bacteria shaped like lady fingers, which form in groups and take the color of Koch's bacteria but do not correspond to his description.

How may we explain the different aspects under which phthisis occurs? In one-half of all the cases the cheesy change takes place; in about one-third the calcareous, and in about one-third miliary tubercles are formed by the separation of cheesy matter.

As to the question of the heredity of phthisis, statistics solve this beyond a doubt. Contagionists explain heredity in this way: they claim that there must be a proper soil for the contagious principle, viz., a vicious constitution, or it will not develop. They claim two factors in producing the disease, a predisposing condition and an active agent. Scientific treatment should be devoted to the first cause, the predisposing condition. In conclusion Dr. Satterthwaite formulated the following conclusions, arrived at by his analysis of the subject:

That tuberculosis is a disease deserving of the name hereditary. Proper preventive treatment enables those liable to it to escape. The most distinguishing characteristic of tuberculosis is the miliary tubercle, which is the result of inflammatory processes. The lungs and serous membranes are most frequently attacked by the disease. In the gradual development of these bodies they undergo cheesy degeneration. Tubercles rarely occur without more or less surrounding inflammation. Tubercles may be confined to a single lobe of the lung or not. Tuberculosis is inoculable, though other substances may produce, apparently, the same lesions. There is some good evidence that consumption is contagious. The best evidence on this point is obtained by a study of phthisis in cattle. There is no evidence to prove that the meat of tuberculous cattle

has produced human phthisis, but it should nevertheless be condemned as being deficient in nutritive power. Bovine virus used in vaccination never develops consumption.

Dr. Delafield spoke as follows:

Mr. President and Gentlemen:—Dr. Satterthwaite has gone over so many points connected with the history and relations of tuberculosis that it is hard to tell which one to discuss. My own interest in the disease and my own studies centre in its morphology, in the actual lesions we find in the bodies of those who have died from phthisis.

There is a tubercle tissue, which while it has nothing specific about it, can be recognized by its characteristics and is not identical with miliary tubercle. I believe we may get as the result of inflammatory processes this form of tubercular tissue or we may get miliary tubercle or diffuse purulent infiltration. Tuberculosis is always produced in combination with acute or chronic inflammations. In acute tuberculosis the complicating inflammatory products are distinct from tubercle tissue proper. When we come to chronic forms of tuberculosis the morbid anatomy becomes very complicated.

Dr. Jacobi said: I have taken careful notes while Dr. Satterthwaite was speaking and it appears to me that his object was to give a digest of all the perplexities of the tuberculosis question. I look upon tuberculosis and phthisis as distinct. There are many cases of tubercle without phthisis and phthisis without tuberculosis, but this does not prove that phthisis can not produce tuberculosis nor tuberculosis phthisis. As to parasitic theory it must be remembered that, with its partisans, there is always necessary a certain diathesis, some call it the scrofulous diathesis. Whether scrofula and tuberculosis are not shades of the same disease is not settled.

Looking at the question from a clinical point of view: We see phthisis in families in which there is a diathesis and in those where no diathesis exists. The same process of premature ossification which by early closure of the fontanelles produces epilepsy and idiocy or immobilizes the spine takes place in the cartilages of the ribs, shortening the ribs, contracting the chest, interfering with the expansion of the lungs. In such cases phthisis often occurs.

Dr. Jacobi alluded next to the influence of enlarged glands in scrofulous children in developing phthisis. He adverted to the frequency of phthisis after measles and whooping cough and to the importance of cutting short these affections. In view of the many facts which clinical observation had taught him he could not believe a bacillus to be the only cause of phthisis. The causes were too many. We should aim to prevent phthisis by preventing broncho-pneumonia, and broncho-pneumonia by preventing glandular enlargement, and all other predisposing diseases.

In conclusion Dr. Jacobi alluded to the fact that phthisis and tubercle are developed especially at certain periods of life and commented on the influence of the anatomical construction of the heart and vessels which in infancy made the right heart stronger and led to a condition of the lungs favoring the development of the variety of the disease peculiar to childhood. Though it might be a great blessing, both from a pathological and therapeutical point of view, to have a bacillus for every disease, he thought it most important to study the clinical aspects of the disease and by appropriate treatment prevent its development.

Dr. Welch discussed the paper at some length, going in detail over the points taken up by Dr. Satterthwaite.

He believed the inoculability of the disease had been established. In every specimen he had examined he had succeeded in finding the bacilli of Koch. He believed phthisis to be essentially pulmonary tuberculosis, that the diffuse processes spoken of by Dr. Delafield merit the name of phthisis, and that Koch's experiments were most important and not to be rejected because they failed to harmonize with certain clinical aspects of the disease.

Dr. Satterthwaite closed the discussion. The Academy then adjourned.

SELECTIONS FROM JOURNALS.

LITHOLAPAXY IN A WOMAN. By EDWARD T. CASWELL, M.D., Surgeon to the Rhode Island Hospital, Providence, R. I.

Since the introduction of Dr. Bigelow's brilliant procedure for the removal of stone in the bladder, allusion has been made by several writers to its adaptability to women. As I have seen no notice of any case in which the operation has been performed upon the female, I venture to report one. The procedure presents great advantages over the methods previously in use, which may be summed up as the removal of the entire stone through the dilated urethra, or by cystotomy. By the first of these methods a greater or less degree of incontinence is likely to ensue, and the second involves the closing of the wound in the bladder, with the possible risks of a vesico-vaginal fistula. In comparison with either of these, the operation of litholapaxy is far preferable. The facility of execution, and the entire freedom from after effects, are sufficient to commend it at once to the surgeon.

This case was the ninth of my series, the rest, of course, being in males, and the difference between the operation in the two sexes was much greater than I had imagined. The following is the record:—

Mrs. L., aged 51, English; had been in this country but six months. Nine years ago she passed the first stone, and several at different times since, all of them small. The last was passed in January, 1880. She has suffered from the present stone for four months, and complains of pain, frequent micturition, with blood and thick mucous discharge in the urine. The pain, while in my office at a preliminary visit, seemed excruciating. The stone was, of course, easily felt, both by the sound in the bladder and by the finger in the vagina. Having etherized her, I dilated the urethra by the passage of conical steel sounds, up to 29 Fr. A modified Thompson's fenestrated lithotrite, and one after a model of Dr. Keyes, were both used. The fragments were evacuated through a straight tube, 28 Fr., which passed with the utmost ease. The only drop of blood visible in the operation was at the meatus, after the introduction of the No. 29 tube in dilatation. The fragments weighed when dried 100 grains, and the character of the stone was phosphatic. Four days after the operation, Dr. Kemp, of Lonsdale, whose patient she was, wrote: "She has not had an unfavorable symptom, and would be up and about her work but for a slight attack of diarrhœa." The operation occupied less than forty minutes.

In looking back at it I am inclined to think that the patient, but for the ether, might have left the table and resumed her calling. Certainly, the advantages over the other methods are evident, and I believe that even smaller stones would be much more easily removed by this method than by any other.—*Medical News.*

REPORT ON ANTISEPTIC SURGERY IN GER-MANY.

Foremost in publishing results of new methods tried is the clinic of Prof. Esmarch in Kiel and we find a long article "On the use of Iodoform and Turf Dressings," by Dr. G. Neuber, in Langenbeck's *Archiv*, 1882, Band xxvii, the observations for which were made under Esmarch's own superintendence. The report says that, after the German Surgical Congress in 1881 was held, it was thought time to give iodoform dressing a trial; it was accordingly used for abscesses, whitlows, boils, suppurating glands, etc., the opened cavity being filled with iodoform, and covered with a pad of carbolized jute, which was sometimes left until the whole wound had healed, and was only exceptionally removed. The results of the use of iodoform in tubercular granulation processes were watched with great anxiety, inasmuch as very good results had been previously obtained by the use of Listerian permanent dressing. In fact, the list of resections reported on a former occasion by the same author in the *Archiv*, Band xxvi., Heft 1, p. 106, was one which, for brilliant results, has never been surpassed. Out of thirty-four resections of joints, thirty-one were cured, all of which had had a dressing, which was at the least sixteen days, at the most thirty-five days *in situ*, and was only once applied. In testing the efficacy of the iodoform dressing, all the most difficult cases to treat were reserved for it. The patients were all scrofulous, and had affections of the bones, joints and soft parts. In each case, after incisions had been made, the granulations were well scraped out with the sharp spoon, and the cavity stuffed, rubbed, or powdered with iodoform, and covered with a dressing of the same. The results were not at all brilliant. Of twenty-one cases there were only thirteen cured, and these only after several months in hospital. Five had fistulæ, one had amputation done afterwards, one patient was still under treatment, and one died, after excision of the hip, of tubercular meningitis. This method is, therefore, neither quick nor radical, and does not protect the patient from relapse. The principal advantages it possesses over carbolic dressings are, that the iodoform is less irritating to the wound, is less volatile, and is absorbed less rapidly than carbolic acid.

Billroth's method of dressing with iodoform is as follows. The wound is powdered thinly with the drug, or filled with it, then a layer of cotton-wool with powdered iodoform on it follows, or a piece of iodoform gauze; then around this a sufficient quantity of wool, perfectly free from fat, a water-tight material; lastly, the bandages fixing and compressing the whole. These are changed from the second to the fourth day: later on, every five to eight days, though some dressing, according to Mikulicz, is left on longer.

The method adopted, according to Neuber, consists of sprinkling the wound with, at the most, 3 grammes (45 grains) of iodoform; puncture of the skin, or insertion of absorbable drainage-tubes; cat-gut sutures, placing in position of a small turf pad, with 2 per cent. iodoform on it, and of a larger one with nothing on it; fastening of the whole with a gauze or water-glass bandage; changing of the whole every twelve to forty days. The difference between the methods is merely the substitution of India-rubber drainage tubes for the absorbable ones used at Kiel.

Gussenbauer gives an exact account of treatment with iodoform in tuberculosis of bone in the *Prager Med. Woch.*, 1881, No. 35. There were twenty-eight cases, of which fourteen were complete successes whilst fourteen others were not completely

cured, four cases altogether having had only one dressing, whilst others had one several times, even as many as nine.

Neuber says that had the toxic characters of the drug been better known, and their development by contact with fresh wounds been understood before it was generally used, the sad accidents which have been recorded would have never been reported. In dressing mucous cavities, the best results have been obtained, the only drawback being the said poisonous effects, which are prone to develop rather quickly in these cases. Two deaths had to be reported in this division from iodoform poisoning alone. The symptoms of intoxication are much the same as those reported by Schede, Kuster, etc., described in the *London Medical Record* for May, 1882. The places in which most caution is necessary are the larynx, oesophagus, mouth, nose, and pharynx, as resorption from these localities is rapid, through contact with food, etc. An iodoform crystal was found in a branch of one of the bronchi in one case which collapsed.

In applying iodoform to the ordinary cases in which carbolic acid had hitherto been used, it was found that, under one dressing carried out with jute and gauze impregnated with iodoform dissolved in ether and alcohol in the strength of 10 per cent., and drawn through a wringing machine, twenty-four cases healed up to a few fistulæ and superficial granulations, which subsequently disappeared, whilst eight required several dressings, and two died. These results, however, were not much better than previous ones; but iodoform has the advantage in being cheaper than the more elaborate carbolic dressing, the preparation of dressing is much simpler, and it has been already mentioned as being less volatile than carbolic acid. But iodoform should not be used in larger quantities than 4 grammes, and the 5 and 10 per cent. gauze jute and cotton-wool is much to be preferred to the carbolic acid preparations.

Now follows a most interesting report on a new dressing material, which was quite accidentally discovered by Neuber in the summer two years ago. A laborer one day appeared in the clinic, who had sustained a complicated fracture of both bones of the forearm eight or ten days previously, whilst working on a moor; the soft parts being extensively lacerated, and the wrist-joint opened. The man at once got a comrade to surround the fracture, as well as the whole forearm, with a thick paste of turf-mould, on which was then laid a sort of rough splint of wood. With this primitive dressing, he came to the clinic ten days afterwards and, on being questioned, said he was very well otherwise. Numerous washings in a hand-bath at length freed the arm of all the turf, when it was found that the wound was healing beautifully, and had not a sign of suppuration, the surroundings being without any reaction. Some parts of the wound had united by first intention, others were granulating nicely. On the application of a Listerian dressing and fixation in a better position, the fracture and wound healed readily. The idea that in turf-mould another good antiseptic dressing might be found, then struck Neuber, and he accordingly proceeded to have analyses and investigations made, the results of which showed that the dust resulting from the manufacture of sods of turf by the circular saw, as carried on in Schleswig-Holstein, and which is very light in weight, as well as in color, possesses a powerful affinity for ammonia, carbonate of ammonia, and bad-smelling materials generally, and takes up nine times its own weight of water. In the infantry barracks at Brunswick such turf mould is used

as a deodorizer in the privies, and renders fæcal products absolutely innocuous. A series of experiments on its use in the dressing of wounds having been carefully carried out, the turf-mould is now used in the following manner, which has been very successful. Bags of gauze wrung out in 5 per cent. carbolic solution are prepared of two sizes, 12 and 24 square centimetres respectively. These are filled with turf-mould (or dust), the smaller bag with mould containing $2\frac{1}{2}$ per cent. of iodoform, which is laid on the wound directly it has been disinfected with either carbolic solution ($2\frac{1}{2}$ per cent.), zinc chloride (8 per cent.), or, at most, 3 grammes of iodoform. Over this is laid the larger bag, the mould in which is saturated with 5 per cent. carbolic solution. The whole is kept in place by a gauge bandage. As these exercise a very energetic pressure upon the wound and its surroundings, it has been found unnecessary to use the elastic compressive bandages hitherto in vogue, unless in the case of wounds near the openings of the body. In Esmarch's clinic, it has never been found necessary to remove this dressing for secondary hæmorrhage, even though the bloodless method is often adopted; and it is the rule to apply a permanent compressive dressing before undoing the tubing above the wound, the only other precautions necessary being that the limb should be elevated, and all ligatures applied before closing the opening. In all, there were treated in this manner, from September to the end of November 1881, fifty-five wounds on fifty-three patients; the list comprising seven resections and osteotomies, seven scrapings out of carious bones and joints, five amputations, twelve extirpations of tumors, six removals of sequestra, five abscesses, thirteen various wounds, amongst which were seven nerve-stretchings and two herniotomies. There was no fatal case, except one after nerve-stretching for tabes dorsalis said to be due to pyæmia after disease of the prostate and abscess of the bladder; but such a case should hardly have been operated upon. No diseases of wounds were observed. Thirty-one cases were without fever; aseptic fever occurred eleven times, slight inflammatory disturbance only six times, elevation of temperature four times. In fifty cases the first dressing remained on until the end of the time intended, mostly a fortnight or more; and in only five was it necessary to remove it before that time had elapsed. Turf prepared according to Neuber's directions may be obtained from the Torfbereitung's Fabrik in Ultersen, Schlesweig-Holstein; and the cost of a turf dressing amounts to 1.80 marks, whereas a carbolic acid Listerian dressing costs upwards of 15.08 marks, if we take an amputation of the thigh as a standard, for which, at least, six complete dressings are required at 2.44 marks; hence turf dressings are eight and one-third times as cheap as these.

Summed-up, the advantages of turf dressing are these: 1. A given quantity of the mould takes up more fluid than jute, gauze, or cotton-wool. If it be lightly moistened, its absorbent power is still further increased; wounds remain perfectly dry under it. 2. It possesses a great power of absorbing products of decomposition of organic substances, and hence prevents the same from occurring, and acts even in the unprepared form. Further experiments are being made in this direction. 3. The moistened mould is a very soft but still elastic substance, so that it is easily placed in the required position in the bags before applying them to the inequalities of the body. 4. It is the cheapest of known antiseptic dressings, one pennyworth sufficing for a dressing, and will be more so when it is found that the preparation

with some antiseptic can be left out. 5. It makes a very suitable pad for all purposes when enclosed in gauze.

Neuber has further, since the date of his first essay, treated seventy-eight wounds with this dressing, that is, up to February 1882, and much the same class of cases, with the addition of ovariectomy, hysterectomy, and operation for floating kidney, one case of each. Of all these, only three died, namely, one from tetanus, one from delirium tremens and sepsis, one from gangrene of the leg and sepsis after resection of the knee on account of hæmophilian inflammation thereof. Altogether, therefore, 133 cases have been hitherto so dressed. The dressing remained from ten days to six weeks in 122 cases, and had to be changed only in 8. In 85 per cent. of the cases, the wound was entirely healed on the removal of the dressing. The remaining 15 per cent. have since been healed or are under treatment. Glass splints are almost exclusively used in this clinic, and have been found to answer all requirements.

Schmid, in the *Centralbl. für Chir.*, Band ix., Heft 1, p. 3, 1882, reports on the use of salicylic acid in removal of sequestra, etc., at the Augusta Hospital in Berlin. He finds that there was no disturbance of the healing process in the wound; that no fever appeared; and that the secretions of the wound never decomposed. In removals of sequestra, the cavity was packed full of powder (salicylic acid), and over it was placed salicylic wadding. The first dressing remained on an average eight to fourteen days in position, and the decomposition which might take place in the outer layers of the dressing had no influence on the wound itself. Compared with iodoform, this dressing seems to have similar advantages; but the author is strong in his belief in the specificity of iodoform against tubercular processes. Though often 40 grammes were put on wounds, no salicylic intoxication showed itself. The amount of secretion is greater than in iodoform dressing; but, altogether, nothing showed the latter to be superior to salicylic acid. With the exception, however, of Neuber's work just quoted, no result seems as yet to have been definitely arrived at by these different authors, whose evidence on all sides is very conflicting. It will be certainly safest to use not more than 4 grammes of iodoform for any purpose until we know more about it.

Hahn (*Berl. Klin. Woch.*, No. 24, 1882) reports seven cases of vaginal extirpation of the uterus, one of which ended fatally, and as he believes, solely because he adopted drainage in it. His method sometimes consists in closing the peritoneal opening after removing the uterus, and then, without drainage of any kind, which is sure to promote peritonitis, filling the well-disinfected vagina with about four or five teaspoonfuls of iodoform, and packing it with gauze of the same nature. In other cases, Hahn leaves the opening patent, ligatures everything lateral *en masse*, and places, after due disinfection with 0.3 per cent. salicylic solution, a teaspoonful of iodoform at the very end of the cavity, so that the intestine is seen through the speculum to be lightly powdered with it, and then dusts four other spoonfuls along the vagina, closing it with a piece of iodoform gauze. This was done in carcinoma, and the dressing had to be changed after twenty-four hours, the vagina being irrigated with luke-warm salicylic solution, which usually brought out most of the iodoform.

In the German Surgical Congress, held at Berlin from 31st May to June 3rd, 1882, the subject of antiseptics was introduced by Kummell of Hamburg, who

believes, that in using solution of corrosive sublimate, he has now achieved successes which will put iodoform in the background altogether. He uses a solution of 1 in 2,000, wadding saturated with 0.5 per cent. of sublimate, ligatures of silk boiled in 1 per cent. solution, catgut preserved in the same for twenty-four hours; and, as a powder dressing, he uses glass powder disinfected by the addition of solution of the sublimate. Cheaper than this, Kummell says, is the use of quartz, screened through a fine sieve and burned. It is forced out of the wound by the granulations, and no grains of sand ever become incarcerated; but to prevent this he uses charpie made of glass-wool which also makes the best material drainage. At the same meeting, nearly every known substance was advanced, and held to be the correct one; for instance, acetate of alumina, sand, ashes of all kinds, saw-dust, charcoal, etc.; but the result is that any substance will act as an absorbent. It is only necessary to carry out the primary antiseptics correctly, to operate rapidly, and to leave the dressing undisturbed for as long a period as possible.—*London Medical Record*.

MEDICAL NOTES AND NEWS.

Syphilitic Inoculation by Tattooing.—As illustrating somewhat aptly one of the channels by which syphilis is engendered *ab extra*, the following case may prove useful. The patient was the finest man, as to physique, in the Scots Guards, and his general character being equally good, it was a matter of regret that the misfortune did not befall a less worthy representative of the corps. He was a young Scotch soldier drawn from the agricultural class, six feet four inches in height, with chest and limbs fully proportioned and symmetrical, when he came to hospital. He had two circular patches situated on the hand and feet of a tattooed figure, about four inches long, which embellished the forearm. This figure is of somewhat classical order, and rather epicene in general aspect, but possibly represents the goddess of war, as a crown surmounts the head of the personage. The spots resembled "blind" boils, to which recruits are subject, and no special attention was given in the first instance, the patient declaring his health to be, as it appeared, good. The eruption remained stationary, however; the boginess changed to induration of base, with a scaly surface; feverishness and sore throat ushered in eruption on the face, and the nature of the ailment stood clearly revealed. I regret that inquiry failed to elicit satisfactorily the source from whence the virus came, although the artist was a private in the regiment, in fact, its professional tattooer. My late colleague, Dr. Campbell, who served in China and Japan, informs me that syphilitic inoculation through this medium is not at all unfrequent in the latter country, where tattooing, according to recent travelers, has reached the acme of perfection. (*Vide* Miss Bird's *Travels in Japan*.) In past years, when deserters were marked, and afterwards sought to obliterate the letter "D" by merging it into a flower-pot and rosebush, there was more scope for the practice than at present. And, *en passant*, let me add that until the legislature relaxes somewhat its present excessive philanthropy, and reverts to a distinctive mark, there can be no hope of materially lessening the many thousands of deserters who cost the country annually so large a sum.

FREDERICK ROBINSON, M. D., *Brit. Med. Jour.*

A Case of Fatal Poisoning by Toadstools.—is reported from France. A. Rev. Mr. Todds who was living in the country with his family, found, while walking in the woods with his children, what he supposed to be mushrooms. They took home an armful, which the cook prepared. The children did not partake of them, but the two adults and the servant did so. They were speedily so much prostrated as to be unable to go for help; the nearest village was eight miles away. By chance a neighbor visited the house after about eight hours. Medical aid and nurses were summoned from Paris, and after a few days all three persons were supposed to be out of danger, but the husband had a relapse, which took the form of peritonitis, and he died. —*Boston Medical and Surgical Journal.*

Dr. Jephson was a distinguished physician of Leamington fifty years ago. The doctor was noted for being brusque and uncereemonious. A great London lady, a high and mighty leader of society, who was taken suddenly ill, sent for him. Jephson was so off-hand with Her Grace that she turned on him angrily and said:—"Do you know to whom you are speaking?" "Oh, yes," replied Dr. Jephson, quietly, "to an old woman with the stomach-ache."

Use of Condom in Gonorrhœa.—Several years since, one of my patients, suffering with gonorrhœa, complained to me of the annoyance caused by the rags, etc., worn around the glans penis to keep his clothing free from the discharge. He asked me if I could not recommend some other mode of cleanliness, that would not be open to the objections that accompany the tying of rags around the part. The idea of using a condom immediately suggested itself to me, and I advised its use. At his next visit he expressed himself as being very much pleased with the treatment. Since that time I have frequently prescribed the same thing for other patients, much to their satisfaction. My plan is to cover the glans with a thin layer of disinfectant cotton, and then to draw the condom over it. By this means undue pressure is avoided, perfect cleanliness obtained, and the movement of the limbs are not interfered with, as would be the case with a cumbersome bandage.—*Southern Clinic.*

The Cure of Saccharine Diabetes.—In a paper by Dr. G. Félizet, read before the Academy of Sciences, August 14, says the *Journal d'Hygiène*, the author claims to have discovered a remedy for a disease usually regarded as incurable—saccharine diabetes. The author states that he has succeeded in putting an end to glycosuria artificially produced in animals, and that the medicine that suppresses that artificial glycosuria will likewise cure diabetes in a few weeks or months. There exists, says he, a bond of union between artificial glycosuria, intermittent diabetes, and confirmed diabetes and that bond is irritation of the rachidian bulb. It is not, then, in masking the disease by submission to the severities of a regime exempt from bread, feculents, sugar, etc., that we succeed in curing it, but by tapping the very source of the production of sugar, that is to say, by suppressing the irritation of the bulb. Bromide of potassium, by the elective action of sedation that it

exerts on the functions of the bulb, suppresses the effects of such irritation with a rapidity that is often surprising, and, in large and repeated doses, cures the diabetes.

Pulvis Doveri.—People whose "inward griefs and peristaltic woes" have been relieved by the powder of Dover, do not generally know to whom they are indebted for this excellent compound. Doctor Dover was a friend and probably pupil of the great Sydenham. He commenced practice in Bristol, where having made some money, he longed to make more. The Roll of the College of Physicians tells us that he joined with some merchants in fitting out two privateers for the South Seas, in one of which, the "Duke," he himself sailed from Bristol, 2nd August, 1708. On the passage out they touched at the Island of Juan Fernandez, where Dover on the 2nd February, 1708-9, found Alexander Selkirk, who had been alone on the island for four years and four months, and whom Dover brought away in the "Duke." In the April following Dover took Ginaguil, a city or town of Peru, by storm. In December, 1709, the two privateers took a large and valuable prize, a ship of 20 guns and 190 men, in which Dover removed from the "Duke," taking Alexander Selkirk with him as master, and finally reaching England in October, 1711. After this cruise Dr. Dover removed to London, where his practice soon became great. His patients, and the apothecaries who wished to consult him, addressed their letters to the Jerusalem coffee house, where at certain hours of the day he received most of his patients.—*Can. Jour. of Med. Sci.*

The last advices state that the ravages of small-pox at Cape Town are worse than ever. Two thousand cases are reported, of which 600 have been fatal, mostly among natives, but the disease is spreading among the whites.

Dr. Ardouin, French physician, attached to the General European Catholic Hospital, Alexandria, has been named by the French Government, Chevalier of the Legion of Honor, in recognition of his services during the present Egyptian crisis.

An Incubator for Infants.—M. Tarnier, the surgeon of the Maternity Hospital in Paris, struck by the great mortality among infants prematurely born, and those which are very sickly after birth, has conceived the ingenious idea of constructing a box which is almost exactly similar to the incubators used for poultry. This box is divided into two compartments—the lower one being used as a reservoir for hot water, while the infant is placed in the upper one, which is well stuffed at the sides and fitted with a sliding glass cover. The temperature is maintained at 86° Fahr., and M. Tarnier has found that by keeping infants in the incubator for a period varying from two days to six weeks, their vitality is enormously improved. He has made experiments upon five six-months children, six seven-months, and thirteen eight-months children, and he has only lost two of them, whereas, according to his statement, three-fourths of them would have died but for this adventitious aid to vitality.—*Lancet.*

Isolation in Contagious Diseases.—At a recent meeting of the Académie de Médecine, M. Hillairet read a report prepared in answer to a question asked by the Minister of Public Instruction, regarding the length of time a pupil affected with any of the con-

tagious diseases should remain separated from the other pupils. M. Hillairet's report may be summed up in the following propositions:

1st. Pupils suffering from varicella, smallpox, measles, mumps or diphtheria should be completely isolated and hold absolutely no communication with the other members of the school. 2d. Isolation should continue for forty days for smallpox, measles, scarletina, and diphtheria; twenty-five days for varicella and mumps; the patient should have repeated baths before being allowed to join his comrades. 3d. The clothes worn by the patient at the time he fell sick should be submitted to a heat of 90°C ., and then to repeated fumigations of sulphur. 4th. The bed clothes, curtains, carpets, furniture, and even the walls of the room occupied should be carefully disinfected, washed, and aired. 5th. If the pupil is taken sick at home he should not be allowed to return to school without the certificate of a physician attesting that all these precautions have been faithfully carried out.

An Operating Couch for Venereal Wards.—

Dr. O. Petersen writes, in the *St. Petersburger Medicinische Wochenschrift*, a short account of a new kind of couch now employed in the syphilitic wards of the Alexander Hospital, St. Petersburg. In minor operations about the groin and the genitals, the loins and nates of the patient are apt to become soaked in blood, morbid secretions, or lotions used for washing the wound or seat of disease. To avoid this inconvenience, Dr. Petersen has contrived a bed, interrupted in the middle by a space one square metre in extent, unoccupied by any mattress; on each side of this space, towards the head and foot of the bed, is a mattress covered with mackintosh. A deep tray is fitted to the iron sides of the bed, so as to lie under the open space, the tray is perforated by a large aperture through which fluids may escape into a receptacle beneath. A stout iron bar bridges over the space, being fixed to the iron sides of the bed, along which it can slide upwards and downwards. In the middle of the bar is a raised portion, convex upwards and covered with a narrow mackintosh pad or cushion. If a bubo has to be laid open, the couch is rolled alongside the patient's bed, and he is raised on to the couch, the bar over the space being slid under his nates, so that his sacrum rests on the elevated cushion. The sinus, when laid open, can be freely washed and syringed, the fluid running down the perineum or over the pelvis, by the flanks, into the tray under the space, and the integument of the patient's back escapes all contact with the fluid. The flanks and perineum can readily be dried. By a contrivance, the foot of the couch can be elevated or depressed, to place the patient in a convenient attitude for phimosi operations, or for any incisions in the perineum, where much blood is lost, and free washing with water or lotion is required.

Forests and Climate.—Dr. Schomburg, the Director of the Botanical Gardens of Adelaide, Australia, has written a recent pamphlet on the influence of trees upon climate. Contrary to the opinions now beginning to be generally accepted by scientific men, the object of the paper is to prove that the destruction of forests usually has the effect of reducing the rainfall, while, on the contrary, the planting of trees broadcast over a country is one of the best methods which can be adopted for ameliorating its climate and increasing the annual fall of rain. Ploughed land attracts moisture to a much greater degree than the

unbroken soil. In considering the effect which the removal of forests has had in altering the climate in South Australia, the only direct test that could be taken from the records issued by the Government astronomer is the experience of the neighborhood of Adelaide. If the time is divided which has elapsed since 1839, the year in which observations were commenced, into two periods, there is found for the first and average rainfall of 22.8 inches, and for the second one of 21.7 inches. It will thus be seen that on the whole, the rainfall at Adelaide is diminishing, though very slightly, and perhaps the diminution in the amount of timber may have something to do with the change. Dr. Schomburg, in searching for illustrations of the effect of trees on climate, goes further afield, and brings forward some instances in which he claims that loss of forests means loss of rainfall, and *vice versa*. He recalls how the Russians, by burning down some of the Trans-Caucasian forests at the time of their struggle with the Circassians, converted the country from a fertile land into a desert, simply through the cutting off of the supply of rain. Similar instances of rain having deserted a country denuded of forests have occurred in the Mauritius, in Jamaica, the Azores, and it may also be added to a still more remarkable extent in several of the smaller West India Islands. No sooner had the forests of these places been destroyed than the springs and rivulets began to cease to flow, the rainfall became irregular, and even the deposition of dew was almost entirely checked. On the other hand it is accepted that Mehemet Ali increased the fertility of Egypt enormously by planting trees. He alone planted some 20,000,000 on the Delta, his successors followed up the work, and the rainfall rose from 6 inches to 40 inches. Planting has also, says Dr. Schomburg, produced remarkable effects in France and Algiers. Extensive regions have been planted with gums and other trees, which, for the most part, grew to about thirty feet or forty feet in height, and it is noticed that the quantities of rain and dew which now fall on the adjacent land are double what they formerly were.

Smoking in Russia.—The smoke which most forces itself upon the attention of travelers in Russia is neither the smoke of the peasant's *isba* nor the vapor from "flaming towns." It is the smoke caused by the burning of tobacco in the debatable and much-debated fashion pursued in the countries of Western Europe. Here, however, lack of power or want of will to smoke is well-nigh unintelligible. A man who objects to smoking is a much more insufferable nuisance than the man who insists upon smoking. To tell the truth, however, neither of these two classes exists in this country. The Russians do not divide society into smokers and non-smokers; they decline to make railway carriages a sort of battle-ground for those who love the weed and those who do not; they refrain from suggesting, either by word or deed, that a man's social qualities or respectability can be at all correctly inferred from his attitude towards tobacco. The reason of this is that in Russia everybody smokes, and provision is made accordingly. Save the church, no place is here sacred from the weed. The papyrus is no respecter of domestic sanctities. Every chamber of every well-kept house has its *pepelnitza* for the reception of cigar ashes. Hotels have similar conveniences, smoking being practised as well as permitted in every accessible apartment in these buildings. In England the railway traveler is left to dispose of his cigar ashes either by depositing them on the floor of

the compartment or by disposing of them through the window. In the former case the result is always uncleanness—in the latter the wind sometimes interferes with the smoker's project, not always to the convenience of his fellow-passengers. Here railway authorities provide a small box or receptacle in each carriage for the use of those who smoke. The "tobacco question" is all the more easy to deal with in Russia for the reason that women smoke as well as men. The Russians themselves—I am here giving a masculine opinion of the masculine sex—are inclined to disparage feminine indulgence in the weed and to regard the women who smoke as socially "fast." It is true enough that one sees few women smoking here in the street. Public use of tobacco in the daytime is confined among the female sex to the peasant classes. At the same time disinclination to be considered "fast" is no proof of a woman's incapacity to consume large quantities of tobacco. As a matter of fact the women of the middle and the upper classes in St. Petersburg are all of them, with rare exceptions, inveterate smokers. The silver or gold papyros case in much more indispensable than a fan to a lady mixing in society. To be without cigars is to be careless of one's reputation. For a guest, lady or gentleman, to decline a papyros, is one of the most serious social offences that can be committed.—*London Globe*.

The St. Bernard Morgue.—The great curiosity of the Monastery of the Mount St. Bernard is the morgue. If the day is a little warm the brother who attends to visitors hesitates a bit before opening the door of the wooden house just outside the chief building. He first drives away the dogs, who come prowling about, snuffing the air suspiciously, and has them shut in their room opposite the huge refectory. Then he marshals the little company of international tourists in line before the mysterious door, and opens the chamber of horrors. The keen mountain air rushes in, and presently you are conscious of a faint, sickly odor—not strong enough to be repulsive, but eminently suggestive of death. Then, as you stand there peering with strained eyeballs into the darkness, you become vaguely conscious that a face is looking at you. I defy any one who is possessed of the smallest grain of imagination to see that mysterious face growing slowly out of the obscurity without a sudden sinking of the heart and a chill which no effort of the will can suppress. It is the face of a woman—and yet of a ghost; a kind of corporeal presence divested of life, and yet so horribly like life, that you are almost afraid that the bony and skinny frame to which it belongs will arise and stretch out its dreadful arms, and drag you down into the depths which you so instinctively shun. The good brother does not say anything; he watches the effect of this curious spectacle upon you. Pretty soon you can discern that the face belongs to the body of a woman—and that this woman is clasp- ing to her breast the form of a tiny babe. The mother is seated on the ground, and appears to be dazed by the light pouring down into her darksome habitation. But, oh! the horror of her face! Here is death without decay; here, in this wondrous air, on this pass more than eight thousand feet above the sea level, putrefaction is unknown; and bodies found in the snows in winter—or after the white shroud has melted away from the bosom of nature in the Spring—are preserved entire so long as the monks care to keep them. The grimness of the spectacle is enhanced by the fact that nearly every body found is contorted, twisted, strained and knotted in fantastic shapes. Now and

then one which bears all the appearance of tranquil sleep is brought in; but in most cases there are indications that man and woman, in their battle with Nature, fought hard and desperately and refused to be overcome until every particle of force was exhausted. The brethren gather up the bodies with tender care and place them in the dead house in the usually vain hope that some relatives may come to recognize them. Where is the father of the child which this strange spectral mother clasps in her arms? What was the history of the woman who had thus wandered in the wild winter from the Rhone valley toward the kinder and warmer Italian slopes? Perhaps her husband was with her—and perhaps his body now lies at the bottom of some precipice where even the "pious monks of St. Bernard" cannot find him—or perhaps he is here, in the dead house; perhaps that prostrate body, seeming to grovel on the rocky floor, is his. The peasants rarely carry any paper which can completely identify them, and sometimes the unfortunates found dead in the pass here led such wandering lives—going to Switzerland for harvest work in the summer, and to Italy when the winter nips them—that their passports even give no clew to their birthplace or native villages.—*From a Letter to the Boston Journal*.

Hæmophilia.—Hæmophilia is a very learned looking word, and, as it should do, it bespeaks a disease of which we know very little. The malady, which from time to time so unhappily incapacitates H. R. H. Prince Leopold, is one which most unprofessional people think to be due to some abnormal condition of the skin. A person who bleeds easily is said to have only one skin, in place of the proper number which it must puzzle many to tell. It is not, however, any such malformation, but what it is is much less certain. Such persons bleed easily from not only the skin when wounded, but from the gums and mouth, and mucous membranes. They also bruise easily, and in the same way it is probable that the troubles in the joints from which they suffer are to be explained by supposing some slight injury to the synovial membrane, and a subsequent escape of fluid to the cavity of the joint. We do not know what is the malformation or disease which predisposes to such an easy escape of the blood from its proper channels. The chemical constitution of the blood has been thought by some to be at fault, the smaller blood-vessels by others; but no chemical or microscopical investigations that have been conducted as yet have been anything but contradictory, and, therefore, have been without result. One curious fact, however, has been elicited from various observations that have been made; and this is, that it is hereditary to a marked degree, and that it is transmitted along the male much oftener than along the female line.—*Brit. Med. Jour.*

M. Pasteur demonstrated, two years since, that fowls contracted charbon only when their temperature was lowered, their normal temperature being 111° Fahr. M. Paul Gibier has recently determined that frogs contract charbon when under the influence of relatively high temperature. He placed twenty frogs in tepid water, and inoculated them with charbon virus; five of them contracted the malady. Their blood indicated the presence of bacteria. These elements were larger than those observed in the bovine and ovine species. Guinea-pigs and rabbits were inoculated with the blood of the frogs, and contracted charbon.

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SOME SANITARY SUGGESTIONS.

Dr. E. G. Janeway, the chairman of the Committee on Hygiene of the New York County Medical Society, in an admirable report read before the Society, Oct. 23rd, 1882, made some very excellent suggestions as to what sanitary measures were advisable to improve the hygienic surroundings of New York.

Though the suggestions were not novel they lost none of their pertinency on that account. Some of the needs mentioned were, a better water supply, a better method of disposing of garbage, the establishment of parks in the confines of the city so scattered as to give to all the benefits of a fresh air breathing place, the establishment of proper hospitals for such contagious diseases as are not now properly provided for, etc.

As the chairman of the committee of fifty (who have been instrumental in nominating able and honorable gentlemen for the positions of trust in our local government), puts it, we are all convinced of the expediency, nay, the necessity, of such sanitary improvements as these, but we are fearful of the abuse of power which such improvements would entail by which unscrupulous office holders would again make, as they have before made, public improvements but a cloak under which they may rob the public treasury.

It does seem that the consummation of these much needed measures would not be brought about until our citizens can be assured that they can be effected without wholesale stealing.

Certainly the present tide of public opinion is setting strongly toward such civil service reform as will give an impetus in the right direction to properly conducted schemes for improving the sanitary condition of our city.

Let us hope that the strong feeling evinced in putting into our executive offices men of acknowledged executive skill, an intimate appreciation of the city's sanitary needs, and a high sense of personal honor, may be auspicious of the beginning of an era in which our city shall emerge from the cloud which grasping, dishonest, incompetent politicians have thrown over the administration of her public affairs and prove that she can manage her affairs on business principles.

INTERESTING AND INSTRUCTIVE DISSECTION, A FEW HOURS BEFORE DEATH, IN A CASE OF CANCER OF THE STOMACH.

A woman residing in Louisville, Ky., had cancer of the stomach, and it becoming apparent that life could not much longer be prolonged, Dr. Koehler, homœopathist, of Louisville, made a long incision in her belly, when he "had the pleasure" of seeing the tumor before him; thus confirming his previous diagnosis. The stomach, or so much of it as was involved in the tumor, was cut out, the vessels tied, and the wound in the stomach was closed by about forty sutures. The examination occupied an hour, a large portion of which time was consumed in the application of the sutures. A piece of painstaking which would seem to have had no other purpose than to render the post-mortem appearance of the body more agreeable to her friends. Perhaps she had no friends; but in case one has, we would suggest that hereafter, in making such *ante-mortem* examinations, the sutures be omitted, since the long time required for their introduction always renders it possible that death may take place before the study is completed, and the surgeon might then rest under the unpleasant suspicion of having killed his patient. Fortunately in this case the patient lived five hours and a half, and without doubt, therefore, she died of cancer of the stomach; nor was her death in any way accelerated by the examination.

We take pride in saying that this is the first scientific observation of this kind every made in this country, and we congratulate the surgeon on its pleasant and satisfactory result.

In the light of the discoveries made by the dissection, it now seems quite probable that, had the woman not died a few hours after, she might have lived.

LECTURES.

A CLINICAL LECTURE ON STRICTURE OF
ŒSOPHAGUS, AND PHTHISIS.

BY

ALONZO CLARK, M.D.

*Emeritus Professor of the Principles and Practice of Medicine
in the College of Physicians and Surgeons. N. Y.*

This patient is a man, sixty-five years of age. He has no business. He comes to us complaining of a soreness in the chest, and he says that five months ago he first felt some obstruction in swallowing after eating any solid matter, and since then he has been getting worse constantly, and now he can not swallow at all without forcing his food down with water. It seems to get lodged at the pit of the stomach and then it hurts him there, but when he takes a drink of water it feels to him "as if the thing turns over," he says, and then it goes down into the stomach.

If this description is correct he has either a spasmodic stricture of the œsophagus or a stricture due to an epithelioma, and the point at which he locates the trouble here is at the lower end of the œsophagus, which is the commonest situation of an epithelioma in this organ. But to determine certainly the nature of this obstruction we need to pass an œsophageal bougie, and as this lies rather in the domain of surgery than of medicine I have not provided myself with the necessary instruments to-day.

This difficulty of swallowing has been gradually increasing for five months as he says, but not until three weeks since has it been very bad. He can now drink only water and milk and he has to take these in moderation at first in order to be able to swallow them.

Three or four years ago it was announced that somebody had discovered that a gurgling noise could be heard at the point of stricture when the patient took a swallow of water, and since then I have listened for this a good many times, and I have found it to be a fact. So now I will try this test in this man. I mark on his back the point at which the œsophagus should enter the stomach and this is the point for me to listen at. Now, as he swallows, I do hear a very distinct noise as the water passes into the stomach, and it is more a rushing sound than a gurgling. I don't know as that sign is in itself diagnostic, but if not we will correct it by the aid of the surgeon.

There are two kinds of obstruction which may affect this portion of the œsophagus. One is a spasmodic stricture, and the other results from a new growth in the organ. I have met many cases of the spasmodic form, and I have always found that passing a stomach tube of the largest size would relieve them at once. I remember a case of a gentleman from Cuba, 60 years of age, who came to this city to visit his son, and I learned that on a certain day, when he was enjoying his usual health, he had taken his breakfast and lunch as usual with no trouble, but at dinner he found that he could not swallow a single mouthful, but his food would seem to go down a certain distance and then stop, and after distressing him for an hour or more it would then come up. This coming on of the difficulty so suddenly after having eaten two meals the same day, was diagnostic of a spasmodic stricture. I therefore advised antispasmodic treatment, and I spent most of the next day in trying to get him to pass food. But the occlusion continued until he had gone several days

without eating. Then I attempted dilating, and I passed a large bougie down the œsophagus without much difficulty until it reached nearly to the stomach, and there it stopped. I then used very gentle and steady pressure for about two minutes, and then the spasm relaxed and the instrument passed into the stomach. As soon as the tube was withdrawn the patient asked for a drink of milk, and when it was given to him he drank it with perfect ease, and for the remaining time that he remained in the city there was no obstacle to his taking nourishment.

I have met eight or ten such cases, and all have been relieved by passing the bougie once, but I have read of cases which were much more obstinate than those I have seen. So you cannot always be sure of relieving a spasmodic stricture at once. Even if the disease be an epithelioma the passage of an instrument sometimes does good temporarily, though the effect is not permanent, and the relief experienced is due to a tearing off of a portion of the new growth which is then pushed on into the stomach by the instrument. This man will be sent to the surgeons for further examination, advice and treatment.

CASE II.—*Phthisis.*—This man is 48 years of age, and he says he has a feeling of oppression over the left side of his chest, and sometimes he has pain in the same region, and a peculiar sensation which he describes as "feeling as if a plaster was being slowly drawn off his chest." Since last March he has been coughing a good deal, especially in the morning, but for the last month or so he has coughed nearly all the time, at night and throughout the day. In coughing he brings up phlegm and a yellow matter, he says. He has been under the care of several doctors already. Once or twice he has coughed up a little blood. He feels feverish most of the time, but more so during the night, and he also sweats at night, and he has been getting so weak that he has not been able to do any work all summer. He sweats so profusely at night that his night-clothes get wet through, and he has to get up and change them sometimes. The perspiration rolls in drops from his whole body, and it begins as soon as he gets in bed, and lasts all night.

Here, then is an array of three diagnostic symptoms. They are, cough, continuing longer than it is likely that a cold would last; the expectoration of blood; and night sweats. These of themselves alone are almost completely enough for making a diagnosis. You notice that there is some falling in of his chest more than is natural. Yet he is a very stout-looking man, and he says that when at his heaviest he weighed 180 pounds, and I do not think that he would fall far short of that now. I have no doubt, however, that upon further examination we will find some of the physical signs of phthisis. I ask him to take off his shirt, because a starched shirt is one of the hardest things to listen through, and it is a good deal worse than a board, for a board conducts sound better than this. Upon inspection I notice no difference on the two sides of the chest. On palpation I find the vocal fremitus a little more marked on the right side. On auscultation I get a distinct prolongation of the expiration, and with it some rasping râles on the right side, and the voice sounds are also much more distinct upon the right than upon the left side. There is hardly any difference in the percussion resonance on the two sides. The volume of sound is about the same, but upon the right side there is a perceptible alteration in its pitch, for the note is higher pitched than on the left. As I place my ear against his chest and ask him to count in a whisper, I hear pectoriloquy more distinctly on the

right than on the left side, though it is not very distinct on either. There is no embarrassment of the respiratory movements on the right side. He has then a very slight deposit of tubercle in the upper portion of the right lung, I think, but there is hardly enough to be sure of its presence if we did not have the rational symptoms to aid us in the diagnosis. His family history is negative as to phthisis. His father died of heart disease, and his mother was killed in an accident. His occupation is a carpenter, and he says he gets out of breath easily while at his work, and especially on going up and down stairs.

As to treatment, it is important that he should live out of doors a good part of the time, and eat well, taking one to two quarts of milk each day instead of water at his meals, and with this half a pint of rich cream, or a pint of New York cream, should be drunk. The surface of his body should be stimulated by frictions with dry flannel in the morning, and if his appetite is not sufficient, some appetizer such as the tincture of gentian or cinchona may be taken. If he can not take cream then he should substitute for it cod liver oil. For the night sweats, aromatic sulphuric acid, beginning with fifteen drops and gradually increasing up to forty-five should be taken in water three times a day through a tube. I would aim at maintaining a good appetite and good digestion, and I would rely on these more than on medicines. If this man has not inherited the disease I think that his chances are good for recovery as he is now only in the first stages. I have lately been giving for phthisis the hypophosphite of lime in five grain doses three times a day and continued for months, and also a dilute preparation of creasote or carbolic acid, of the strength of one part to two hundred of water, to be inhaled as a spray from an atomizer. I have not prescribed this last enough to determine its real value, but it does not seem to do any harm, so it is well to try it. Mr. Koch you know has recently found a minute creature incorporated with the tuberculous matter from the lungs which he believes to be the cause of the disease, and he has been able to separate it and to cultivate it, that is by placing it in a pabulum which will supply it with a proper food he has multiplied it into an indefinite number of similar creatures. No doubt there will soon be other works, written by other investigators, which will tell us whether or not this is the true source of the disease.

A CLINICAL LECTURE DELIVERED AT BELLEVUE HOSPITAL OCT. 12 1882.

BY

WM. T. LUSK, M. D.

Prof. of Obstetrics and Diseases of Women and Children in
Bellevue Hospital Medical College.

RETROFLEXION OF THE UTERUS.

Here is a patient 32 years of age. She says she has very bad headaches which she locates in the forehead and just over the eyes, and when she has them her eyes get red and the eyelids twitch. You will very often see such morbid conditions of the eyes in patients with retro-misplacements of the uterus, and there may be flushings of the eyes or twitching of the lids or difficulty in breathing. She also complains of attacks of

pain which starts from the cardiac region and shoot down the left arm. It is a very curious fact that the left half of the body and especially of its lower portion is oftenest affected, and that ovarian pains or sciatica or other peculiar sensations are more frequent on the left side. The pains which she describes in her left arm differ from that of angina pectoris, for the latter starts with a painfulness in the finger tips and then the pain extends up the arm and finally it reaches the heart, but here the reverse happens, for the region of the heart is affected first, and then the arm and hand. So this case is not then one of true angina pectoris. She complains chiefly of neuralgic pains in the left leg, in her head, in the region of her heart, and in her left arm, and also of pain in the stomach. This last is from a gastric dyspepsia probably, and this is sufficient to explain her other symptoms. She is very much constipated and this condition often follows from the pressure of the misplaced uterus upon the rectum, which result in a paresis of the intestine and a swelling of the abdomen. Pain referred to the region of the heart I will say, usually means indigestion in women, and the use of too much tobacco in men. For her costiveness she has been taking a tea made from senna leaves with the bitartrate of potash. She also has a difficulty in passing her water, and this is common in cases of misplacements of the uterus for when it is retroflexed the bladder is dragged upon and there is therefore apt to be tenesmus and frequent passages of scalding urine. When she is unwell she has a great deal of pain, and she also has the whites. These are very common symptoms in retroversion and retroflexion giving rise to an endometritis. Those forms of vaginal discharge that produce itching of the vulvæ are generally from the cervix, for the discharge from this part is naturally acid, but if there is rupture or a laceration of the cervix the discharge will be of a yellowish color from an admixture of pus with it. The discharge from an endometritis is accompanied by more pain but less irritation from its local action.

In making a complete examination of a woman we go over all the parts liable to be affected, beginning with an examination of the abdomen, but ordinarily in office practice we begin with an examination of the vagina, and then afterwards we examine through the abdominal walls in case there is any suspicion of the existence of a tumor. Here then upon inspecting her abdominal walls we notice the presence of scars having a silvery hue, which indicate past pregnancies, and that she has borne children some time ago, but not recently, for in that case we would find some reddish streaks mingled with the others. These scars are due to an undue development of the lymphatics in the abdominal walls during pregnancy, and these vessels at first become over filled and distended, and then after labor is over they become atrophied and obliterated and leave only this peculiar marking of the skin behind. In the next place we notice here that there is a depression of the navel, showing that if pregnant at all, she is not very far advanced in pregnancy. For when the gravid uterus rises out of the pelvis it pushes the navel outwards rather than causing it to retract. The next expedient in the examination is to compress the abdominal walls, in order to find whether there is any enlargement of the uterus, or any foetal movements in it, or any tumors of the kidneys, spleen, or other organs, or new growths in any part. I feel no unusual enlargement of any of the organs here, but when I get her to relax her abdominal walls still more, by telling her to bend her knees and draw up her legs, I can make a more thorough examination, for now I can press my

hand firmly down upon the abdominal walls, and almost at once I find I come in contact with the spinal column; and now I know that there is no uterine fibroid or ovarian tumor or other foreign growth in her abdominal cavity. You can make the examination of the pelvic organs with the patient either in the upright position, or on her back. You will choose the upright position sometimes if you are in a great hurry, for it requires less time for the patient to prepare herself. She simply stands with her feet somewhat apart or with one foot elevated upon a stool, and then you pass one finger under her thigh into the vagina. This method of examination has very few advantages except sometimes where there are deformities of the pelvis or peculiar displacements of the pelvic organs. In making the examination, after you have placed the patient on her back with her knees flexed and drawn up, you next cover your finger with some oil, vaseline, or soap, and pass it to the vagina with the thumb covering the index finger and resting against the middle finger, being careful not to soil her clothes. Having entered her vagina in this way, the first thing that strikes me is the fact that she has no perineum, then I notice that the vulva is of large size, and the secretion from the vagina is profuse, and I find the cervix hardly two inches from the orifice of the vulva measured on the anterior wall of the vagina, and it is thrown forwards so that it nearly rests on the symphysis pubis. From that condition of the cervix alone I should suppose that there was here a retroversion of the uterus. But to prove this I now press the fingers of my left hand firmly down into the abdominal walls above the symphysis until I bring them in contact with the finger of my right hand which is in the vagina. So I know that the uterus is not between my fingers, and hence it cannot be turned forwards. But on the other hand, with the finger in the vagina I do feel a tumor on the posterior wall of the vagina which is very sensitive here, and this is probably the uterus. To prove this I push the fingers of my left hand through the abdominal walls two inches above the symphysis, until they meet the prominence of the sacrum, and then I carry them downward until they come in contact with a free body which I can feel is movable between the hand and the finger in the vagina, and when it moves both fingers which touch it move with it. Hence it must be the uterus, and it is in a state of retroflexion. I say this because the uterus is not only turned backwards, but it is bent upon itself at the neck, and hence the fundus lies lower than the cervix. The organ is of a large size too, and it is so sensitive that I can hardly treat it here, or make any attempt to replace it at this moment. She should first be required to lie quietly in bed, while hot water injections are frequently made and the bowels are opened, and then after a moderate length of time this sensitiveness will subside, and then it will be time to restore the uterus and to maintain it in place by a pessary.

CASE II.—*Forceps Delivery in Powerless Labor.*—

Early this morning I was summoned to the emergency hospital to see a patient who had been for a long while in labor, that is, since midnight of the previous night; and until five o'clock yesterday afternoon she had not made much progress, so she was then sent to the emergency hospital. This is a specimen of the class of cases which are usually sent there. Labor then went on until the cervix was dilated and the head had descended into the cavity of the pelvis, and then there was no further progress. I was sent for to come and see her at half-past one this morning, and when I arrived I found the expulsive pains were extremely feeble, and

she was in a most emaciated condition, and her surface was cold and clammy, and she appeared very much as if in a condition of shock such as would follow a rupture of the uterus. I determined at once to use the forceps, and I succeeded in delivering the child without causing any laceration of the tissues, and then I left the patient in a precarious condition and with a very feeble pulse. She is doing well now, however. I have just learned that she has been vomiting obstinately for the past five weeks, and this is probably the cause of her present emaciation. She may have been suffering from uræmia, which caused this vomiting, for a woman in child-bed may have uræmia without any convulsions, though they are usually attendant upon this condition.

CASE III.—*Catarrh of the cervix.*—Here is a patient 36 years of age who was sent in to us because of a supposed abdominal tumor. I have been told that she has a tumor of some kind, and sure enough I notice here something that is an indication of the presence of something unusual inside the abdomen, for there is a drawing in of the navel. Now I also notice here upon her left side that there are two scars, and the question hence arises whether she has been tapped here or whether these were the openings made by a pelvic abscess. But the doctor tells me that they were made by a seton which was put in her left side to relieve a pain in that region. She says she has had seven children, and here you notice, too, the same lines on the abdomen which were so marked in the other case. Now I will examine her abdomen by palpation. In most patients you can tell if there is anything intervening between the abdominal wall and the spinal column by placing the left hand upon the abdomen and the right hand upon this, and then pressing downwards, with the combined strength of both hands, during prolonged and deep expirations until your hands meet the spine. But here it is not even necessary to relax the abdominal walls by telling her to draw up her feet, for I can easily touch the spinal column. So if there is any tumor at all here, it is not in the median line, though it may be either upon the right or left side of her abdomen. But if there is any in the right iliac fossa it is so small and so movable that I can not find it; neither can I perceive any in the left iliac region. Upon making a vaginal examination I notice that she has but little perineum left, and the uterus is quite high up in the pelvis. By counter pressure through the vagina and the abdominal wall I find that the uterine body is not turned backwards or forwards, and the only marked thing I notice is that the cervix is torn and that there is considerable of a cervical catarrh, and this is perhaps the cause of her trouble for which she comes to us. For the purpose of examining for a catarrh of the cervix nothing is better than a round or cylindrical speculum if you have them of the right size for each case. Some of them are too large for a woman who has not a lacerated perineum, and others are too small for a woman who has borne children, so you should possess a variety of different sizes to suit all cases. You must separate the labia and then pass the speculum in, directing it backward towards the rectum and pushing it along until the cervix is brought into view, and if the cervix does not come into the field as plainly as you desire, catch it up with a tenaculum and place it in the position you wish. Having introduced the speculum so as to expose the cervix to view, I will now clean off some of this secretion with the uterine forceps and a bit of cotton, and as I withdraw the instrument I see there is some blood mingled with the secretion due no doubt to the use of the tenaculum.

This patient has no pelvic or abdominal tumor that I can find and as this cervix can be better treated in an outer apartment, we will have her removed.

CASE IV.—Early Atrophy of the Genital Organs.—The doctor tells me that he has a case which he is about to bring in, of a patient with a rudimentary development of the genital organs, and her vagina, uterus, and external organs are in an extremely undeveloped state. As this is not a very frequent condition to meet with, I will examine her here and tell you what I find.

The patient is 28 years of age, and married. She has had three children, but for the past five years she has been sterile. She has not been unwell now for six years. She complains of nothing but some pain and soreness on the left side of the abdomen.

This is possibly a case of atrophy of the whole genital apparatus, for atrophy of these organs sometimes comes on as a result of labor. Upon vaginal examination I find an absence of the perineum, due to her having borne children no doubt, and in passing my finger back into the vagina I notice that the whole of the cervical portion of the uterus has nearly disappeared, and I am not able to feel the body of the uterus through the abdomen in front, but I can through the rectum. By passing one finger into the rectum you can often map out the uterus when you cannot tell its position or size through the vagina. You may meet a difficulty here, however, when, as in this case, you find that the rectum is pretty well filled with fecal masses, but yet I can feel the cervix and make out the fundus, which feels as if it was of a very small size. I will pass the sound now to measure the exact length of the uterus. I pass the sound along my finger, the tip of which rests against the orifice of the cervix, and then I try to follow the curve of the uterine canal with my instrument as I slowly introduce it. When it will advance no further I mark the point where it meets the cervix, and on withdrawing it the distance of the point marked from the end of the instrument will show you the apparent depth of the uterine canal. I find here that there is apparently a little shortening. The normal length of the canal is generally three inches in one who has borne children, and two and a half inches in a virgin. But here the sound shows a depth one-fourth of an inch less than in a virgin uterus. It is this atrophy of the uterus therefore that accounts for her sterility. The artificial sterility which we sometimes find among the upper classes is rare in women of her class in life.

ORIGINAL ARTICLES.

REMARKS ON A MEDICAL PROFESSOR'S RECENT CRITICISM OF THE AMERICAN ACADEMY OF MEDICINE.*

BY

LEWIS H. STEINER, A. M., M. D.

*Read before the American Academy of Medicine at its Sixth Annual Meeting at Philadelphia, Oct. 26, 1882.

Shall medicine withdraw from the family of 'learned professions,' in which it has been included for centuries; or shall its teachers strive to secure the best possible preliminary preparation for those who aspire to its honors and emoluments? It is strange that any physician should hesitate to express a decided opinion on this subject at a time when our medical faculties with more or less earnestness of purpose, are insisting

that *some* intellectual attainments are needed by those who apply for admission to their lectures,—and when some of these faculties have so increased the requirements for matriculation that they have become co-extensive with those demanded for graduation in our best colleges. Moreover, there has been a feeling widely prevalent in the profession for some years, that its members should not only be thoroughly prepared to meet its daily practical requirements, but also to take that place among educated men to which their vocation as members of a learned profession entitles them. There has been no inclination to cast reflections upon those who, having surmounted the impediments arising from imperfect scholastic preparation, had secured high positions as wise and skillful physicians. Such exceptional cases have always existed, and been recognized as illustrations of what genius can do in the way of overcoming obstacles to success, but they have never been considered as establishing a law, or as forming an argument against the policy of requiring, that admission to medical study shall be ordinarily granted only to those who have accomplished the preparation which the experience of many years has pronounced specially adapted for men whose life-work is to be study, research and investigation, as well as practical skill in the ranks of a learned profession.

The American Academy of Medicine has been striving to direct attention to the necessity of suitable preparation for medical study. Its membership is composed of those who have practically experienced the advantages of such preparation, and who desire to persuade students to complete the regular college curriculum before they enter upon the studies which are peculiarly professional. It has undertaken to reflect in no manner upon those of its professional brethren who have not had such preparation, but its members mingle with these in medical associations, in consultations by the bedside, and in all efforts made for the good of suffering humanity or the advance of the profession. It simply claims as one of its main objects—"the encouragement of young men to pursue regular courses of study in classical and scientific institutions before entering upon the study of medicine,"—because its members have experienced the advantages of such preliminary study, and earnestly believe that aspirants for high position in the profession would be greatly aided by thorough preliminary preparation. It is striving in a quiet, unobtrusive way to accomplish something that may benefit the profession; it antagonizes no plans or methods pursued, or even proposed, by others to secure a similar object.

While, however, engaged in this work, the Academy meets its first decided opposition from one who holds a Professorship in one of the largest medical schools in the United States, and whose utterances in a recent address before the alumni of another medical school,* sound more like "a defence of defective preparatory education," than an argument in favor of the widest and most comprehensive cultivation for the medical profession. As this address makes direct reference to the Academy, although not by name, and proceeds from one who recognizes the value of literary degrees as he employs A. M., and LL.D., as well as M. D., it is deemed proper to make reference to it at this meeting by way of protest against some of its dogmatic statements, and for the purpose of presenting the results that would follow the logical application of the

*Some Points on Medical Politics: Being the annual oration before the Alumni Association of the University of Maryland, March 1, 1882. By Roberts Bartholow, A. M., M. D., LL.D., Professor of Mat. Med. and Ther. Jefferson Medical College.

author's theory. His position is untenable, because it would dispense not only with preliminary, but with all regular professional instruction.

We are told that "an extended literary and classical course rather unfits a student for the acquisition and practice of medicine as an art, how much soever it may facilitate his progress in science." This startling proposition is advanced without a shadow of an argument in its defence, and there we are further told that "the men of most distinction at the present, achieved success by the exercise of other than the literary faculty, and the men who will hereafter occupy the foremost places will not owe them to a collegiate training." In which statement the author, while asserting what no one pretends to deny, that "the literary faculty" by itself has not insured success in a profession where practice must go hand in hand with theoretical knowledge, he at the same time dogmatically declares another thing, that "a collegiate training" will not aid men hereafter in securing the foremost places. The assertion evades the issue, which is that a collegiate training will, by its development of the mental faculties, the powers of observation and the general acuteness of the individual, fit a student better for the wide field of medical study and the application of its truths to practice, than he would be if deprived of such advantages; and the dogmatic declaration is gratuitous and, to say the least, disrespectful to the band of young men who are making exertions to enter upon professional studies with all the advantages flowing from preliminary training so that they may not blush to call themselves members of a learned profession. Both the assertion and the declaration are censurable, coming as they do from a Medical Professor, although no Medical Faculty as such would be reckless enough to discourage the preliminary education of its students. In strong contrast with the spirit of the utterances of the author may be quoted the following from a recent editorial in a leading New York Daily.* "Will a surgeon set a broken leg better because he understands Latin? they ask. Manifestly not; but the training of the mental faculties, the discipline of the understanding, the increased mental alacrity and resource that arise from long preparatory study, are important factors of success; and the culture and manners of a gentleman soothe the distracted nerves and tend to win the confidence of the patient."

Now the argument, based upon the past success of men in any of the professions, who have overcome—as genius always will—every obstacle in their way, is worthless when used to support the assertions, that there are no obstacles which may not be formidable to the young in pursuit of special professional knowledge. Some of the brightest stars in the past history of the profession, especially in France and Germany—where, as the distinguished Professor of Anatomy in the University of Pennsylvania recently stated in an address advocating special attention to *practical* studies, "three fourths of the scientific investigations of the world take place" and where classical study is an indispensable prerequisite to the study of medicine—have freely acknowledged their indebtedness to the assistance furnished by their collegiate training. Indeed no man has ever been rendered unfit for any professional work by preliminary scholastic instruction, wisely furnished under judicious direction. The two surgeons of this country—to whose care the life at the time most dear to his countrymen was confidently entrusted, because they were universally acknowledged to be of those

who stand on the topmost plane of American Surgery, were men who had passed with care through the college curriculum before they entered upon the study of medicine. It would be sheer nonsense to say that either Hamilton or Agnew was unfitted by such training for the professional studies they afterwards undertook, and only by great exertions overcame the obstacles which this training threw across their paths. As well say that Garfield himself, when he proudly determined to compass a full college course—which so thoroughly fitted him for a scholarly career—was handicapping himself with a load of learning that would unfit for any other occupation whatever, when the sequel demonstrated how this very preparation enabled him to attain a proud position afterwards, both in the army and public life, as a practical man.

It is not proposed to repeat here the arguments in favor of collegiate training. They have been presented to the Academy time and again. It is only intended to direct attention to the substitute which the Professor in question suggests for preliminary training. He says: "The medical college owes to the profession the duty of a rigid ascertainment of the candidate's fitness, medical, moral, intellectual." This duty is not to be exercised at the commencement of his medical course—when defects might be remedied—but at its close, when he asks for his degree. "Let every man who has the barest pretense of a claim to engage in medical study have the opportunity to demonstrate his powers. If he fail to prove his right to become a physician by a sufficient course of successful study, no merciful considerations should prevent the exercise of an inexorable justice." Now, apart from the fact that medical colleges generally are not endowed in this country, and hence are grievously tempted—by way of increasing their receipts—to make not only their course of lectures especially attractive, but their tests for graduation by no means difficult; apart, also, from the fact that it has been seriously suggested by some very wise men, within and without the profession, to separate the function of teaching from that of examining for graduation, so as to remove the temptation which greed for filthy lucre might present to the souls of impecunious or avaricious medical faculties;—apart from all this, does not this suggestion that there be no restrictions placed upon those who wish to study medicine, no requirement of preliminary knowledge (and not a medical college in the land would endorse such extreme liberality), excite also, as a logical outcome of such views, this query: "Why should young men or women be compelled to secure the endorsement of a medical college, as to their fitness medical, moral and intellectual, before they are allowed to practice medicine?" Is this not a free country, where any man can compete freely with his wares, whether material or mental, and secure all the patronage his ability or his cunning may bring to him? Why should there be any medical colleges at all? Do they not subject all comers, whether sluggards or men of unquenchable genius, to the same course of study, admit of no provision by means of which one might complete the curriculum in a shorter while another will need a longer time, require all to submit to a Procrustean rule before they can be crowned with the honors of the doctorate? Is it not possible for a bright youth, impatient of obstacles, to secure in a few weeks, *per saltum*, what droning lecturers dole out in hourly doses three times a week during a whole winter, to investigate the mysteries of the dissecting room, and

*N. Y. Times, March 26, 1882.

those of the laboratory, with the aid of the excellent manuals which are now placed at his disposal without forcing him to spend his time in listening to didactic lectures from the living lecturer prepared for more sluggish minds, to seek out for himself, book in hand, the nature of the disease which the morbid symptoms indicate in the patient? In a word, could not one become a physician or a surgeon, without even having attended a single course of lectures? The question is not, would it be wise for him to seek such an end without employing the means that the wisest of the profession have declared best adapted for the purpose? It is simply—could he do it? And if so, then, in the spirit of this Professor's indifference to preparatory training, why may we not denounce all medical colleges as unnecessary impediments to admission to the profession for men who prove themselves practically fitted for the same? Why may we not parody his words and say, "the place for the exercise of a just severity is at the bedside of the medical or surgical patient?"

Might we not, indeed, go further, and declare that all educational institutions are superfluous and unnecessary, because forsooth, men have acquired reputations as philosophers, linguists, and statesmen, who have never had the advantages they offer? Why may we not oppose all training as an interference with a man's natural bent, and therefore provide for nothing save the spontaneous manifestations of native genius? Why not get rid not only of College Instructions, and Medical Professors, but of all possible varieties of teachers whatever?

When the writer was a student in the University of Pennsylvania, there was in the class a man beyond middle age, who had been a successful practitioner of medicine for many years in Tennessee, exceedingly well informed in all the branches of Medicine, one of the very best dissectors in the Dissecting room, at one time an acting Assistant Surgeon in the Army, and yet he had never attended a single lecture in a Medical College. He had, however, laid aside the practical duties of his profession and undertaken, what was to him the tedium of attending courses of didactic lectures, simply because he wished to protect his son from the reproach of having a father "who was a doctor without a diploma." Here was a reputable and successful practitioner, who had secured his professional knowledge and acquired his practical skill in an unusual and abnormal way. His genius would have carried him through successfully, if even greater obstacles had appeared than he encountered in his struggles to secure in the western wilds the knowledge necessary for a practitioner of medicine. It was possible to do what he did. Others, with like genius and perseverance, might achieve the same result. But—one swallow does not make a summer, and no one would recommend such a course, because the people must be protected against the probable quack where there has been no training at the medical college, and hence, usage based upon common sense, demands that entrance to medical practice shall only be secured after a preparatory sojourn is made within the halls, where careful and judicious teachers expound the principles of medical science, and demonstrate their practical application.

During the brief period allotted to a course of medical lectures, every one feels that there is no time for other study, and yet, according to this Professor's substitute for preliminary training, the candidate should in some way be able to establish, to the satisfaction of the College, positive evidence of his fitness, moral, medical and intellectual, without having had opportunities other than for medical instruction during his

term of attendance. He has been placed in the same category, during his attendance upon lectures, with those whose intellectual and moral fitness is beyond dispute, in order to secure medical fitness, and yet the College, at the end of his studies, is to decide upon his moral and intellectual, with which it has had nothing to do, as well as his medical fitness. This surely is a new *role* for the Medical College to fill. And whence arises its right to attempt it? Is it a portion of the State, and hence endowed with sovereign capacity? Nay, verily; but, in the greater number of instances in our country, it is merely a private corporation, to which certain restricted powers have been granted, and which may even misuse the same to the detriment of humanity, should its authorities be venal, by disposing of its privileges for money. Moreover, not because of possible but of actual venality in some, there has been produced such degradation of the medical diploma as has aroused the indignation of the profession and forced the study of the problem—how medical fitness can always be evidenced by the possession of a diploma? The secular writer already noticed, speaking of a pamphlet by Dr. Frederic R. Sturgis, of New York, on the inadequacy of the present system of training for the practice of medicine, quotes Dr. S. as holding that, "reform must come from the body of the profession, not from medical colleges, whose interests are identified with a laxity of standard that will produce the largest number of graduates in the shortest possible time," and as finding "the primary source of the degradation of medicine and surgery below the standard of other learned professions in the fact that our medical colleges are really private enterprises, and as such, must be conducted in such a manner as to pay current expenses at least, if not to put money in the pockets of their corporators. They must present the most attractive baits possible to bring students, and what bait so alluring to the average young man who has saved a few hundreds as that which turns out a full fledged physician in two years, *without preparatory training*, and with the smallest expenditure of money."

All honor to those colleges, whether attended by hundreds or by scores of students, who set their faces against the routine manufacture of doctors, and resolutely determine that they will introduce no man into the fraternity who does not satisfy a high standard of fitness! Let them add, to their requirements, a preliminary training such as the experience of centuries has pronounced, when honestly and faithfully undergone, as calculated to fit a youth for undertaking intellectual tasks. Let the requirements for matriculation be gradually increased until the student within their walls shall be an exception, who has not by untiring labor and honest endeavor secured a preparation equivalent to that obtainable within our college halls. In the meanwhile let it be the duty of this Academy to aid in such a movement by encouraging the young to avail themselves of all the apparatus of learning possessed by our literary institutions, so that they may enter upon their medical studies with all the advantages that collegiate culture can furnish. The exceptional cases, where genius demands exceptional methods of preparation, will take care of themselves, and can never be affected by any adverse circumstances that may surround them.

It does not become the profession to defend any past deficient preparation of its members, by preventing the erection of barriers to the admission of imperfectly-prepared students to our colleges, but rather to increase these until the medical degree shall indicate

hat its possessor is an honored member of a learned profession which demands scientific knowledge and practical skill of its members.

The medical societies and the reputable medical colleges should not antagonize each other, but join hands in the accomplishment of this great work. Quackery cannot be suppressed unless we make the line of separation between it and the regular medical profession so distinct and so legible, that the people can recognize it at a glance, and thus be won to the choice of the true and genuine, rather than of the false and counterfeit. The true gold must be refined from all base alloy, until its lustre shall establish its superiority over all base metal, however skilful the imitation.

We want no defense of ignorance, no apology for insufficient preparation for medical study, but we do want earnest efforts to elevate the professional standard. Fidelity to this duty and no apology for its neglect should be the ambition of every medical teacher and practitioner in the land.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, OCTOBER 25, 1882.

The Vice President, Dr. Peabody, presided. The minutes of the preceding meeting were read and approved.

Dr. Howe exhibited a patient who had suffered from

POPLITEAL ANEURISM

for three years past. The cause of the aneurism was syphilis. He had tied the femoral artery, and by this means had diminished the size of the aneurism one-half. The catgut ligature was used. At the present time, opposite the point where the artery had been tied, there was a distinct indurated nodule and a small ulcer, which Dr. Howe thought due to the irritation kept up by the ligature. There had been for a time numbness in the leg and inability in walking.

Dr. Briddon remarked that he did not think the ulcer or sinus still remaining was due to the ligature as these might remain after any wound.

Dr. Bozeman presented a specimen of

INTRA MURAL AND SUBPERITONEAL FIBROMA OF THE UTERUS,

taken from a patient who had discharged from the uterus, Sept. 27th, with uterine pains, a fibro-myoma. Pelvic abscess supervened, which ruptured into the vagina; the patient did well up to Oct. 7th, when she developed peritonitis; on Oct. 19th she was seized with vomiting, dyspnoea, and great prostration, and died. The specimen was of interest as illustrating several varieties of fibroma, submucous, intra mural, and subperitoneal.

Dr. Bozeman presented a second specimen of

COLLOID CYSTOMA OF OVARY AND TRANSFORMATION OF OMENTUM INTO COLLOID TUMOR.

The growth had been removed from a patient at the Woman's Hospital, it was found to be extensively adherent. Both ovaries and the omentum were removed, the abdomen was closed the patient freely stimulated, and nourished by the rectum. She was doing very well.

Dr. Briddon inquired if patient had suffered from ovarian trouble during life, Dr. Bozeman replied in the negative. The right kidney had been much deformed

and there were patches of the deposit in various parts of the abdomen. In reply to Dr. Briddon's question as to whether the malformation of the kidney had led to changes in the urine, Dr. Bozeman said it had not.

Dr. Louis Elsberg presented two specimens of

INTRA-LARYNGEAL TUMORS.

The first case was that of a boy eight years old who had been seen by Morell McKenzie of London. The specimens illustrated the curious forms such tumors assume. In the anterior curvature of the rima glottidis was one portion of the growth and in the posterior curvature another, making the chink of the glottis transverse.

The second specimen had been removed eight or ten days ago from an Italian singer. It was located on the left side of the larynx, was spindle shaped, first an elevation, then a stem with a button on the end. Dr. Elsberg had never met with this peculiar form. In the first case the boy wore a tracheotomy tube and there was absolutely no voice, there was hoarseness only. In both there was complete restoration of function.

Dr. Ferguson exhibited three specimens. A skull showing malformation,

A TUMOR OF THE CLAVICLE WHICH CONTAINED FRAGMENTS OF BONE

which had been formed as the result of fracture, and a third specimen bones which exhibited very conspicuously the

LESIONS OF CHRONIC ARTHRITIS.

The patient from whom the last specimen was taken was 60 years old, he had complained of rheumatic pains, but had had no acute attack. In another case from which one of the specimens was taken the man had died of phthisis at 60, there was much atrophy of the muscles of the leg and thigh and the limb was fixed forming ankylosis of the hip joint.

Dr. Howe presented a specimen of

CALCULUS

weighing 354½ grains which had been removed from a boy of 16. He had suffered with bladder trouble for seven years. Dr. Howe had attempted to get the lithotrite on it but in vain and finally took it out by the abdomen, it was found to be adherent to the bladder. He had inadvertently pushed his finger into the peritoneal cavity. The boy was however doing perfectly well. Dr. Howe had never before seen a stone of this size and thought it remarkable that the boy had been able to attend to his work, having had no aggravated symptoms.

Dr. Beverly Robinson presented a specimen of

'HEART SHOWING STENOSIS OF MITRAL AND AORTIC ORIFICES.'

It had been removed from a patient in Charity Hospital. No valve lesion had been made out before death though the patient had all the external symptoms of advanced cardiac disease.

Dr. Robinson presented a second specimen showing "CHEESY DEGENERATION OF LEFT KIDNEY."

which had occurred in case of patient with catarrhal consumption. Also a third specimen of

"KIDNEYS IN CONDITION OF ATROPHIC CHANGE."

The urine had been examined a day or two before

death and contained no albumen. The urine in bladder after death was also free from albumen.

Dr. J. Lewis Smith presented a specimen of
**SPINAL CORD SHOWING LESIONS OF
 CEREBRO SPINAL MENINGITIS**

which had been removed from a child of ten weeks old. It had been brought to the Clinic when a month old showing lesions of syphilis, it was well nourished and improved under antisiphilic treatment. Subsequently it had developed symptoms of cerebro-spinal meningitis, *post-mortem* the entire spinal cord was found to be encased in a pseudo-membrane except about $\frac{1}{2}$ inch which showed fibrinous exudation. There was also fibrinous exudation at base of brain and some serum. The vertex was in normal condition. Dr. Smith alluded to his study of this disease, its first appearance in this city twenty years ago and the interest it had awakened.

Dr. Wyeth presented a specimen of

**"CARPUS AND POSTERIOR PORTION OF
 METACARPUS REMOVED BY EXSECTION
 FOR NECROSIS."**

The specimens were taken from a boy with tubercular diathesis. Amputation was necessitated two months after exsection and was performed by Dr. Gerster. He was now well.

Dr. Peabody presented a specimen of

"PRIMARY CANCER OF BLADDER"

which was of large size and had created very little disturbance. Patient 51 years old, married, for 10 months previous had suffered from difficult, frequent and scanty micturition and gastric disturbance, and œdema of the feet and legs. He acknowledged syphilis. Urine on examination was acid, 1022, contained albumen and pus but no casts, it soon became strongly alkaline and the bladder was washed out with borax and water. He developed profuse pulmonary hæmorrhage and died. On autopsy, the lungs were adherent to the chest and had a cavity holding three ounces White kidney. Surrounding the base of the bladder was a soft mass $3 \times 1\frac{1}{2}$ inches attached by a broad base. The condition is a rare one.

Dr. Peabody presented a second specimen of

"CONGENITAL ABSENCE OF THE KIDNEY."

He had presented a similar specimen a year ago. The patient from whom the present specimen had been taken was operated on Sept. 21st, for a very close traumatic stricture of the urethra. He died five days after operation. His urine had contained pus and albumen, was acid and sp. gr. 1026. On autopsy but a single kidney was found, this was of normal size and was in the usual position of left kidney. There were two renal arteries and but one ureter. The bladder was much hypertrophied. The distribution of the renal arteries was anomalous.

Dr. Wyeth remarked that he had seen in Bellevue Hospital museum a kidney with double renal arteries.

The society then went into executive session.

ABOUT BOOKS.

Carotid Compression and Brain Rest, by J. Leonard Corning, M. D., Member of the New York Neurological Society, etc. Published by Anson D. F. Randolph & Co., New York, 1882.

The author of this little memoir, after giving a brief but interesting historical review of what others have claimed for carotid compression, states the results of his own experiments, which have led him to substitute instrumental for digital compression. He has devised two instruments, one for exerting temporary compression, the other for prolonged compression.

It is stated that the most gratifying results have been obtained in epilepsy, maniacal excitement, and congestive headache.

In an appendix is detailed the results of experiments with carotid compression in conjunction with an apparatus constructed on Junot's principle, which envelopes the lower half of the body, also with hot bath to the lower extremities, and ice bags to head and spine.

Cuts of the instruments used for carotid compression are inserted.

The views maintained seem reasonable. They will, however, require further experiment to demonstrate their general utility. They are for the most part clearly presented, though the writer is too apt to clothe simple ideas in bombastic language.

SELECTIONS FROM JOURNALS.

DIPHTHERIA.—A Lecture delivered by invitation at the Bellevue Hospital Medical College, New York, Oct. 12, 1882, by MORELL MACKENZIE, M. D., Lond., M. R. C. P., Senior Physician to the Hospital for Diseases of the Chest and Throat, Lecturer on Diseases of the Throat at the London Hospital Medical College, etc.

The disease in question is sometimes considered to be a specific inflammatory condition of the mucous membrane of the throat; being produced by a definite cause. It generally occurs epidemically, though sometimes endemically. It is characterized by the formation in the throat of a false membrane. These are its main features. Now we have to consider what is the specific nature of the disease. Is it the result of certain germs or not? One of your most distinguished American physicians, Dr. Jacobi, does not believe in the germ theory of diphtheria; at least that was his belief two years ago when he wrote upon this subject. You are well aware that certain minute bodies called micrococci are found in the membrane of diphtheria. These are supposed by some to be the cause of diphtheria, while others believe there is nothing specific about them as they are found under other conditions.

When I wrote my book three or four years ago I was rather guarded on this point. I said there was a good deal to be said on both sides of this question; that if these germs did not cause the disease, they had a good deal to do with it. And I consider the question is not yet settled as to whether or not bacteria are the cause of the disease. You are probably aware of the recent experiments of Dr. Wood, of Philadelphia, which have shown that bacteria are exceedingly abundant in the false membrane of the severer forms of diphtheria; that, in fact, their number is in direct proportion to the virulence of the disease; and that they are present in

all cases. He demonstrated that these germs actually attacked the white corpuscles of the blood, thus killing the blood, as it were, at its very fountain head. My opinion is, that these bacteria have a most important connection with the disease. Dr. Wood says also that bacteria are present in almost every inflammation of the throat. But the important point which he has drawn attention to is that they are found in numbers corresponding to the severity of the attack. He showed also that their contact with healthy mucous membrane reproduced the disease. When the bacteria became dried up and were no longer active, they were not capable of reproducing the disease. But it may be argued in good faith that the drying process also destroys the specific poison of the disease as well as the bacteria. Therefore I say we are still where we were four years ago; the subject is still *sub judice*. It is of all things important that you should not lose sight of this question, because, if germs have nothing to do with the disease, you might be led to think it is less infectious than it really is.

This brings us to the point, whether croup is really a separate disease. Now, I hold that croup and diphtheria are quite identical, and that it will not be long before we shall have exhaustive works upon diphtheria which will consider it and croup as identical diseases. One reason why there is so much confusion about this matter, is that the meaning of the word croup is vague, it having been applied to a variety of conditions. There is what is called diphtheritic croup, catarrhal croup and nervous croup. I think a term that can be applied so loosely is a very unsatisfactory one to use in medicine. I consider croup with membrane in the throat to be the same as diphtheria. Then there is, as I have just said, catarrhal croup and laryngismus stridulus or nervous croup. I would strongly recommend to give up the term croup altogether, for it is used so vaguely that it only confuses. I believe though, after all, it is merely a theoretical question, and will not materially affect our practice, for we do not treat disease according to names. We look at a patient and observe the character of the attack from which he is suffering, determine the conditions of the pulse, and if he be strong or feeble. We do not treat the patient according to whether the disease is called by this or that name, but according to the indications present in his particular case. The discussion as to the identity or non-identity of croup and diphtheria reminds one of that which was seriously discussed many ages ago, viz., as to how many angels could sit together on the point of a needle, and is perhaps, after all, of little more importance.

We now pass on to that which is of much greater importance, the prognosis. I shall leave out altogether the symptoms and pathology of the disease, for if I were to go into a description of the various forms of diphtheria, it would consume three or four hours. All these matters are thoroughly considered in the textbooks. I want to urge upon you not to be guided in your prognosis by statistics. You must consider your patient quite independently of all statistics. The figures published by some authors indicate that half of the patients die, while those of another may indicate that more than half recover. According to our present systems of gathering statistics we can only accurately determine the number of fatal cases, for we have no means of knowing whether all those that are reported as having recovered were really cases of diphtheria. I have known of some gentlemen to have reported treating two hundred cases of diphtheria without a death. But I have always thought that all of these

could not have been cases of true diphtheria, or else the physician was exceedingly fortunate in having a large number of very mild cases. When the disease is accompanied by a thick membrane in the throat, especially in the larynx, it is very fatal. Therefore let your prognosis be most guarded.

A point I wish to speak of is, a high temperature early in the disease. This I believe to be indicative of a serious case. In diphtheria the temperature is usually not much elevated, but, in the severer cases, it is often excessively high from the beginning, and is accompanied with great depression. The case is likely to prove very serious if there is sickness at the stomach, and especially if there be vomiting.

As some of you may know, I consider the disease to originate from germs; that it is from the commencement a local disease. I am, in fact, of the same faith, regarding this matter, as your townsman, Dr. Elsberg, who more than ten years ago pointed out the fact that the disease was in almost all cases primarily local. Sometimes the severity of the attack may from the beginning be so great, that the disease will appear to be constitutional from the commencement.

These cases I believe are analogous to those of scarlet fever, where the patient is stricken down from the very moment of onset of the disease. These points bear upon the prognosis.

Now we pass to the treatment, which is perhaps even more important than the prognosis. Here you will find the remedies recommended very numerous, and in many instances directly antagonistic. I remember to have read the report of sixty cases of diphtheria, in which it was stated that all the patients were bled, and all recovered. Such reports show the possibility of making mistakes in diagnosis, and the possibility of finding people who can stand depletion in an extraordinary manner.

We have first to consider the constitutional, and then the local treatment. The constitutional treatment is not less important than the local. Diphtheria is the disease *par excellence* in which stimulants are most important from the beginning. I am an advocate of moderation in the use of stimulants, both in health and disease, but in diphtheria we have an exception. I would advise you to give brandy diluted with water, or port wine and water, from the beginning of the attack. Do not wait for your patients to become exhausted, but stimulate them from the first. When they are beginning to recover, light wines are particularly useful. You must give stimulants not only during the day, but during the night in a large number of cases. I have seen many cases where I believe patients have died because stimulants were not administered during the night. Frequently it is advisable to wake patients to give them stimulants, if they sleep more than four hours. It is important not to let your patient get depressed, and to give stimulants from the first.

I will now pass from the use of stimulants to the use of medicines. Of these the most useful, I believe, is the perchloride of iron. Dr. Jacobi has found this remedy more useful than any other. For general constitutional purposes there is no better remedy. It should be given in full doses. We generally give the tincture or a solution of the perchloride of iron. It is important to give a per-salt. As Dr. Jacobi says, you should give at least a drachm a day; fifteen drops well diluted with water, four times a day. The only times I have not given it is where I have been trying the effects of local remedies, and did not wish to have the results affected by constitutional remedies.

Quinia is of great value in cases having high tem-

perature. These two drugs, perhaps, may be considered the most important constitutional remedies.

All sorts of specifics have been recommended. I have not had any particular success with these remedies. Chlorate of potash is probably the most important. I wish to call particular attention to a remedy introduced by one of your professors, Dr. Beverly Robinson; I refer to cubebs and copabia. These drugs, as many of you may know, have a peculiar influence upon mucous membranes. I have made use of the French pearls coated with sugar, which are readily taken by children, and have had very gratifying success. I have used them principally in the catarrhal form of diphtheria, where the secretion is not very adhesive, and where there is a good deal of catarrh in connection with the false membrane. When there is an epidemic of diphtheria you get a large number of catarrhal cases and in these you will find the pearls to work well.

We pass from the general to the local remedies. Here we have a very wide field. A great many doctors go through life, and see very few cases of diphtheria. Some doctors meet with only mild cases, others with severe. Some physicians will tell you they have never lost a case, and will recommend some such simple remedy as chlorate of potash. These statements you should regard with suspicion. Of simple local remedies, lime water and lactic acid are probably the best. One thing in their favor is that they can do no harm. It is a good thing in applying remedies, to have those which can do no harm, even if they do no good. These are much better than strong hydrochloric acid or nitrate of silver, drugs which were formerly used. Strong caustics, we now know, cause an extension of the disease, or an increase in the formation of false membrane, as it is called. Therefore, when we were told by the German physicians that lactic acid and lime water were efficient remedies in diphtheria, it was very acceptable news. I should state also that solutions of potash have been found very useful. These solutions have a marked effect upon the false membrane. They will gradually dissolve it, as you can demonstrate to yourself by placing some false membrane in a glass of water with the potash. In the living subject, however, where there is a constant reproduction of false membrane, it is a different thing. I have found when I used locally a solution of potash strong enough to dissolve the false membrane, it had an irritating effect. With regard to lactic acid and lime water the result is somewhat different. They do not appear to affect false membrane placed in a tube of water, but in the living subject they certainly do have a dissolving effect upon the false membrane.

It is always difficult to determine the exact effect of any local application upon the false membrane in the throat, on account of the difficulties attending inspection, especially in young subjects, among whom the disease usually occurs. I once had the opportunity, however, of trying those remedies where I could observe their effect. The membrane was situated upon the inside of the lip. I treated one side with lime water, while no applications were made to the other. The side treated got well fastest. I mentioned this detail in passing as opposed to Dr. Jacobi's idea that the influence of these remedies has been over-estimated.

We pass on to another class of remedies, namely, those which have the effect of shutting out the air. These have been used considerably in England, but not much, so far as I am aware, in America. I tried some experiments a few years ago of dissolving differ-

ent gums in ether, chloroform, and alcohol, and I found as a result of a considerable number of trials, that tolu in ether, in the proportion of one part of the former to five parts of the latter, made a good varnish, one that was strong and would not crack, and furthermore, was not irritating when applied to mucous membranes.

Many of these local remedies have been recommended on the ground that they destroy germs. I omitted to mention carbolic acid and salicylic acid as among the most useful of local remedies. Carbolic acid is a very great germ destroyer. All of this class of remedies have been recommended upon the scientific ground that they destroy germs.

Now the principle which I introduced was this: no matter whether it is an animal germ, or vegetable growth, or something else that causes this false membrane to be formed, whatever it may be, it requires the presence of air in order to develop. By excluding the air, we arrest its growth. Hence when I have a patient with diphtheria, I exclude the air from the surface of the affected mucous membrane by the application of tolu varnish. This varnish is in fact a germ destroyer, for germs cannot grow without air.

Some of my friends have found difficulty in applying the varnish. The first method of application which I adopted was to wipe the surface dry with a piece of blotting paper, and immediately afterward apply the varnish with a camel's-hair brush. This answers very well when you can do it, but very often the patient retches a little just after you have wiped the surface dry, and again covers it with mucus. To avoid such an accident, I adopted the plan of winding a piece of lint around my finger, wiping the surface dry with this, and then applying the resin. This I have found to answer perfectly well. Even if you do experience some difficulty in the application of the varnish, I advise you to use it.

I have had several patients during the past winter, among the profession, and have had abundant opportunity of testing its value. I shall be exceedingly proud if any of you gentlemen in future times will try the effect of this varnish.

There are only two other points connected with the local treatment of diphtheria that I will call your attention to, namely, the use of steam and ice. Both are very useful, but have to be employed under different circumstances. Ice in the early stages of the disease is often of the greatest comfort to the patient. Small pieces should be frequently taken into the mouth. Its effect is to restrain the inflammation, and if we can do this, we at once diminish the vigor of the attack; so that in the early stages of the disease, you cannot use too much of it.

Now as to the use of the very opposite remedy, namely, steam. I believe it was first recommended by Drs. James, of London, and Oertel, of Munich. Germans always give a philosophic reason for the use of remedies recommended by them. Dr. Oertel says that the effect of steam is to separate the false membrane. True it is that in certain stages of the disease steam is very useful. This is when the false membrane is beginning to separate. I do not believe it is of any use in the early stages; if used then, I think it lowers the powers of the patient. Hence you will have no difficulty in deciding when to use ice and when steam—you are to use ice in the early part of the disease and steam later.

You can make use of some antiseptic, such as carbolic acid or salicylic acid, in conjunction with the steam. It is especially desirable to do this, because at this period of the disease you will find a certain amount

of gangrene, and consequently a good deal of fetor. Antiseptics will correct this. These constitute all the points under this head which I will bring to your notice.

I will make a few additional remarks in regard to the performance of tracheotomy in cases of diphtheria. I am very proud to see Dr. Cohen, of Philadelphia, present, who has published one of the most complete essays on tracheotomy in the English language. He concludes that the operation should be performed at an early stage. My advice is the same; operate early. When there is considerable false membrane in the larynx, when you see the falling in of the sternum with each inspiration, then is the time for tracheotomy. You should always examine the condition of the thorax and the posterior part of the chest, to see that the air is going into both lungs. If you find one lung is obstructed I would not operate. But still there are cases where every indication seems to be against operating, and yet the life of the patient is saved by operating. Under such circumstances the question is not whether you or the parents will take the risk, but whether the parents and friends are sufficiently sensible, should the patient die, not to attribute the death to the operation. It is perfectly useless to perform an operation where there is scarcely any chance for recovery, and the probabilities are that it will bring into discredit the whole domain of surgery. You should consider not only the interests of the child, but the interests of surgery, for in this way only are we to retain the respect and confidence of the public. If you perform tracheotomy as a rule, perform it early. By so doing many cases that would otherwise result fatally will recover. Of course, if you operate very early a good many cases will recover, for the reason that you will probably operate on cases that do not require it.

By adopting the plan of treatment I have hastily sketched, I feel confident you will meet with your share of success in handling these cases, and will rescue many patients from imminent death.—*Medical News.*

MEDICAL NOTES AND NEWS.

How Much Should We Eat?—How, asks Dr. Nicholls in *The Food Reform Magazine*, are we to get at the proper quantity of food? Animals living in a state of nature do not over-eat themselves. They stop eating when they have got enough. There are no prize cattle on the prairies. It is the stalled ox, and the pig in his pen, deprived of exercise, that can be fattened into a diseased obesity. Horses escape this process because men do not to any great extent knowingly devour them. The hunter and racer are not over-fed. All animals expected to do their work are carefully fed as to quality and quantity. If human beings were fed as wisely, they would be as healthy.

There are some good rules for feeding as to quantity. When our food is simple and natural in kind and quality and mode of preparation, there is little danger of eating too much. There is little danger, for example, of eating too many grapes, apples, pears or bananas. Salt, sugar, spices and luxurious cookery tempt to excess. With men, as with animals, a natural diet is self-limiting, and we are disposed to stop when we have got enough. The more artificial the food, the more elaborate and luxurious the feast, the more the liability to overload the stomach, overtask the digestive power, and over-weight the forces of life. Simplicity of food is a condition of health, and pro-

motes longevity. The quantity of food which enables a man to do his daily work without loss of weight is precisely what he requires. He supplies the daily waste—no more and no less. This quantity may vary a little with each individual, but every one can easily ascertain his own measure of requirement by reducing the quantity of daily food until he finds a balance of force and weight. It is my opinion that the average quantity of water-free aliment required, say by business and literary men, is twelve ounces. Men of great muscular activity may require from sixteen to twenty ounces. I have found myself in very good condition for sedentary work on eight or ten ounces. When anyone is in good condition for his work and keeps his normal weight, he has food enough. Dr. Nicholl's advice is, find this quantity by experiment, and then habitually keep to it.

Sulphur and Malaria.—At a recent meeting of the Paris Academy, M. d'Abbadie called attention to some facts regarding marsh fever. Some African elephant hunters from plateaus with comparatively cool climate brave the hottest and most deleterious Ethiopian regions with impunity, which they attribute to their habit of daily fumigation of the naked body with sulphur. It is interesting to know whether sulphurous emanations, received involuntarily, have a like effect. From inquiries made by M. Foque, it appears that in Sicily, while most of the sulphur mines are in high districts and free from malaria, a few are at a low level, where intermittent fever prevails. In the latter districts, while the population of the neighboring villages is attacked by fever in the proportion of ninety per cent. the workmen in the sulphur mines suffer much less, not more than eight or nine per cent. being attacked. Again, on a certain marshy plain near the roadstead in the island of Milo (Grecian Archipelago), it is hardly possible to spend a night without being attacked by intermittent fever, yet on the very fertile part near the mountains are the ruins of a large and prosperous town, Zephyria, which, 300 years ago, numbered about 40,000 inhabitants. Owing to the ravages of marsh fever the place is now nearly deserted. This change was brought about by the transfer of sulphur mining in the neighborhood to the opposite side of a mountain range. The decadence of Zephyria has nearly corresponded to this transference. The sulphurous emanations no longer reach the place, their passage being blocked by the mountain mass. Again on the west side of the marshy and fever-infested plain of Catania, traversed by the Simeto, is a sulphur mine, and beyond it, at a higher level, a village which was abandoned in the early part of this century because of marsh fever. Yet there is a colony of workmen living about the mine, and they seem to be advantageously affected by the emanations.

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A CLINICAL LECTURE ON RACHITIS.

BY

A. JACOBI, M. D.,

Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, New York.

When a child is brought to you on account of some disease or sickness, your first duty is to get at the history of the case, and you should not approach the child for the purpose of making a physical examination until you have done this. Your first question, as a rule, should be: "How old is the baby?" and then, "What did you bring it here for?" The diseases of children are simple usually and not multiple, and they are not likely to have more than one complaint at once, and your efforts should be directed to finding out this one principal complaint first and then to the complications, if any. In most cases you will find that you have to deal with acute symptoms, or if it be a chronic difficulty there will be only a few prominent symptoms, which you can get from the mother. As this woman is a German and does not speak English, I will translate what she says as we go along. She says the baby is one year old, and that it has had a cough ever since it was born, and it is worse when the weather changes, but when it is fine weather there is no cough, and the baby is red about the nose a good deal, and when it coughs much it sneezes too. It is somewhat hoarse, but not very. When the cough is worse

the baby drinks more or nurses more. Now and then the passages from the bowels are slimy in appearance. It may be, therefore, that the child has a general catarrh, and that will possibly account for the cough and diarrhoea at the same time. The reason that it nurses more when it coughs may be that it has some fever then, and so is more thirsty than usual; but if it is allowed to take the breast always when thirsty the result will probably be that, while there is a little fever the stomach will not be able to digest the extra amount of food taken into it, and so a diarrhoea will result, which is simply due to an overloading of the stomach. So part of this child's trouble may be due to the carelessness of the mother, and part to the baby itself.

The cough has probably not been very severe, because the baby is well developed; but it looks a little younger, and is more stupid and sluggish and fatter than a baby of twelve months generally appears. Babies that nurse healthfully are liable to be thinner at twelve months than this, and this baby feels to me as if it had too much subcutaneous fat. Its anterior fontanelles are still open, and they are a little large. There are now three teeth upon its upper and four upon its lower jaw, and this is about the normal number, or perhaps one or two less than there should be at this date. The mother says now that the baby was constipated before the teeth began to come, that is, for the first five or six months of life, and this, I believe, is an important fact in the history of this baby. These lower limbs, too, look to me a little more curved than they need be for a normal condition, and the baby is certainly more indolent than most babies, for the majority of them would resent such treatment as I am using by crying, but this one is satisfied and good natured through it all.

In percussing a baby always do so gently, for if you make too loud a note the whole chest wall will vibrate and if you strike too hard, part of the sound which you hear will be transmitted from the abdominal organs and thus obscure the results. On percussing this child's chest, I find a little dulness at the upper part of the sternum, and it is most marked just behind the manubrium. Now what organ is there in this position in a child which could give rise to this dulness? It is the thymus gland, which you know is very large in the foetus and also in the infant of a year; it remains in nearly the same condition for several years, gradually it becomes smaller, and it is not found of much size in a child of seven or eight years, until finally nothing remains of it but some connective tissue in adults. Remember this when you are percussing a child, and also that the dulness becomes less as the child grows older. There is still another disease which might cause dulness at this point, and that is an enlargement of the thyroid gland or goitre, but in the large majority of cases such dulness is due to an

increase in the size of a large number of lymphatic glands in this region. As every irritation of a part is apt to be accompanied by an increased growth of the glands in the neighborhood (they even sometimes swell spontaneously), so there is not infrequently a swelling of the bronchial and tracheal glands on both sides, which is caused by any source of irritation in the larynx, trachea or bronchi. If you find no other disease to account for the dulness in this region, you should always think of the possibility of these glands being affected. They owe their tumefaction often to constitutional causes, sometimes syphilis, more frequently rachitis. Thus this cough which accompanies these cases may be called a rachitical cough, and such a cough is very difficult to remove, and in a large number of cases it cannot be checked till broncho-pneumonia or a bronchitis have resulted. These enlarged glands are frequent causes of the broncho-pneumonia so common in children. Many a case of pulmonary consumption is due to nothing else but the return of such a broncho-pneumonia or bronchitis, due to an enlargement of the tracheal glands. So when you find this one sign you should always look for other symptoms of rachitis. In this case the mother speaks of the baby having been constipated for the first five or six months of its life and this is a frequent symptom in rachitis. Rachitis is not a disease of the bones only, but rather a malnutrition of the whole system, resulting in a deficiency of the normal tissues, accompanied by muscular weakness and especially that of the muscles of the intestinal tract; and this atony of the intestines is the real cause of the constipation so often found in these cases. So this history of constipation, together with the flabbiness of the muscular tissue here, taken in connection with the cough which is so troublesome, give us the right to diagnose rachitis in this case, and especially so since we cannot find any other disease.

As to treatment, I would first advise keeping the child in as uniform a temperature as possible, not allowing the air of the room to get too hot, but keeping it fresh by leaving the window open. The temperature of the room where the baby stays should be kept at about 70°, and a little water should be kept in a vessel on the stove so that the steam arising from it may moisten the air a little. Then the child should be washed oftener than usual, at least every morning and night; cold water with perhaps a little salt added should be used and the child should be warmly clothed after the bath. Then the baby should be weaned, for the character of the mother's milk has probably something to do with this rachitis. A baby with seven teeth well out, ought to have been weaned before this, and it is usually time for this when from two to four incisors have appeared. Farinaceous food such as barley and oat-meal mixed with boiled cow's milk may be gradually substituted for the breast milk. It is thought by some that a superabundance of lactic acid in the stomach and intestines may prevent the bones from reaching their normal development, and the theory which explains this by the lactubes being washed out is a very plausible one. So too much milk may be too much injurious by forming too much lactic acid in the stomach and intestines. This theory has been advanced a number of times and it can not be denied that it may be true in some cases. It is a question whether any direct treatment is necessary. I do not generally care to give much medicine directly provided I can harden and toughen the baby by cold water-bathing and proper food. Perhaps it may be necessary to give opium now and then but I do not

think it best to give this child any for its cough. It is well however to give such medicines as will tend to diminish the size of the glands. These are the iodides, and one of the best preparations is the syrup of the iodide of iron, of which eight or nine drops may be given in sweetened water three times a day. Besides barley and oat meal, you may add beef tea or soup to the diet. But you must discriminate in your use of barley and oat meal according to the condition of the bowels. If there is a tendency to constipation oat meal is the best, but for diarrhoea barley is to be preferred because of its tendency to constipation. This baby must be weaned at all events, and then we will have it brought back in a fortnight to see if it has improved.

CASE II.—*The Sequelæ of Rachitis.*—This little boy is seven years of age, and as you look at him you see that the chest appears to be a little more expanded on the left side than on the right, and the pulsation of the heart is visible, though perhaps not more so than is natural, and there is also a slight epigastric pulsation. It looks as if one portion of the left side was less expanded than normal, and there is a sinking in of the chest walls under both clavicles, but this falling in is mainly on the right side. The whole chest looks rather flattened at the side and back, and it has not its natural roundness and elliptical shape. There also seems to be a grooving in of the chest, just above the liver, and upon further examination we will probably find the liver pushed downward. Yes, it is. But you must not forget that the liver is larger in the child in proportion to its size than in the adult, and it can therefore usually be felt below the free border of the ribs. Now what are these conditions, which we have so far found, due to? To disease of the heart, it is suggested, a hypertrophy of the right ventricle. The usual cause of hypertrophy of the right heart, you say, is impermeability or an induration of a portion of the lungs, but the commonest cause is really an incompetency of the mitral valve. Upon listening over this boy's heart, I can hear a very faint murmur, but not such a one as would give rise to such a hypertrophy as to cause these symptoms which we have here. Even if the heart becomes so enlarged as to make the chest protrude, yet it does not change the elliptical shape of the chest, and it does not give rise to this peculiar grooving corresponding with the insertion of the diaphragm. These are a further development of the disease which here affects the bones of the chest, namely, rachitis. Rachitis is a disease which partly affects the bones and causes a softening of them, and hence the cartilages which bind the ribs to the sternum will give way, and the diaphragm will pull more effectively upon the less resistant lower ribs, so that they become quite retracted. This grooving about the lower part of the chest in a baby, is therefore one of the first symptoms of rachitis. This boy's having lain much on his back while his bones were in this softened condition, accounts for the flatness of the back which you observe here, and again because the pulling of the diaphragm has narrowed the chest, and the lungs must therefore seek a way for themselves somewhere, they have pushed the sides of the chest forwards, and hence you see their prominences along the sides of the sternum. The chicken breast, or pigeon breast as it is called, is caused by the rachitical softening of the ribs which therefore bulge forward, and in this state of the bones a larger part of the heart than normal comes in contact with the chest wall, and hence there is more movement in the præcordial region and the heart appears enlarged; and this is the condition here, where we noticed that

there was more prominence of the left side of the chest. This deformity of the chest here dates from infancy. Now, why are these veins, which you see on the right side of the chest, enlarged? They discharge, as you say, into the vena cava superior, and anything therefore which causes an obstruction in the circulation through the heart or lungs or in the vena cava itself, will cause this.

The right subclavicular region is more deeply depressed than the left, and there is a greater loss of substance on the right. As I listen I find I can hear the heart beating over the outer edge of the right clavicle distinctly, and I therefore conclude that the normal condition of the lung does not exist in this region. It is solidified from some cause and hence the sounds of the heart are more easily transmitted to this side than to the left, and we conclude that this consolidation has existed for a long time.

We have found here then not only a rachitis, but also an hypertrophy of the heart, and a slight mitral incompetency, together with a condensation of the upper lobe of the right lung. This state of the lung is probably the result of an old interstitial pneumonia which has resulted in a cicatricial induration of the lung. Now when we come to consider the treatment of this case we must bear in mind that we have to deal here not with a rachitis but with the results of a rachitical disease. And first of all we want, if we can, to render this chest elliptical, then we wish to make the lungs expand, and the heart normal. The heart is suffering because of the induration of the right lung; it has harder work to perform than natural, because the blood is not now thrown with its normal ease through the lungs, and the result of this increased effort of the heart is hypertrophy. Our main object therefore is to expand the lungs and to change the shape of the chest. It is barely possible, but not very probable, that the administration of the iodide of potassium will do something in the way of causing a resolution of the induration in the lungs. But I think it will be of little value because the disease is of long standing, and the lung tissues have undergone constant changes until we have now got to deal with a very hard cellular tissue which will scarcely be absorbed by any medicine. But we know that very similar conditions of the lungs are sometimes benefited by the iodide, such as asthma and supposed spasmodic contraction of the bronchial tubes, the result of a former peri-bronchitis accompanied by a hyperplasia around and within the walls of the bronchi. In such conditions potassium iodide does a great deal of good, and so it may here. The chronic bronchitis here can also be benefited thus, so we will try at least the iodide of potassium, and with it use the iodide of iron for a time. Good nourishing by mixed food is also needed, such as beef, oysters, eggs, milk, farina, oat meal, etc., but no coffee, tea, or stimulants should be allowed. Play in the open air, and gymnastic exercises with dumbbells, and cold bathing should not be omitted, and cod liver oil may be added in the winter to increase nutrition.

A CLINICAL LECTURE ON ANTISEPTIC DRESSINGS, AND FRACTURED THIGH.

DELIVERED AT BELLEVUE HOSPITAL, N. Y.

BY

STEPHEN SMITH, M. D.

You recollect that last Friday we amputated this little boy's limb about the vicinity of the knee, and the upper flap was of a porkey consistency; that is, it resembled the appearance of salt pork upon cutting it, and this kind of flap never unites by immediate union, and I did not try to get it, because every condition was so unfavorable for it. But the limb was treated purely antiseptically, and all the dressings were thoroughly saturated with carbolic acid, and upon the stump borated cotton was placed, and as a result of this treatment, on the fourth day after the operation, he was playing about on the floor, and now the union is perfect. The healing was not by granulation as I had expected it would be, but the union was immediate, and it has been effected without the production of any suppuration whatever.

For the last eight months the boy had been in an almost dying condition, with a chronic diarrhoea and offensive dark watery passages, and with an unhealthy dark-looking suppurating wound of the leg and yet with all these unfavorable symptoms we got immediate union, except at one point where the surfaces were not perfectly coapted. The wound has only been dressed three times since the operation.

I wish to call your attention to one or two facts in connection with such cases, and their relation to antiseptic surgery. In these days some surgeons are beginning to disparage the use of antiseptics, and they claim that just as good results can be obtained without them. Now I defy any one to get such union as we have got in this little boy without using antiseptic dressings. We had here a poor, miserable flap, which was already undergoing fatty degeneration, and all the circumstances were favorable for suppuration, and yet we got a union without any suppuration. I believe there is no other way so certain to secure a wound from suppuration as by the free use of antiseptics. Suppuration is only a breaking down of tissues with an effusion of matter in the affected parts, and as this discharges it is called pus, and the formation of pus is always the result of a local irritation in the wound, and this is produced by the decomposition of the materials of the part. Now, if in any way you can prevent this decomposition, you will not get suppuration. So we treat subcutaneous wounds successfully by excluding the air, for there are certain conditions in the air which tend to make wounds suppurate. In certain parts of California it is said that they can kill an animal and strip off its hide and hang its flesh upon a tree and leave it there, and then they can go to it and get fresh meat whenever it is wanted, and the meat dries up without undergoing decomposition, because of the purity of the air. And so we could also do here if our air was free from poisonous germs, but now we are forced to use ice to kill the germs or to exclude the air, and so it is that you see hams and meats are preserved from contact with the air, and so if the air is excluded the germs cannot live and propagate themselves in a wound. Carbolic acid renders all the tissues of the wound itself pure, and then it is covered with cotton batting which has been disinfected, and this has been found to be the best material to interpose, because it catches in its meshes all germs and dust, and any other materials

which may be floating in the air, and so before it reaches the wound it becomes perfectly antiseptic; and that the air is thus purified after passing through a mass of cotton batting has been abundantly proved by experiments. So after disinfecting a wound with carbolic acid, you must keep the air which reaches it purified in this way, so that no poisoned air can get access to it. Again, it is said by some, that this is a very troublesome dressing. But the doctor says that he has only dressed this boy's limb four times, while with other dressings you must change them twice a day, and I defy any one to get such results with them as we have here with this dressing. Here the wounds need only to be dressed when the discharge shows itself through the dressings. In the first twenty-four hours after the antiseptic dressings are applied there is an effusion of serum from the wound, due to the irritation caused by the carbolic acid which has been used. But after the effects of the carbolic acid have passed away, the wound generally becomes dry, and then the first dressings should be taken off and a new one applied, and this will remain dry generally for ten days or more. I cannot say that carbolic acid is a perfect dressing because it leaves its own impress upon the wound by reason of the irritation it produces, but it is the best and most convenient one which we have, and after the first dressing I defy any one to find better results than follow an antiseptic dressing. Consider what the atmosphere in such a hospital as this must be which has been used for the past one hundred years as a prison and a hospital for typhus and typhoid fevers, and almost all other diseases, and yet we get such results as this by antiseptic dressings.

I show you this little boy in order to explain to you one method of treating fractures of the thigh by a peculiar apparatus which I used here. Deformities following fractures in this region are all but the rule in boys of this age, and the treatment of fractures in children is entirely different therefore from that employed for grown-up persons. And I claim that all the different apparatuses which are useful for grown-up persons are useless in a child, because they will not keep quiet, and they finally succeed in getting them off, and so often these cases are really not treated at all. And just here I would like to say that you will probably often get the best results if you do not try to put on any apparatus in a boy who you have found after trial, will not keep one on, and these children frequently recover with less deformity than those which have been treated by an apparatus. In this case there was a fracture of the upper portion of the right thigh, and the upper end of the lower fragment has a tendency to lie on a lower plane than the end of the upper fragment, and generally when the ordinary apparatus is used they unite, overlapping in this way, and this results in a peculiar sort of deformity. You may even put on a gypsum splint in these cases, but still they will kick about till they get that off, for it produces a feeling as if they were being tied down, and so they will resist wearing it and break it off finally. So a more flexible apparatus is needed, and this one which I am using here is the best of all, and while wearing it the patient gets well without leaving any deformity. The philosophy of it is that when it is applied both the limbs are fixed to it, and in any movement the limbs and the body both move together, and the child cannot get out of it, and it is comparatively easy to wear.

It consists of two long splints about three inches in width reaching from the feet to the middle of the body, and to the lower end of these is fastened a transverse footpiece, which is strengthened by braces upon the

outside. These splints are more widely separated below than above, so as to keep the legs a little apart, and they are padded throughout their whole length. The well leg is fastened by a roller bandage to the inside of one of the splints, and the injured leg in the same way to the other splint, and to the foot of the injured leg is fastened an extension apparatus consisting of a brick or a weight of two or three pounds, to keep the fractured bones properly adjusted. There can in this way be no movement of the well limb or of the body, but what carries the fractured limb with it, and the whole tendency of the apparatus is to keep the fragments adjusted exactly on the same line, and there is no tendency to produce a prominence or angle at the seat of injury, such as often follows the application of the ordinary apparatus. The most perfect results follow its use, and there is nothing in this apparatus which can get tight or endanger the limbs by reason of pressure. The child lies quietly and comfortably in bed until it is removed. I advise you not to try any other means of treating such a fracture in a child, because you cannot keep them quiet, but always try this first. For with this there is no special opportunity for any muscular action, and hence no deformity results, and you can also get recovery here without any shortening of the limb or any deformity, and these you cannot generally get even in men by the use of other apparatus. In any fracture in a child you can always promise excellent results with this, and you cannot do so with any other apparatus. This apparatus was devised by Dr. Hamilton.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, NOV. 2ND, 1882.

The President, Dr. Fordyce Barker, presided. The minutes of the preceding meeting were read and approved.

The Secretary read a report from the Council to the effect that members whose dues were not paid by Feb. 1st should not be allowed to take books from the library. The report was adversely discussed by the chairman of the Library Committee, who said it was not just for the library to be used as a means for punishing delinquent members. Why suspension from the privileges of the library rather than any other department of the Academy. The by-laws provided for the punishment of members whose dues were unpaid, but not in this manner. The motion to adopt report of Council was tabled.

Dr. Ball moved, in view of the great calamity that had befallen Dr. Seguin, one of the members of the Academy, that a committee be appointed to express the sympathy of the Academy. The President appointed Dr. Ball and Dr. Wm. H. Draper.

The scientific paper of the evening was next in order. The President explained that the author of the paper Dr. W. E. Forest had been called from town by the illness of his father, and that his paper therefore had not been entirely completed. By the aid of the author's wife, however, who had copied the manuscript, the paper was made legible, and the secretary had kindly consented to read it.

The paper was entitled

"THE MANAGEMENT OF LABOR WITH REFERENCE TO THE PREVENTION OF SUBSEQUENT UTERINE DISEASE."

The following is a resumé of the points made by the author and those who discussed the paper:

There is an unquestionable relation of cause and effect between the puerperal state and uterine disease. With whom does the responsibility of uterine disease rest? Often with the accoucheur. If he who makes two blades of grass to grow where but one grew before is a benefactor to the human race, how much more is he who by the exercise of proper skill and care saves the wife and mother from the misery of invalidism? It should be the province of obstetrics to prevent as well as for gynæcology to cure.

Uterine disease as a sequela of labor comes chiefly from laceration or subinvolution. It is of the utmost importance to study to prevent laceration. In $\frac{2}{3}$ of the patients examined by Dr. Emmet lacerated cervix was present. It is a common accident after labor, but one difficult to judge of at the time.

Rapid labor is usually mentioned as the most frequent cause of laceration, but in my opinion this is the least frequent cause, only four per cent. of lacerations being due to this cause.

Dilatation of the cervix is a physiological, not a mechanical process; it might better be called relaxation. Rapid labors are natural labors. If a precipitate labor threatens laceration, we are able to modify the character of the labor by the administration of anæsthetics.

The most frequent cause of laceration is tedious labor; statistics prove this to be so. The harmony of action between the fundus and cervix is destroyed by tedious labor.

When morphine or chloral are given to regulate disturbed nerve function they should be given early and in moderate doses. Large doses of morphine paralyze the action of the uterus.

Gentle dilatation of the os with the finger is a most important means of preventing laceration.

The progress of labor is indicated to me by what I call the position of the anterior vaginal cul de sac.

Neither shape, age, or condition of life seem to explain the causes of tedious labor. The most natural labors occur in spare American women. The law governing labor will be found not in race but in nerve function.

Instrumental delivery is often spoken of as a cause of laceration, and it is in careless hands. It is to be regretted that obstetrics is so befogged with individual opinion.

At about the 16th day subsequent to confinement every woman should be carefully examined.

Supposing laceration has occurred, what may we do? Very much. What is done? Very little. By cleanliness, disinfection, and properly adjusted compresses we may favor healing. Vaginal injections, unless carefully given, are not without danger. I have sometimes tried placing an elastic band over the ruptured cervix to induce coaptation and healing. But we can do more toward preventing than healing laceration.

Subinvolution, which should take place in from two to three weeks, is interfered with by laceration of the cervix, though laceration of the perineum favors involution.

There seems to me no excuse for septicæmia in the puerperal state. The author stated in his paper in

conclusion that the last and most important part of his paper he was unable to complete.

Dr. Barker said the paper was one of much merit, and called upon Dr. Beckwith to open the discussion.

Dr. Beckwith said he was not prepared off-hand to discuss the points made in the paper; he however fully agreed with the author on the necessity for examination after delivery.

Dr. Castle said he was not prepared to accept all the author's conclusions regarding laceration. Among the causes of tedious labor mentioned in the paper the influence of narrowed pelvis was not brought out.

Dr. Lee regarded the paper as extremely suggestive and valuable. Adverse discussion of the paper was hardly just, since the author was not present to reply to questions raised. He quite agreed with the theory that laceration was most often due to tedious labor, which led to œdematous softening of the os.

As to the means to detecting laceration when it occurred, he had observed that, if extensive, it was always accompanied by arterial hæmorrhage, and by the aid of a speculum had often detected the rent and seen the blood spurting from it. It was this kind of laceration for which some recommended immediate closure. He himself had tried this operation, which was so strongly commended by Dr. Pallen, but had signally failed to get any good result. In one case, that of a primipara, he had used silk sutures, which cut through at the moment of tying; in another case he had used silver sutures and not drawn them tightly, but these too cut through by the third or fourth day. A third case was equally fruitless of good result, and he would not again make the attempt to do tracheloraphy unless the patient's life was in danger.

As to the use of a rubber band, as suggested by the author, it was difficult for him to conceive how this could be retained in position. The frequency with which contusions of the vaginal tissues occurred in labor exceeded that of laceration. Drs. Sims and Emmet had proved conclusively that 90 out of 100 cases of vesico-vaginal fistula were caused directly by the sloughing resulting from pressure of the head, therefore the warning embodied in the paper, not to allow delayed labor, was most important.

He had never obtained any special benefit from opium in delayed labor, but from chloral he had got the effect formerly attributed to belladonna.

Dr. Lusk said that the good ladies who made the reputation of obstetricians were accustomed to recommend a doctor because he had not lost a case of labor, but the time was coming when it would be asked not only if he saved his patient, but also what her health was subsequent to labor.

It should be remembered that there were two classes of rapid labor. One form, which is preceded by slow labor, and when violent pains come on the cervix was already dilated. This kind of rapid labor would not endanger the cervix. The other kind of rapid labor usually occurred in nervous, impressionable women, who hasten too early to strain and bear down before the cervix is dilated, and thus cause laceration. This class of patients should be treated by full doses of chloroform. He had not much faith in digital dilatation of the cervix. Barnes' dilator was to be preferred, since it not only dilates but induces uterine action. In cases in which the head pressed against the over-distended cervix we should use forceps and make traction during the intervals between

the pains, when the cervix is relaxed, and should take time to do this carefully.

The President announced the election of Dr. F. E. Hyde and Beverly Livingston as resident fellows, and Julius Althaus, M. R. C. P., as corresponding fellow. The Academy then adjourned.

SELECTIONS FROM JOURNALS.

A CASE OF SUCCESSFUL RESECTION OF STOMACH ON ACCOUNT OF GASTRIC ULCER.

Herr Rydigier (Culm) exhibited the foregoing, with preparation. The operation was performed on the 21st November, 1881, on account of an occluding ulcer of the stomach, in consequence of which enormous dilatation of the organ was produced. Every second day pyrexial disturbances occurred in consequence of retained decomposing food. The speaker held that the operation was far more frequently indicated for stenosing ulcer of the stomach than for carcinoma of the stomach. In the discussion that followed Herr E. Hahn (Berlin) thought that the condition of the colon and its contents appeared to have a more important influence over the operation than was generally supposed. In a case in which he had recently operated for dilatation in a patient sixty-three years of age, and in which the patient died on the eighth day, absolutely without any symptoms of fever or reaction, but with persistent fecal vomiting, the cause appeared to lie in the loaded condition of the colon. Large quantities of feces had been evacuated by enemata previous to the operation, and yet at the autopsy the colon was found to be loaded. Herr v. Langenbeck had performed resection of the pylorus in a case with attached pancreas, but the patient died of collapse before the completion of the operation. Herr Billroth said he was very much surprised at the great number of resections of the pylorus that had been undertaken in so short a time. He himself had waited five years before meeting with a case that seemed suitable for the operation, and in this case the diagnosis was wrong. The tumor proved to be a lymphoma of the mesentery, and he simply closed the wound. With the very greatest care in the selection of cases, those suitable for resection would be but rarely met with, and one should never be afraid to desist from proceeding with the operation if during its course the extirpation should seem unusually hazardous. He held as particularly dangerous the excision of the pancreas, but he did not believe that the contents of the intestines would have any influence on well-placed sutures. In every gastro-enteroraphy the sutures should be so accurately adjusted that there could be no possibility of intestinal contents coming into contact with the wound. Silk, and not catgut, should be employed, and the lumen should not be too much encroached upon. But above all, he would warn them not to carry the resection too far. If the infiltration extended too far forwards the operation would be in vain, and it was for this reason that the number of cases suited for the operation was so very small. He held with Leube, that the non-cancerous strictures of the pylorus, as well as cases of dilatation, were much more suitable for resection; for if the disease were only moderately widely spread, the case would end fatally, as mechanical difficulties invariably cropped up. Herr Gussenbauer (Prague) mentioned a case of resection of the pylorus undertaken on account of a movable tumor in the neighborhood. The

case ended fatally. He also was of opinion that the best indication for operation was a non-carcinomatous stricture.—*Med. Press.*

TREATMENT OF CARDIAC, HEPATIC, AND RENAL DROPSY. Being an Introduction to a Discussion in the Section of Medicine at the Annual Meeting of the British Medical Association in Worcester, August, 1882. By D. J. LEECH, M. D., F. R.C.P., Physician to the Royal Infirmary, Manchester.

In dealing with cases of œdema and ascites dependent on heart, kidney, or liver troubles, one or two points stand out prominently for consideration. The first is the advisability of attempting to remove the fluid by mechanical agencies or by medicines; a second is the means of removing it, should we so desire. A decision on these points involves, to a certain extent, in every case, a consideration of concomitant or alternative treatment; but, in order to bring the subject within due limits, I propose to confine my remarks to that portion of it which relates to the removal of fluid.

And first I would raise the question: Is it desirable, in all cases of dropsy, to attempt the removal of fluid by mechanical means, or by eliminants of water, such as diaphoretics, diuretics, and purgatives? I hold not. I believe that the routine use of agencies to get rid of fluid by these means is, in a certain proportion of cases, to be avoided.

The immediate causes of effusion in the dropsies under consideration, on which most stress is usually laid, are, 1, obstruction of the venous circulation; and 2, insufficient removal of water by the kidneys with sequential hydræmia, and the treatment is usually in accordance with this view of causation. If there be evidence of obstruction, attempts are made to remove it, sometimes directly, sometimes by medicines acting on the lungs or heart. If these fail, or if no obstruction be present, then the abstraction of water by tapping, or by medicines which increase excretion from skin, bowels, or kidneys, is, for the most part, entirely relied on. But it is doubtful whether the conditions above named are by themselves efficient causes of dropsy; certainly they do not always suffice to explain the anasarca and ascites in heart, kidney, and liver disease.

Great obstruction to the return of blood through the right heart not unfrequently exists without dropsy appearing; and, when dropsy does occur, its extent is often no measure of the obstruction. Experiments, too, on animals, seem to throw some doubt on the production of dropsy by venous obstruction alone.

Defective secretion of urine is frequently spoken of as the most important factor in the production of dropsy. Bartels, for example, seems to view it as the essential cause, both of cardiac and renal watery effusions. But there are reasons for doubting whether, by itself, it does lead to dropsy. In obstructive suppression of urine lasting many days, dropsy does not usually occur. Dr. W. Roberts notes that, out of ten cases in which suppression, more or less complete, lasted nine to eleven days, dropsy was only met with once. Nor does the history of calculous anuria warrant the supposition that the want of urine excretion is made up by increase in the fluid discharged from stomach, skin or bowels. In scarlatinal nephritis, too, suppression for a long time may occur without a trace of swelling.

The conjoint effect of impeded venous circulation

and defective kidney excretion is, doubtless, more potent than either factor singly; yet considerable venous obstruction, with defective water excretion, may fail to produce dropsy. On the other hand, the occasional co-existence of profuse watery flow from the kidneys with extensive ascites and anasarca, evidence of any considerable venous obstruction being absent, shows that the causes already alluded to, will not suffice to explain the occurrence of dropsies. I have known a flow of urine, averaging above eight ounces daily, continue for weeks with increasing œdema and effusion into the peritoneal cavity, and this, too, without any indication of venous block, and without thirst calling for increased consumption of fluid.

The dropsy again, in acute Bright's disease, cannot be explained by the defective excretion of water, for it occurs generally within a day or two of the first indication of kidney mischief, and often when the urine, though small in amount, is by no means suppressed. It has been known to come on in scarlatinal nephritis, whilst the urine flow continued unduly copious.

The other causes of dropsy which aid those already mentioned, and which sometimes appear to produce their effects independently, may be enumerated as follows: 1. Alteration in the blood or blood-pressure; 2. Defective nerve-supply to vessels or tissues; 3. Structural alterations in vessels and other tissues, with modifications of the nutritional processes.

Some of these causes are connected with those before mentioned; alterations, for example, in the tissue or nerve-supply of the heart or arteries, may lead to venous obstruction. But, for the most part, they produce their effects in a different way, and, on this account, the ensuing dropsy is less amenable to treatment by agents which eliminate water, and sometimes wholly uninfluenced by them. Deficiency of albumen in the blood, and consequent undue serosity of this fluid, may cause more ready transudation through the walls of the vessels, and increased blood-pressure; may, as Dr. Mahomed suggests, force fluid through the walls of the arterioles. It is possible, also, that alterations in the composition of the blood, by preventing it flowing readily through the minute vessels, may lead to effusion into the tissues from the blood thus detained. Diminution of blood-corpuscles, so constantly present in cardiac and hepatic disease, plays an important part in the production of dropsy, chiefly, perhaps, by lowering tissue-nutrition. Impairment of the nervous influence may produce its effects in a similar manner, and, also, by leading to the dilatation of the minute vessels.

Changes in the tissues themselves, and in the nutritive processes going on in them, seem to me to bear not unfrequently a leading part in the production of dropsy. Apart from the dilatation of vessels arising from impaired nerve-influence, the vessel-walls may be so altered as to allow more easy efflux of fluid.

The lymphatic system may be influenced, and the due balance between exudation and absorption destroyed. Leichstenstein has recently suggested that, in scarlatinal dropsy, the accumulation of fluid in the tissues follows on an engorgement and subsequent inflammatory irritation of the lymph-vessels, due to the action of the poison on the lymphatics of the skin. In other cases, the depressed vitality may lead to impairment of the normal absorbing power.

Loss of the elasticity or tone of the tissues may give facilities for the accumulation of water in them. In lax structures, watery collections appear earliest, and last the longest.

It appears to me that the frequent dependence of

dropsy on blood, nerve, and tissue changes, has much to do with the difficulty often experienced in removing effused fluid. When the effusion arises chiefly from obstructed venous circulation, or from defective water-excretion, the tissues being but little weakened, we may usually relieve or cure by the elimination of water; but we fail to do good by direct water-removing agencies, in proportion as deterioration of tissues, altered blood, or weakened nerve-supply, jointly or separately, take the lead in the causes giving rise to dropsy.

In the earlier stages of heart-disease with anasarca, for example, diuretics may succeed admirably; later on, as the general health fails, they lose their power, even though there be no evidence of increasing obstruction of the circulation; and at last it sometimes happens that we cannot drain the water from the œdematous tissues, even when they are pricked or tapped; much less can we remove it, by inciting the kidney, skin, or bowel action. We can, indeed, no more remove fluid from the tissues by these means than we can drain a soaked sponge by a trocar.

It is true that the kidney and heart structures are involved in the general tissue-degeneration of advancing disease; and hence, as time goes on, they answer to the whip less readily than in the earlier stages, and that this, in part, accounts for the frequent failure of digitalis and diuretics in long-standing dropsies; but another, and probably more common, cause of this failure, is consequent on the important part which tissue and blood-changes, and weakened nerve-supply, then play in the production of dropsy, and cannot, in many cases, succeed.

Now, the routine and continuous employment of eliminants of water where no good result can follow from the very nature of things, is an evil. It cannot be that the useless administration for long periods of squills, juniper, and potash-salts, of jaborandi, jalap, and elaterium, is devoid of injury; and the injury is the greater since, during the employment of such agents, tonic and nutrient treatment is commonly neglected. We cannot, of course, always decide as to the possibility of success from the use of water-eliminants. In the aged—in those whose nutrition has been rendered defective by prolonged disease—they are usually of no service, and in more promising cases we at times find them fail. In doubtful cases, they must be tried, but a short trial of the leading remedies soon allows an opinion to be formed of the value of eliminators of water. These failing, it is, I believe, better to fall back on tonics and nutrients, than to try the hundred remedies which have the reputation of carrying off water through the various emunctories.

After tonic and nutrient treatment, combined with rest, we sometimes find that remedies, previously powerless, become efficacious, and, removing the water, cure the dropsy. Diuresis, under improved nutrition, may even set in, apart from the use of special remedies.

In cardiac dropsy, if the patient be placed under favorable circumstances, spontaneous diuresis is not uncommon. In cirrhosis, it occurs more seldom; yet I have seen very remarkable instances of it. It is frequent in some forms of Bright's disease. In acute Bright's, indeed, it seems to be a natural termination of the disease; and in the subacute attacks, especially when supervening in chronic cases, it is far from rare. In a case of albuminuria under my care recently, with great and general œdema, lasting many months, where purgatives, diaphoretics, and diuretics had been tried fully, but in vain, I saw prolonged rest in bed, with

tonic treatment, followed in a few weeks by profuse spontaneous diuresis, which, in a fortnight, removed every trace of dropsy.

The mode in which removal of fluid may best be accomplished has next to be considered. I propose briefly to call attention to the points which seem to be worthy of discussion, in the various means used to eliminate water effused in the abdominal cavity or into the tissues. And, first, I will allude to tapping in ascites. Dr. Frederick Roberts, many years ago, drew attention to the fact that tapping might not only relieve, but cure, ascites in cirrhosis of the liver; and many cases have been recorded where, after tapping once to one hundred and thirty-two times, the fluid has ceased to form.

It seems to me there are two factors in the production of ascites in cases of cirrhosis: obstruction to the passage of blood through the portal vein, and an altered condition of the walls of the peritoneal cavity; and, in hepatic dropsy, sometimes one, sometimes the other, predominates as a cause of effusion.

When the dropsy is due mainly to a block in the portal vein, tapping is almost necessarily followed by fresh effusion;* when chiefly to the condition of the serous membrane, then the mechanical removal of fluid may not be followed by a recurrence, a healthier condition of the membrane having supervened. We have here an apparent exception to what I have stated concerning the comparative inutility of water-removal when tissue-alteration, rather than mechanical obstruction, causes dropsy. It is only apparent, however; for, if the walls of the serous sac remain in the same unhealthy condition as when the fluid was poured out, the good effect of tapping is very temporary, and the abdomen refills with great rapidity. In acute cirrhosis rapidly tending to a lethal termination, where, though the fluid is abundant, the dilated intestines occupy the major portion of the abdominal cavity, the difficulty in breathing and the discomforts of the patient are strong incentives to remove the fluid; yet, in my experience, not even temporary relief follows this procedure. Nor have I seen the slightest good from tapping in advanced cases of ascites dependent on cirrhosis, where symptoms of coma have developed. In ascites connected with heart-disease, as well as in ascites dependent on cirrhosis, tapping may lead to the cure of the dropsy. A patient with advanced heart-disease came under my care last year, who about three years before had been tapped three times; six, four, and five pints of fluid having been removed at short intervals. After the third tapping, the fluid did not return for three years. Of such temporary cure I have seen several examples; but they are more rare than in cirrhotic ascites. I cannot call to mind a single case of ascites dependent on Bright's disease in which more than temporary relief followed paracentesis.

I know of no way by which it is possible in cirrhosis to distinguish with certainty the cases in which cure can be effected, from those in which we can only look for relief. The greater reason we have to expect serious obstruction in the portal circulation, the more must we fear that the fluid will re-form after removal; and enlarged abdominal veins point to such serious obstruction. Yet I have discharged, cured of his ascites, after two tapplings and diuretic treatment, a man whose abdominal veins were distinctly prominent. Tapping soon, and, if necessary, often, then, it seems to me, should be the rule in most cases of cirrhotic ascites,

* Dr. Grainger Stewart has called attention to the possibility that such recurrence may, at times, be prevented by the formation of new channels for the blood in the liver.

and I think, too, in ascites dependent on heart-disease. Apart from the relief it gives, the removal of the pressure from the renal veins is justly supposed to favor subsequent diuresis. In kidney-disease, also, no harm can come of early tapping; unless, indeed, the nutrition of the patient is much depressed. When this is the case, and the fluid is not abundant, tapping seems to give no relief, and only hastens the fatal result.

I should not have brought the question of paracentesis so prominently forward, were it not that, as Dr. Duncan, of Croydon, has recently pointed out, tapping for all forms of ascites is still, in many works on medicine, alluded to as only a remedy to be used as a last resource.

What are the dangers of tapping? Peritonitis, syncope, and exhaustion from the loss of albuminous material are spoken of, but, so far as I know, very few cases in which serious evil has arisen from paracentesis have been recorded.

In 400 cases of paracentesis of which I have notes, I only find one instance of a bad result following the operation. In this case, rapid peritonitis, ending fatally, followed a complete emptying of the abdominal cavity for the second time. Not unfrequently, however, I have observed pains pointing to peritonitis after the operation. A bad result due to syncope I have feared, but never seen, nor have I noted any considerable effect from the loss of the albuminous fluid; even repeated tapplings cause much less exhaustion than we should expect, from the amount of albumen lost on each occasion.

Should the peritoneal sac be completely, or even almost emptied, or should we be content with taking away a small quantity of fluid? To the former plan I am averse, since, as I have said, I have seen fatal peritonitis follow on one occasion; yet I have known experienced men prefer it, as giving the best results.

Undoubtedly, the removal of a small quantity of fluid, in peritoneal as well as pleuritic effusion, sometimes gives relief, and seems to act as an incentive to the absorption of the rest; and, where the circulation is extremely weak, as in ascites, with irregular feeble heart, I have, at times, tried with success the removal of a small portion of the fluid. One drawback there is to this: unless an excessively fine trocar be used, the puncture left by the instrument continued to weep, and no ordinary means will check the flow of fluid. I have twice seen this occur after the use of a cannula only one-eleventh of an inch in diameter; once, the compression of the weeping orifice by needles alone sufficed to check the flow. Now, this prolonged flow is not without danger; I have known fatal peritonitis follow it.

About the comparative advantages of the various modes of tapping, I would just say a few words. I take it that it is never wise to use a cannula with a greater bore than one-eleventh of an inch, unless, indeed, for the sake of relieving urgent dyspnoea, the effect of pressure.

When but little fluid is to be removed, the very fine tubes of Dr. Southey are, I believe, decidedly the best; but, where the quantity to be got rid of is large, and the circulation fairly vigorous, I prefer the small to the very fine cannula, as being less fatiguing for the patient, and quite as safe.

The use of fine cannulae, advocated by Dr. Southey, is, beyond all doubt, the best means for the mechanical treatment of oedema, and should supersede all other plans. I am satisfied they should be used earlier and oftener than they are. Let me strongly endorse the advice of Dr. Goodhart with regard to their em-

ployment. He recommends that they be put in some boiling germicide before being employed. In one case under my care recently, the neglect of this precaution led to serious results. Phlegmonous erpispelas of the leg, followed by wide-spread pus-formation and considerable danger to life, followed the use of a fine cannula which had been simply washed before use. Heating the cannula in the flame of a spirit-lamp will serve the same purpose as boiling, but it injures the metal, and renders it liable to break.

Diuretics rank next as the most active agents for the relief of dropsy, but about their value there is a great divergence of opinion, to which, it seems to me, two causes mainly contribute. In the first place, they are often used in cases where they cannot possibly be of service, and an impression of their inutility is often founded on such use. Diuretics cannot eliminate water if, from structural changes in the glomerular tubes, the water-passages are wholly or partially sealed up, nor when tissue-degeneration is far advanced; nor can they act when the kidney is functionally competent, if the tissues are generally in such a condition that they will not yield up their water. The uselessness of some of our reputed diuretics, and the slight value of others, is a second reason for the skepticism with which some regard the whole class.

A careful series of water measurements carried on for some years, has satisfied me that diuresis occurring spontaneously must often have been erroneously attributed to the action of the drug given to produce it.

Of the potency and utility of some diuretics there can be no doubt, but the power of this class of medicines is exercised within narrow limits. It is too much influenced by the cause of the watery effusion. In hepatic dropsy, copaiba or its resin seems to give the best result. Caffein sometimes, but less often, promotes diuresis. Digitalis I have rarely found of use; whilst from juniper, squills and salines I have not been able to assure myself that any increased urine flow has followed.

Dr. Wilks Taylor has showed that the resin possesses the diuretic properties of the balsam copaiba. I am not aware that any proof has yet been given that the oil acts also as a diuretic, but the following case points to this conclusion:—J. B. W., aged 49, a whiskey imbibing omnibus driver, came under my care on March 3d, with ascites of ten weeks' and anasarca of six weeks' duration. His history and symptoms pointed to cirrhosis as the cause of dropsy. Until March 9th he took no medicine. On that day he was ordered five minims of oil of copaiba three times daily, and he took it until he was discharged on the 28th. The following table shows the daily quantity of urine excreted:

March 5th..54 ozs.	March 18th..95 ozs.
" 6th..44 "	" 19th..96 "
" 7th..20 "	" 20th..98 "
" 8th..46 "	" 21st..80 "
" 9th..66 (Oil of copaiba given)	" 22d..62 "
" 10th..50 "	" 23d..66 "
" 11th..34 "	" 24th..54 "
" 12th..64 "	" 25th..68 "
" 14th..84 "	" 26th..52 "
" 15th..98 "	" 27th..72 "
" 16th..96 "	" 28th..40 "
" 17th..100 "	

The commencement of diuresis followed so closely on the administration of the drug that one can hardly

help doubting a causal connection. Yet the oil has never since in my hands produced a similar effect, though I have often tried it, as it is possible that the diuresis was, after all, spontaneous.

In cardiac dropsy, digitalis and caffein seem to me by far the most powerful excitors to increased urine flow. Saline diuretics rank next in efficiency. Copaiba in my hands has rarely proved of use. Squill and juniper have disappointed me always, and I have tried them largely. About broom I cannot speak with certainty, since I have not used the fresh preparation by itself.

Two years ago, in the *Practitioner*, I recorded a series of cases illustrating the marked benefit derived from caffein in many cases of cardiac dropsy, an my subsequent experience has confirmed the views I then enunciated. Dr. Breckenridge has recently borne further testimony to the value of the drug as a diuretic. He thinks it should be given by itself when the blood pressure is fairly normal, but combined with digitalis when the pressure is low. In these points I fully agree with him, for digitalis is of the two by far the most powerful vascular diuretic. The arguments he has brought forward, however, in support of his view that caffein acts alone on the renal epithelium, seem to me insufficient, nor do I think we can with certainty augur the success or failure of caffein from the condition of the circulation or that of the renal epithelium, as far as it is possible to determine this.

I am satisfied I have seen, both in health and disease, a distinct effect produced by caffein on the circulatory organs, nor will the law of action laid down by Dr. Breckenridge explain several instances both of failure and success in the administration of the drug which I have met with. In renal disease the estimation of the effect of a diuretic is much more difficult than in hepatic or cardiac affections, for diuresis is more often spontaneous. Saline diuretics, especially the tartrate and bitartrate, citrate and acetate of potash have given me the best results. From iodide of potassium, which some have thought so beneficial, I have obtained no definite effects. Digitalis and caffein have seemed occasionally useful, but much less so than in cardiac disease. Where copaiba, squill, and juniper have appeared to succeed, I have usually had occasion to doubt their real efficacy. The inhalation of the oil of juniper has appeared to give me rather better results than its administration by the mouth.

The difference between the time at which the various diuretics commence to act, and the varying periods during which they act, deserve a short notice.

In average doses, digitalis rarely acts within thirty-six hours, often not for forty-eight hours, sometimes not for three to five days. If caffein acts at all, its diuretic effect is almost always noticed within twenty-four hours. Copaiba, like caffein, acts quickly, but not with such uniform rapidity. Sometimes a day or two elapse before it affects the urine.

The duration of the action of digitalis is usually longer than that of other diuretics. The diuretic influence of caffein and copaiba are much more transient than that of digitalis, and caffein loses its power very quickly. It cannot be relied on for sustained diuresis. Copaiba may be given with advantage for a long time, but its effects usually cease at once when the drug is withdrawn. Does the establishment of free diuresis ever do harm? Not in cardiac and kidney disease as far as I can tell, but in ascites dependent on hepatic troubles, the experience of Dr. Taylor seems to point to the possibility that [the removal of fluid by means of

increased kidney action, does not always prolong life, and may even shorten it. Out of eight cases in which the administration of copaiba resin was followed by an increased flow of urine and the decrease of ascites, in four, coma, followed by death, quickly set in.

Personally I have never seen any evil appear to follow the removal of dropsy by the aid of diuretics. The relative value of diuretics and purgatives in the treatment of dropsy must now shortly be considered. Many writers, disheartened by the frequent failure of diuretics, have ascribed to purgation a higher value in the removal of dropsy than they accord to diuresis, but with this I cannot agree.

That the administration of a hydrogogue purgative is at times followed by diuresis and subsidence of swelling is probable, but yet I must say that I have not been able to demonstrate this by actual urine measurements in a large number of cases which have passed through my hands of late years. I think the result more rare than is usually supposed. I never purge actively till I have given a fair trial to diuretics in various forms and conditions, and under these conditions I have not met with encouraging results.

It is true that a considerable amount of fluid is at first carried off by hydragogue purgatives, but the process soon reaches its limit, and the dropsy ceases to subside even if the bowels be continuously harried. In two cases of dropsy, when purgation had been long carried out but unsuccessfully, I noticed at the *post mortem* a markedly catarrhal condition of the mucous membrane of the small intestine, and I cannot help thinking that often more harm than good is done in dropsy by long continued purgation. For the catarrhal condition of the mucous membrane must interfere seriously with absorption and nutrition. Then, too, in pronounced dropsy, we at times find the severe diarrhoea in no way diminishes the oedema.

In hepatic dropsy, I am satisfied that very active purgation is rarely beneficial; and, in cardiac dropsy, I have much more faith in diuretics. In renal dropsy, however, purgation is often our only resource, and its depurative effect is certainly most advantageous; but, even in renal dropsy, it has not unfrequently appeared to me that excessive purgation had been productive of more harm than good.

Diaphoretics, in hepatic and cardiac dropsy, I have found but little service. In renal dropsy they are of great value, but less, it seems to me, by removing fluid, than by eliminating from the blood a portion of the material which the kidneys have failed to excrete. I have not witnessed extensive subsidence of dropsy from diaphoresis alone.

Two other methods of treatment I must just allude to—the withholding and free administration of liquids.

The withholding of liquids in cases of dropsy was advocated by the earlier physicians; in later times, much less importance has been attached to this plan. But Dr. Cheedle has brought forward a few striking cases illustrative of its utility. He finds that the amount of water excreted, is greater as compared with the quantity ingested when a small, than when a large quantity of fluid is taken. He does not recommend rigid abstinence from fluid, but only such avoidance as can be borne without discomfort. Personally, I have so far made no experiments on this point.

The free administration of liquids, especially distilled water or milk, has been tried with the idea that a flush of water through the kidneys might clear the renal tubules.

It has also been thought that increased ingestion of water might, by increasing vascular pressure, originate

a diuresis. Dr. Dickinson, in 1864, advocated this plan in the treatment of the nephritis of children; and Bonchoadour, and Dujardin-Beaumetz value highly the use of water and milk in cardiac dropsy. I think I have seen increased ingestion of fluid of service in ascites dependent on cirrhosis, as well as in cardiac and renal dropsy; but more accurate observations are required before the comparative advantages of an increase or decrease in the supply of liquid to dropsical patients can be even approximately determined.

In conclusion, I must express my regret that I have been compelled to avoid the consideration of many important questions connected with the treatment of dropsy. The mode of action of diuretics the cause of spontaneous diuresis, and the effects of diuretics in increasing the excretion of solids, are subjects of great interest. My object, however, has been to bring up for discussion the more practical points connected with the treatment of dropsy.—*Bost. Med. Jour.*

THE TREATMENT OF THE SEVERER FORMS OF NEURALGIA AND MUSCULAR RHEUMATISM BY MEANS OF MASSAGE AND OF METHODICAL MUSCULAR EXERCISE.* BY DR. J. SCHREIBER Translated from the, *Deutsch. Med. Zeitung*, by J. E. BURTON, L.R.C.P. Lond., M.R.C.S., Physician-Accoucheur to the Liverpool Lying-in Hospital.

GENTLEMEN:—If you take up the most recent treatises on neuralgia and muscular rheumatism you will find in the comprehensive works either no mention whatever of massage as a method of treatment, or its name barely mentioned. As far as I know, amongst modern authors, it is Benedikt alone, who freely and without prejudice has laid stress upon the powerful action of massage. In regard to surgical diseases, the employment of massage has obtained an entrance everywhere since Stromeyer and Volkmann appeared in favor of this method of treatment.

The obstinate and painful character of neuralgia generally compel the attending physician to make use of the whole register of available methods of treatment one after the other, from mustard plasters to commence with, to attacks at the hands of the surgeon, from quinine to arsenic, from belladonna ointment and morphia injections to electricity and the actual cautery, from the simple diaphoretic to the energetic cold water cure.

When at last the endless array of means and medicaments has been exhausted, and the physician blindly brandishes his weapons before the malicious demon "Neuralgia," then is the despairing patient packed off to a climatic *Kurort*, in order that change of air may complete the miracle.

I have had, however, in my calling, opportunities of seeing that this "Deus ex machina" thus appealed to in time of utmost need fails to do his duty, and the patients as before retain their neuralgia, their muscular rheumatism.

When some years ago the reports about the powerful action of massage forced their way into publicity, I joyfully greeted them, and now, in an already considerable number of cases, I have had the satisfaction of achieving a surprising and durable success by the use of this method of treatment.

Permit me here to say emphatically that I have drawn my results not from mild cases of brief dura-

*An address delivered before the Naturalists' Society of Salzburger section of Medicine.

tion, but from the successful treatment (*Heilung*) of severe, inveterate cases of neuralgia and muscular rheumatism that have persisted for years, and that had been treated without good result by all other methods.

The short space of time allotted to my address lays upon me the duty of touching upon the most important points only of this method of treatment.

From the circumstance that the pathological anatomy of neuralgia and muscular rheumatism is up to the present a *terra incognita*, the conclusion may *à priori* be drawn that all methods of treatment can be founded upon hypothesis only.

Concerning the changes in the sensitive nerve apparatus, we know as good as nothing.

These changes are inaccessible to the present therapeutic methods of research. To this hour such a darkness rules over the existence of neuralgia, that Erb considers all views that have taken a decided shape as to the nature of neuralgia to be premature, and Senator, in his introduction to the "Diseases of the Apparatus of Motion," says:—

"Muscular rheumatism is a completely indefinable rubric that has to receive all those painful affections that have for their seat the muscles, or their neighboring parts that cannot be otherwise classed; it may be said of it, as was said in that old grammatical rule—

"Those pains that can't be otherwise defined
All in the class called rheumatism you'll find.
(Schmerzen die man nicht definiren kann
Sieht man als rheumatismus an)."

Both diseases, however, neuralgia and muscular rheumatism besides the "uncleanness" that shrouds them, the great painfulness and the functional disturbance that characterizes them have this also in common, that they sometimes bid defiance to all the hitherto available methods of treatment.

What now is the physiological action of massage and methodical muscular movements?

It is a complicated one. Many factors come into play, quite as much as in electrical treatment.

We have mechanical, thermic, trophic, and, most probably, molecular influences at work. Accurate observations teach us that sometimes the thermic, sometimes the vaso-motor action is the predominant one. One of the most familiar examples is the mild neuralgia caused by cold; and dissipated by the action of warmth. If in such a case massage be employed in place of warmth, the neuralgia disappears more rapidly. In this case the action of massage would be principally thermic—a conception that corresponds to the ordinary physical laws, according to which moving force can be resolved into heat.

As muscles attacked by neuralgia seek to withdraw themselves from activity, this inactivity reacts upon the blood supply. It is shown by experiment that the blood-vessels of muscles at rest contract, while those of muscles in motion dilate. The lessened blood supply leads to diminished irritability of muscle. At the same time the chemical changes that go on in muscular tissue fall behind during inactivity, so that accumulation of effete material takes place, and this also serves to check muscular function.

Massage, in the same manner as muscular contraction, causes an increased blood supply, the blood-vessels dilate under the mechanical irritation, and the artificially-produced hyperæmia serves the purpose of carrying off effete material.

From what has been said, it will be clear that muscular movements, active as well as passive, assist the

action of massage, and Metzger also has credited them with possessing a high value. For myself, I have no hesitation in claiming for them the lion's share of the success that follows the employment of massage.

We have, however, another factor to consider. If it is true that in some neuralgiæ the pain arises in part in consequence of the pressure exudation within the nerve sheath, massage will have the effect of softening and pressing back the exudation into the lymph channels.

Berghmann's notion may be here mentioned—that through the mechanical action of massage the nerve becomes numbed, that it for the moment loses its sensibility, so that it gradually diminishes.

Whatever may be the explanation of the process, the fact remains that, by the energetic and long-continued employment of massage, combined with methodical muscular movements, a cure can be effected in those cases of neuralgia and muscular rheumatism in which all other methods of treatment have proved ineffectual.

I must, however, narrow the limits of this assertion to those cases of neuralgia in which large groups of muscles are affected, such as ischiatic and humeral neuralgia, and in which no complete intermissions from pain occur.

Neuralgiæ of the head and face, which attack groups of muscles, and only occur periodically, are certainly relieved by massage. The paroxysms are delayed or shortened, but recurrences are prevented only in the rarest cases. The explanation of this may be sought in the fact that the forehead, nose, and cheeks only permit a very limited use of the mechanical treatment, and that, in particular, the so-called muscle-tapping cannot be carried out over the above-mentioned localities.

It now remains to explain the mode of procedure as briefly as possible—more briefly, in fact, than the extent of the subject demands. There can be no doubt that the best way of learning the details of the treatment is by autopsy—actual observation; but as those who first employed it could not have learned in this way, it will be clear that personal observation is not indispensable. When the broad principles are once laid down, each physician must assimilate the details of the method for himself.

Metzger divides the manipulation into four divisions—

- Gentle stroking.
- Hard rubbing.
- Kneading.
- Knocking or tapping.

In neuralgia only the two last methods of manipulation are suitable, but to these should be added "pressure."

In what manner the individual fingers, the fist, or the knuckles are to be used each medical man will find out for himself if he only keeps in view the object of the treatment, and this is to thoroughly work up every structure affected by the neuralgia from the very bottom. During manipulation the locality operated on must be borne in mind, particularly the relation of the soft parts to bones. The latter must be dealt with carefully. The edges of bones are much more tender than muscles, and if too much force be employed on the part of the masseur injury to the bones may possibly occur. The manipulation should always commence with pressure; this should be followed by kneading, and this by knocking or tapping.

Pressure over certain parts, as for example, the fossa supra-spinata scapulæ, can scarcely be performed in any other way than by the tips of the stiffened index,

middle and ring fingers. Pressure on the larger surface of the scapula is best effected by the firmly closed fist. If it be advisable to increase the force, it can be done by using the knuckles. If still more be desired, the metacarpophalangeal joints are to be employed.

Pressure must occasionally give place to pushing or digging down with the finger tips when the depth between groups of muscles is to be reached—for instance, on the inner side of the thigh, between the rectus internus and group of muscles springing from the os pubis. Here and there the thumb alone is to be brought into play.

In kneading, the word alone sufficiently indicates the method of manipulation. The part operated on is to be grasped between the thumbs on one side, and the four fingers on the other, and thoroughly worked between them. The thorough kneading of large groups of muscles is the most laborious part of the manipulation, and requires strong thumbs.

Tapping, or knocking, is less fatiguing. The edge of the flat hand is here employed, and the muscle should be struck transversely as well as longitudinally, care being taken to keep clear of the edges of bones. The force to be employed in the various parts of the process varies according to case and time—the more inveterate the process, the more force must be employed in treatment. If the patient be too sensitive, the attendant must be the more cautious and gentle.

In almost all cases in which massage is employed, after one or other "sitting" extravasation of blood will appear in the parts operated on, and the patient will complain of pain in the discolored spots. These must be left at rest until the color again becomes normal.

With the exception of increase of tenderness, these bruises have no other injurious consequences, and it has even been noticed that, where this bruising has taken place, after some days the muscles act more freely and the neuralgic pains become less.

As regards the length of time during which the manipulation is to be employed on one and the same part of the body, this must be decided by the stubbornness of the case and the resistance of the soft parts. As a rule, one to two minutes will suffice, so that it will take ten to twenty minutes to operate on ten different localities. Between the successive manipulations pauses for rest should intervene, as well as in the interest of the patient as of the operator. It is important that at the commencement but little force should be used; this should be developed gradually as is thought necessary. Sudden and violent handling causes fear, and is not well borne. Massage may be carried out with the patient in any posture.

When, as in ischialgia, the horizontal posture is necessary, the patient should be placed on a hard non-elastic couch, as, if the couch be elastic, the strength of the operator is wasted. Ladies undergoing this treatment should wear a dress of light dark-colored flannel, consisting of wide drawers and a suitable blouse. Linen does not do, as it glides too much under the hand, and fatigues the fingers of the operator.

The pain produced by the treatment is occasionally so great that the patient has not sufficient nerve to remain quiet. In such a case a third person is needed to hold the limbs.

After a "sitting" the patient is generally tired, sometimes exhausted. The temperature is raised $1\frac{1}{2}$ to $2\frac{1}{2}$ degrees, and the pulse accelerated. The pains set up by the massage subside after from 10 to 30 minutes. The patient desires rest, which should be permitted him. For this reason the active and passive muscular movements that are made use of should precede the massage.

To prevent misunderstanding, it is well to state distinctly that the patient is in a better condition for the methodical movements after the manipulation than before, and that is only on account of the fatigue that it has been recommended to operate in the above mentioned order.

If pyrexia sets in, the massage must be stopped at once. It is well after massage has been employed, daily for about ten days, to give one or two days rest.

It is not necessary that the treatment should be always carried out on the uncovered skin; the parts intended for operation may also be oiled, and should then be covered with a woollen covering.

With regard to the methodical muscular movements, it may be said that all those muscles capable of being put into movement should be, and as at first this cannot always be done actively it should be done passively. A thorough acquaintance with the anatomy of the muscles, and of the pathological action of each individual suffering muscle will enable the physician to have a clear idea as to what muscles should be exercised.

For the active exercise of the various muscles many simple contrivances may be employed. They render the labor light, and economize time, as the patient can often use them himself. Many patients have not the courage themselves to make movements that are painful, but they will give themselves up to their medical attendant "aut Gnade and Ungnade," and will bear patiently the greatest pain, and this with an abandon and victim-like submission that is singular to contemplate, and that is heightened, if possible, by any sign of approaching improvement. The physician must not commit the error of giving up the treatment if after three or four weeks no improvement sets in; for two or three months he must not allow his diligence to slacken, nor his courage to fail. Gussenbauer reports cases that required two hours manipulation daily.

In proportion as the painfulness of the neuralgia or rheumatic processes diminishes, the muscular movements will be easier and more energetically performed; massage of the individual parts will require less time and labor; the active movements, in which the aid of the attendant will have been before required, will be by degrees performed independently.

It is well to state that experience has shown that no method of practising massage is universally successful. The same results are obtained in different ways. Whoever has practiced massage for any length of time, will, encouraged by his success, follow ways of his own. Who-ever will make use of this method of treatment must have a certain disposition thereto, a certain degree of manual dexterity, accurate knowledge of the anatomical relations of the structures operated on, great perseverance and patience, and then he will succeed without the advantage of learning from demonstrations. He must, however, have a clear conception of what he is aiming at, every movement of his hand must be guided by a consciousness of the end in view, and in order to enjoy the pleasures that attend success, he must enter upon the treatment of each individual case in confidence in his method of cure.

If once a case hitherto declared incurable has been restored to health future cases will be undertaken with the greater confidence.

May the words of the great surgeon Nussbaum which he addressed to the naturalists gathering at Munich be fulfilled:—

"Let it be the aim of the physician to win back to medical science those glittering triumphs that in many cases have been left to add lustre to the quack and the rubbing women."—*Med. Press.*

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MALARIAL METRORRHAGIA.*

BY

J. J. HENNA, M.D.,

Physician to the French Hospital, etc.,

In this short paper, I desire to call the attention of the members of this society to a phenomenon which perhaps they may have noticed in their practice, but which to my knowledge, has not yet been brought to the notice of the profession. I refer, as the title of my paper indicates, to cases of metrorrhagia caused by the malarial poison.

In a frank case of intermittent or other malarial fever, it might not perhaps strike us as being a matter of great surprise, to meet with uterine hæmorrhage during the course of the disease, and treatment directed to the primary affection would also lead to a subsidence of the concomitant symptom. But as we all know, malarial poisoning assumes an almost infinite variety in its manifestations, and it sometimes becomes an extremely difficult problem to decide in an individual case as to the cause or nature of a symptom, which may be the only phenomenon presented to our observation, and which, usually, when met with, is due to other causes. The difficulty of solution of a problem frequently de-

pends upon the standpoint from which we view it, or the aspect which it presents to us, and so it is in the present instance. A case of uterine hæmorrhage presenting itself as such would raise in our minds the thought of perhaps a dozen or more different causes, but would not be likely to suggest at all the idea that it might be due to malarial influence. Though if we met with a case of fever and ague, in which, beside the chill, fever and sweat, there was a periodical bleeding from the womb, we would have no hesitation in at once recognizing the cause and remedying the difficulty.

Isolated symptoms, however, of disease generally presenting well characterized manifestations, are very apt to be mistaken, and the true cause to be overlooked, and I think that, perhaps, the clinical histories here related may enlighten us somewhat on a subject, which, as was previously remarked, has been either unknown or entirely neglected by those who look on it from their own peculiar standpoint, a point of view, moreover, from which it would be most likely to be observed, namely, the gynæcological.

Mrs. S., a native of the U. S., 36 years of age, married fourteen years; no children. Her menses appeared when thirteen, and have always been very regular up to two years ago, when she suffered from intermittent hæmorrhages as at the present time. Is quite emaciated, weighing only 95 pounds, pale and very depressed in spirits. Has been treated by a specialist for uterine displacement, to which the doctor attributed her sterility. Two weeks before she called on me she noticed that her courses had come three weeks earlier than expected, and that she would be taken sick about four o'clock every afternoon, and at or about eight o'clock in the evening she would again be well. Associated with this trouble she felt pain in the region of the uterus, which she compared to the pains in the temples from "tic douloureux," *i. e.*, like neuralgic pains; felt chilly and desired to lie down. Her appetite, which was never very good, was less than usual. But she felt better in the morning and could not understand why she should be taken unwell every day, and for a few hours only. On examination (ten o'clock in the morning), I found the uterus anteflexed and slightly enlarged, but not extra sensitive to the touch. With the speculum I perceived no high coloration of the cervix, and the sound passed in with very great difficulty. There was neither granular nor cystic degeneration of the cervix, and independent of a slight mucous discharge, I considered her in as good a condition as her anteflexed uterus would permit. I therefore concluded that she was suffering from that form of metrorrhagia which I had before met, and which I could not classify among those usually recognized. Ordered injections of hot water, rest, ergot and nuxvomica. Two days later, she called again, to say she felt no better, and repeated her original remarks: that she was well until about four o'clock in the afternoon,

*Read before the East River Medical Association, Nov. 14th 1882.

but after that hour she felt the pain in the uterus, chilliness, and the flow began. On her previous visit she had neglected to mention that, two years before, she had, at her husband's suggestion, taken a sea voyage, in the hope that it might bring the relief to her distressing symptoms which all the means which she had tried had failed to do. *To her surprise this gave her complete relief, and she returned home entirely well.* She was the more anxious and worried about her condition at the present time, as it would very seriously inconvenience her to repeat the trip, and she had no hope of relief in any other way. This most important information—her recovery after the sea-voyage, associated with the periodicity of the hæmorrhage—suggested to my mind the idea of malaria. I therefore resolved to try the usual method of combating that protean intruder, and began with a full dose of quinine. Twenty grains were administered at bed-time, and ten early in the morning. The drug showed no clemency to the poor lady's shattered nervous system, I found her at 5 o'clock in the afternoon entirely cinchonized, trembling as in paralysis agitans, deaf and in a high degree of hyperkænesis. *But there was no hæmorrhage.* Ordered food to be taken at once, believing as I do, that more good is obtained from food in cases of cinchonism than from the empirical dose of bromide, and promised to return the next morning. I called at eleven A. M., and to my discouragement I heard that about nine A. M. the flow had begun again. The fact that I had been able to postpone the attack, however, gave me renewed hope of success at my next attempt to stop it. I ordered the same dose of quinine, 20 grains, to be taken as soon as the flow stopped. At 12 o'clock there was no more blood, and she took the quinine, and also 10 grains the next morning. The day passed and there was no hæmorrhage. Ten grains more of quinine at night, and ten the next morning, as much food as she could take to mitigate cinchonism, the battle was gained, and I was enabled to carry to my book of record an interesting observation which I had never heard of before. She continued to take small doses of quinine for a week longer, and her appetite returning, she was again reestablished in her usual health. Six weeks after, however, I had her again on my hands with a similar attack, but this time the quinine did its work quickly, and to prevent further recurrence of the same, on my advice she removed from the premises where she was living, and since then, about a year and a half, she has had no return of the trouble.

The second case was a Cuban, Mrs. R., 24 years of age, married eight years, two children, the youngest $4\frac{1}{2}$ years old, now sterile, probably on account of a very severe form of cervicitis associated with a small laceration of the cervix. The first time she noticed the hæmorrhage was while in the country a year ago last Summer, at Rahway, N. J. Towards evening she felt pain in the uterus, a flushed face, palpitation of the heart, prostration and chilliness, and then a few drops of blood would show themselves for a few hours. After a while the symptoms began earlier and earlier, until she had two attacks in one day very much resembling the anticipating type of our malarial fevers.

Encouraged by my former case, and the periodicity being so well marked, I lost no time in combatting it as of malarial origin, and, after a full dose of quinine and the continuance of the anti-pyretic drug for a few days, she was again restored to her usual health; but I warned her to leave that little cradle of paludal poison lest she might get a more formidable and less tractable type, which would baffle our most energetic efforts.

The third and last case, is that of Mrs. McC., an American of Irish parentage, widow, 38 years of age, and of robust and plethoric constitution, the mother of one child, a boy 17 years old. This case had the peculiarity that the uterine hæmorrhage alternated with attacks of epistaxis, but the periodicity was never well established; at least I was never able to ascertain whether it was the quotidian, tertian or quartan type. It was, however, sufficiently marked to put me on the track of its cause, and the sulphate of quinine, as in the preceding cases, did its work well, and in a short time.

I have been trying to recall to my mind other cases which came within my observation before I had the idea of treating them under the new light, but I had not the curiosity of recording them, and so will devote the rest of the time allowed me, to examine into these three, the history of which I think will speak louder than my remarks. In case No. 1, I will call your attention to the very important fact that gave me the idea of the true origin of this curious complaint. I refer to that part of its history in which the patient informed me of the *complete relief* which she had experienced upon taking a sea-voyage after medicines had failed. That *sea-trip* was the equivalent to the subsequent treatment by the sulphate of quinine. Remove the patient from the infectious influence or neutralize the poison absorbed, the end will be the same. That sea-trip, therefore, was the key to the whole puzzle, and to it am I indebted for success in the subsequent cases.

We all know that malarial poisoning takes place through the circulation, be it by inspiration or by absorption of *bacteria* and *fungi* introduced into the stomach with the food and drink. "The blood," as says Hurtz, "is only the vehicle for the poison which, by hyperæmia and destruction of blood corpuscles in such organs as are disposed thereto, may occasion at such points, the local development of pigment matter." We have recognized congestion in almost all the viscera due to malarial poison. The spleen I believe to be the favorite one. Then the liver, the lungs, the brain, the stomach. The mucous membranes are also favorite places of malarial congestion.

Assuming Hurtz's supposition to be correct, we may explain the influence of malaria in producing the phenomena in question, that by paralyzing the vaso-motor nerves, in the coats of the vessels of the uterus, a hyperæmic condition is produced; then, again, to the influence it exerts on the red corpuscles, which disintegrates and transforms them into pigment, and to the diminution of the albuminoid elements, the nutrition of the walls of the blood-vessels is therefore lowered, and they are consequently exposed to breaking. But how does malaria produce this vaso-motor paralysis? It is an accepted theory that the pigment matter produced by malarial poison in the blood has a predisposition for the capillaries, and as it carries with it the poison, penetrates their walls and forms true capillary aneurisms, which in their turn press upon the nerves and paralyze them. Or we may have œdema exerting a like influence over the nerve peripheries. These cases, I hold, elucidate the fact, that metrorrhagia is sometimes produced by malaria, and exemplify how some cases of that affection may be remedied, which otherwise would baffle our efforts for relief.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY
OF MEDICINE, NOV. 16TH, 1882.

The President, Dr. Fordyce Barker, presided. After the transaction of routine business, Dr. Draper read resolutions expressive of the sympathy of the Academy for Dr. E. C. Seguin in his recent great affliction. The resolutions were ordered to be sent for publication to the New York medical journals and a copy forwarded to Dr. Seguin.

The scientific paper of the evening entitled

"EXCISION OF CHANCRE AS A MEANS OF
ABORTING SYPHILIS."

was read by its author, P. Albert Morrow, M.D., and discussed by Drs. Keyes, Sturgis, Taylor, Fox, Bronson, Bulkley and Otis.

The following is a brief abstract of Dr. Morrow's paper:

Mr. President and Fellows of the Academy. Is it possible by the excision of chancre to abort syphilis? It is difficult to determine the prophylactic value of the excision of chancre. Its practice has been received with more or less favor from the time of Hunter and Bell, who extirpated or destroyed it with caustic. This practice became almost universal until within comparatively recent times the principles upon which they based the procedure were found to be erroneous.

In 1877 a fresh impetus was given to an examination of the question.

In Germany the current of professional opinion is in favor of excision. In France there is not the same recognition of its value. In England it has been ignored, and in this country it is not generally practiced and the sentiment of the profession is against it.

Those who believe in excision claimed for it that in some cases it would abort the development of secondary symptoms, in others it would render milder the manifestations of the disease. The chancre and tissue surrounding it was thoroughly excised, the wound sutured and a compress and bandage applied. Union took place by first intention. If subsequent induration occurred a second operation was necessitated. In brief the advocates of this procedure claim that it effects the radical cure of syphilis. The indications for recourse to it are not clearly presented though it may be of course presumed that the earlier it is done the better the chance of success. It may be done with hope of a good result any time before the appearance of the secondary symptoms.

In determining the value of excision it is important to settle the question as to whether the syphilitic virus remains localized until the development of secondary symptoms or the chancre itself is but the local evidence of a constitutional condition.

As to the pathological character of the initial lesion we know very little. The virus has not been isolated. How shall we determine when generalization of the virus takes place? It seems for a time to remain in a stage of incubation until by gradual implication of the vessels it reaches the lymphatics. This theory regards the chancre as the deposit of the virus.

Tuberculosis and cancer have many points in common with syphilis. The advocates of excision argue why, if the disease be at first local, may excision not abort it, and if inevitably constitutional from the beginning, why is not the treatment begun at once.

Dr. Morrow then gave an elaborate resume of clinical

experience on the excision of chancre which, he maintained, condemned the procedure as valueless in aborting syphilis.

From his analysis of the subject he concluded, 1st. That the weight of evidence was opposed to the theory of the local nature of chancre in its incipency. 2nd. That excision was condemned by its clinical results. 3rd. That there was no evidence to prove that excision attenuates the syphilitic virus.

Dr. Keyes said: I have been much entertained and instructed by Dr. Morrow's paper. I am glad to express my entire assent to his views. He has gone over the subject so completely as to leave nothing to be said. Syphilis is like a beautiful woman, uncertain and irregular. It is to-day not the syphilis of the 15th century. (Dr. Keyes here read a letter from a friend in the Sandwich Islands which stated that in the forty years since syphilis had been introduced the population had diminished from 110,000 to 40,000.) When introduced on fresh soil its ravages were most virulent. It is to-day, though not robbed of all its terrors, only respectable from its surprises. In this city its manifestations were uniformly mild. It had gradually become acclimated, civilized and milder. As to the excision of chancre he had never practiced it though since question of its prophylactic value had been agitated he had uniformly offered the operation to patients.

Dr. Bronson said that his own personal experience in the excision of chancre had been very meagre. He thought the operation an illogical one. It presupposed the fact that the virus of the chancre was all we had to do with in syphilis.

Dr. Fox on the whole agreed with the conclusions arrived at in Dr. Morrow's paper. His own in this operation had been limited to two cases. In one case there were absolutely no symptoms of syphilis following excision of the chancre. In another symptoms were developed but of a milder character than was usual. He believed the chancre a local lesion and saw no reason theoretically why its removal should not abort the symptoms dependent upon the subsequent absorption of the virus. But clinical experience was unquestionably opposed to this theory. In discussing this question, the impossibility of making a positive diagnosis of chancre in every suspected case should be considered. Contrary to general opinion he regarded syphilis as usually a mild affection. Naturally the cases with most striking features were presented in text books on this subject. In some cases no one could over-estimate its ravages but in the majority of cases it ran its course without any appreciable symptoms.

Dr. Sturgis said that he had been impressed by the fact that in the many successful cases reported in which excision of chancre was presumed to have aborted syphilis, there was almost universal absence of adenitis. This fact threw suspicion on the character of the sore excised, since adenitis was coincident with the appearance of the chancre. Then he considered seven successful cases out of thirty operations a very small proportion on which to recommend an operation independent of all error in diagnosis. He could not but believe that there was some error in the German statistics. The discrepancy between the descriptions of cases by French and German authorities, the fact that the former were uniformly cases accompanied by adenitis and unsuccessful and the latter without adenitis when successful, coupled with the fact that Auspitz was a unicist, certainly rendered the verdict in the question of the prophylactic value of excision *not proven*. A pseudo induration might attack a simple

sore and thus mislead; coincident grand induration was the important fact to be determined.

Dr. Bulkley heartily concurred in the views expressed in Dr. Morrow's paper. Personally his experience had been limited to one case. He had done the excision very thoroughly, but the patient had developed syphilis in the most aggravated form. If, however, excision had in one case aborted syphilis the theory was proven. Even if the successful cases reported were chancroids he thought the operation justifiable, since it transformed a dangerous sore into a simple wound.

Dr. Taylor would agree with those who considered syphilis benignant, given a good constitution, a docile patient, and a good doctor. He had gone into this question of excision of chancre and believed that there were cases in which chancres should be excised, as for instance, where they were situated on the prepuce and gave rise to phimosis. If you attempted absorption by early treatment you produced a disorderly evolution of symptoms. As regards the prophylactic value of excision of chancre, he had found that it delayed the manifestation of secondary symptoms. Dr. Taylor related the history of a case in which extirpation had been most carefully performed. The wound healed kindly in ten days, and no enlargement of inguinal ganglia followed, but in forty-five days after the roseola came out. As a cure for syphilis the operation was a failure, though for other reasons it was sometimes advisable.

Dr. Otis, in substance, spoke as follows: My object in rising is not to criticise personally Dr. Morrow's paper, or the views of the gentlemen who have already spoken, but rather to give you my own views and experience on this question. If we wish a definite and reasonable solution of the question of the prophylactic value of excision of chancre, it seems to me this can only be reached by inquiring what is the initial lesion, and what is the manner of infection?

The beginning of syphilis is in a cell not differing from the white blood-cell with which we are familiar. In other diseases this has also been established as the point of infection. The first morbid process is one of proliferation, not of inflammation. Syphilis may go through its course without an open lesion, even without inflammation. That it must have a point of entrance before it can gain access to the system is well proven. Now, what goes on after it has thus gained entrance? Besiadecki, in 1867, was the first to determine this. He examined twenty specimens of the Hunterian chancre with the microscope and found the evidence of proliferation of cells in loco, he found that these cells were so aggregated as to interfere with the nutrition of the part; the lumen and adventitia were packed with these cells, and from interference with nutrition there was loss of tissue, but in no sense ulceration, simply a breaking down. The walls of the nearest capillaries were found to be infiltrated with these cells, and especially the adventitia of these vessels; and all this time there was nothing wrong with the individual, no symptoms were developed. This process of cell proliferation in not a theory but a process proven by unprejudiced microscopical examination. This process extends through the lymphatics to the receptaculum chyli, to the venous system, and now at length we have the development of the roseola.

When we talk about excision of the chancre we must know that we have this process of proliferation going on at a local point. The prophylactic value of excision must therefore depend on the rapidity with which these cells get away from this point to the general system. It follows that when the glands are

involved the value of excision of the chancre as a preventive of infection can never be established. We know that the white blood cell may move with great rapidity into the lymphatics, to the receptaculum chyli, and into the general circulation.

As a matter of personal convenience very great benefit may accrue from the excision of chancre, for example, a gentleman came into my office with a large chancre, who expected his wife home from Europe in ten days; I advised excision, which he agreed to. On the 3d day after operation the wound was healed by first intention, and in ten days he had but a line to indicate where the wound had been. The material removed is superfluous material and I have never seen a permanent cicatrix resulting from such a procedure. The cases in which I have done excision have been characterized by milder secondary symptoms. (Dr. Otis next narrated a case in which excision had been followed by supposed immunity from the disease, but careful examination had disclosed a mucous patch on the fauces.) There was no doubt that syphilis varied greatly in its manifestations. During the last twenty years we had been giving mercury judiciously, and to-day there were few men in the profession who did not know how to treat syphilis intelligently. We should cease to regard it as a mysterious affliction, but look at it in the light of modern knowledge and research.

In conclusion, Dr. Otis referred to the recent work of Cornil, which substantiated the lymphatic theory of infection, and stated that Cornil and Auspitz were in harmony with the views of Besiadecki.

Dr. Morrow said that Auspitz claimed that infection took place through the vessels not through the lymphatics, and that though he had not yet read in detail Cornil's latest work, he was under the impression that Cornil confirmed Auspitz.

Dr. Otis replied to Dr. Morrow's criticism that he had read Cornil and found as he stated that he confirmed the views of Besiadecki, that the recent work of Hill & Cooper distinctly stated that Auspitz confirmed Besiadecki.

Dr. Otis stated, also, as confirmatory of the lymphatic theory of infection, that the works of Bumstead and Taylor and Hill & Cooper had incorporated this theory though no mention had been made of its author. After further brief remarks by Drs. Taylor and Keyes the academy adjourned.

ABOUT BOOKS.

The Diseases of Women. Their Pathology, Diagnosis and Treatment, including the Diagnosis of Pregnancy, by Graily Hewitt, M. D., London, F. R. C. P., Professor of Midwifery and Diseases of Women, University College, London, Etc. Fourth American from the Last Revised and Enlarged London Edition, with One Hundred and Thirty-two Illustrations. Published by P. Blackiston, Son & Co., Philadelphia. 1882.

American readers who know either personally or by reputation the distinguished teacher whose rare experience, sound sense, and happy faculty of conveying to others the points of his knowledge, would be easily misled by the title page of this volume, which some Philadelphia publishers have endeavored to foist upon professional readers, though in so doing they have, it seems to us, been guilty of gross imposition. We base this statement on the fact that the volume claims to be a reprint from the "last revised and enlarged London

Edition"—the London edition referred to being published ten years ago. The value, or rather want of value of the reprint of a work on diseases of women which has not been revised for ten years will be at once evident.

Moreover, this reprint is not from the last revised edition, since the last revised edition is now passing through the press of Longman, Green & Co., London. The reprint of this edition, edited at the request of the author, by Dr. Harry Marion-Sims, is now in process of publication, by Messrs. Bermingham & Co. We insert the editor's preface, which will indicate the rare worth of this revised edition, and at the same time expose the deception by which the former publishers have endeavored to hoodwink a confiding profession by presenting an old work in the guise of a new.

"The author sent the proof sheets of this edition of his book to me with the request that I would supervise their passage through the press, and add any notes I might choose to make. Having known him from my early boyhood, I accepted the compliment, and determined to give the book the widest circulation possible.

"I was fortunate in securing Messrs. Bermingham & Co. as publishers, who promised to issue an edition of at least ten thousand copies.

"The book has some points of peculiar interest. It insists on better nutrition. It advocates the mechanical pathology of some forms of uterine disease, viz., that pathological changes are produced by mechanical causes. The wood-cut illustrations of uterine displacements are of life size, which is an aid to the beginner. We have long known that the nausea of pregnancy is a neurosis, a reflex symptom which the author shows very conclusively to be the result of some form of uterine distortion, and which is always relieved by appropriate mechanical treatment. He further demonstrates most satisfactorily that hysteria in all its protean forms is a uterine reflex (not ovarian as has been generally supposed), dependent always on flexion or malposition; and that to remedy the latter is to cure the former.

"This book has many other features of interest, which the student will readily appreciate.

"The notes I have added are embraced in brackets in the text.

HARRY MARION-SIMS."

The points of dissimilarity between a work on this subject written ten years ago and one thoroughly revised, for the most part rewritten by the author and edited for American readers by an experienced gynecologist are so great as not to permit of our taking them up in detail.

That such a complete treatise on Diseases of Women from such a source, profusely illustrated by life size illustrations and in all respects written with an intimate appreciation of the wants of gynecologists of the present time, must receive a hearty welcome, a wide reading, and create a renewed interest in the study and treatment of this class of diseases goes without saying.

But that any attempt should be made to abort the proper purpose and usefulness of such a work by substituting for a valuable treatise an antiquated one can not but react on the authors of such a scheme and arouse the indignation of the profession. It will however at least have the effect of awakening readers to the fact that an unfathomed mine of gynecological riches will soon be opened up to them, when they may

themselves judge of the comparative value of the legitimate heir and the changeling.

Papers Read before the Medico-Legal Society of New York. 2nd Series. Revised Edition. New York, W. F. Vanden Houten, 1882.

This volume of five hundred and twenty odd pages, is unquestionably a phenomenal curiosity of medical literature. It incorporates about twenty papers read before the Society named in the title, respectively eight nine, and twelve years ago. It is not generally held, we believe, that Science, like cheese, improves with age; and what motive could influence a society, some of whose recent proceedings have been valuable and instructive, to resurrect these antiquated and, in the light of modern science, largely erroneous, and in part absurd papers, is more than we can determine. In fact, we are inclined to believe that the society as such had little or nothing to do with the publication; and the fact that no less than *three* very poor inaugural addresses of Mr. Clark Bell, the officer who managed the publication, and a very good picture of Mr. R. S. Guernsey, nominally the chairman of the committee are included in this, which has been not inaptly termed the "Medico-Legal Picture Book," may go far in the way of suggesting the inside mechanism governing the conception, maturation, and delivery of this literary and artistic monstrosity. The better papers of the series were published at the time they were read, and like Dr. Hammond's articles on "David Montgomery" and "Morbid Impulse," and the meritorious report of Drs. O'Dea, George F. Shradly, Rogers and Messrs. Gerry, William Shradly and Bedford on Criminal Abortion, have become such permanent factors of medico-legal literature, that their republication in the questionable company of political illustrations and medico-legal compilations can hardly add to the reputation already gained by their authors. It is ever to be doubted whether the publication of the pictures of one deceased and three living members of the society, can add much to *their* reputation. If one member or three members can thus claim immortalization (?) pretty soon other *members* paying their dues, will advance the same claim. Not a few might do so on the strength of a world wide reputation actually gained—and the volume III. of the Transactions, announced as "shortly forthcoming" may turn out to be a photographic album illustrating the society's membership. We are encouraged to hope that such a discreditable contingency will be avoided, and are sustained in this hope by a knowledge of the fact that at least one member of the society had the good taste to decline having his picture inserted. Certainly the experience of those who have thus far been exposed to the medico-legal retina, by Messrs. Bell and Guernsey, can not be said to be very encouraging. One of them lost his position as solicitor for an elevated railroad and another had the still greater misfortune of being elected a member of the Assembly immediately after the issue of the "Picture Book." As to the frontispiece, which furnishes a portrait of the only member who could be with propriety considered a fit subject for illustration,—the deceased Dr. Rogers—it must strike the relicts of that esteemed and lamented physician as a caricature. We recollect in our boy-hood day having seen pictures of the military heroes of the late war in illustrated histories of the latter event—which were artistically on a level with the portrait of Rogers, but were redeemed by the military uniform. It is perhaps as well that no attempt was made at de-

picting the various forms of insanity discovered by the Society, although we must confess that when we first opened the volume, we thought the artist of the Society had attempted in one of the other portraits to depict Guiteau—whose mental state it will be recollected was discussed by the members—and we thought that the artist had made a pretty fair success of it.

As to the papers contained, aside from the inaugural addresses of Mr. Bell; which are repetitions of the inaugural address of Dr. Rogers as far as their medico-legal bearing is concerned; it may serve to characterize them, that the criterion of insanity advanced by Mr. Guernsey is like the criterion of the people who ridiculed Columbus and imprisoned Galileo, the "common sense" of mankind; and that the learned paper on "Rape" may be found in Blackstone's commentaries on the common law of England. There are other papers which are remarkable only for the loans negotiated from Caspar, Beck, Taylor and Tardieus.

Dr. Eugene Peugnet contributes a valuable paper on Toxicology and one on the Fisk murder. But even his name is not correctly spelled, and there are so many gross errors in the type and copy, that when a friend of the deceased author reported them to the Executive Committee of the Society, it was resolved to withdraw the entire edition. But, unfortunately, a sufficient number of volumes had already been sent abroad, and it will require many years of good hard earnest work on the part of the members to neutralize the discredit into which it has fallen through this publication, if it will ever recover from the injury it has sustained financially.

Unless the New York Medico-Legal Society will undertake to publish its transactions, while the proceedings are still fresh, and will include in its publication what it has not done in this one before us, the discussions of the papers read, it may as well abandon publishing altogether. The resurrection of antiquated proceedings can only lead to the surmise that the Society is deteriorating, while their publication in such form and with such associations as the volume before us can only effect the holding up to ridicule and the final disintegration of a body which occupies an important field of inquiry.

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Walsh's Physicians' Combined Call Book and Tablet. Seventh edition. Published by Ralph Walsh, M.D., Washington, D. C. Price \$1.50.

This handy little combination of call book and

tablet is already so popular as to need no new commendation. Beyond its neatness and convenience of arrangement and its perfect fitness for the end for which it is designed, it contains many memoranda regarding formulæ, dosage, etc., which furnish a ready reference for the physician.

SELECTIONS FROM JOURNALS.

A SUCCESSFUL CASE OF NEPHROTOMY AND NEPHRECTOMY. By GEORGE ELDER, M.D.

Mrs. W., aged 36, was admitted under my care on April 29th, 1882, suffering from an abdominal tumor. The history of the case went back two years and a half, when its first symptoms were pain down the left side of the leg, aggravated by exertion and by painful micturition of scanty thick urine. At no time was there hæmaturia. As time advanced, rigors, night sweats, diarrhœa, nausea, anorexia, fever, and general declension in strength became superadded, until on admission she was literally "a bag of bones." The urine was loaded with pus, and, for the first few days, did not average more than sixteen ounces. Lithia water, *ad libitum*, soon increased the flow. There was distinct evidence of tubercle at apices of both lungs, but no family history of it.

Until May 10th, on account of the patient's weakly condition, I delayed making a full examination of the swelling, contenting myself with relief of the local suffering, and measures to improve her general condition. So tender was the superjacent skin, that no sort of satisfactory examination could be made without an anæsthetic. Ether was administered, and it was found that the tumor was a large left renal abscess, extending from the left anterior superior iliac spine up to, and continuous with, the cardiac dulness vertically, and, in the transverse direction, from an inch to the left of the umbilicus round to the spine. There was considerable bulging anteriorly, posteriorly, and laterally, and very distinct fluctuation was felt.

Evidently the kidney was converted into a large abscess-sac. After making the usual lumbar incision, and dissecting down to the organ, two large abscesses were emptied of offensive and curdy pus. The interior of the kidney was very friable, roughened, and gave rise to troublesome bleeding, which was checked by plugging with carbolized lint.

The kidney was very considerably enlarged, reaching inferiorly below the level of the crest of the ilium and closely adherent to the surrounding tissues. The nephrotomy was performed under antiseptic conditions. There was little or no shock; and, on the evening of the operation, it was noted that the local pain was much lessened; and the temperature, which previously had fluctuated between 100° and 103° Fahr. fell one degree. For several days the urine contained a much smaller proportion of pus; and on the fifth day, for the first time since her admission, it gave an acid reaction.

For the three weeks subsequently, the patient's condition did not alter much. The wound discharged freely, and the urine was never free from purulent deposit.

The temperature remained high, and night-sweats continued, unless when controlled by pilocarpine in doses of one-sixtieth part of a grain. All through the illness this drug was effectual in checking the hyperidrosis. It is an interesting fact in this case that the temperature in both axillæ was never the same, usually

higher in the right; the difference occasionally being as much as two degrees. There was also synchronously with this, right hemi-hyperidrosis. At this stage of the case, an attack of right pleuro-pneumonia, doubtless of septic origin, all but ended the record. When she got fairly over this attack I, on June 20th, extirpated the peccant organ, by extending the original incision upwards and downwards, and supplementing it by a transverse. By long and patient manipulation with the fingers, I peeled the kidney from its adherent capsule, and finally secured the pedicle with thick carbolized silk. After the removal of the kidney, the friable tissue, of which the pedicle was composed, broke down under the strain of the ligature, and, for a few seconds, the hæmorrhage was appalling. A second and third ligature were applied, with the result of effectually controlling the greater part of the bleeding, and ligature of several small arteries finally disposed of it. During the enucleation of the kidney, there was very considerable oozing, which the pressure of sponges kept under control. Altogether, there was a good deal of blood lost. Beyond washing the cavity with carbolized water, and plugging, a few temporary metallic sutures completed the operation. Through an accident with the spray, the operation was not done strictly antiseptically.

For some hours after its performance the patient's life was despaired of from the intensity of the shock, which was combatted by rectal injections of brandy and pancreatised beef-tea. During the first forty-eight hours the urine was very scanty, but since, its quantity and quality have been normal. Up till date (July 22d), the patient made an uninterruptedly good recovery; and the wound, though not skinned over, was quickly filling in with healthy granulations. With the operation, the hemi-hyperidrosis and differences in the axillæ disappeared.

My only regret is, that I did not remove the kidney at the first operation.

Since the operation, the chest symptoms have undergone considerable amelioration.

Oct. 24th—I last heard of the patient two weeks ago, when her health was better than it had been for years. *Brit. Med. Jour.*

A CASE OF GASTROSTOMY. By R. H. BOURCHIER NICHOLSON, M.R.C.S., Eng.

J. McD., aged 69, seaman, had good health up to three months ago, when he first experienced difficulty in swallowing; could only take small quantities of fluid, and that with much pain and frequent sickness; losing weight rapidly.

May 1st, 1882, I could not pass the smallest size bougie; recommended gastrostomy; and performed the first stage of the operation on May 14th, under ether—strict antiseptic precautions being used. I made an incision three inches long, three-fourths of an inch on the inner side of the ninth and tenth left costal cartilages; passed two long silk ligatures through the peritoneal covering, three-fourths of an inch apart (as recommended by Mr. Bryant); and stitched the stomach to the abdominal walls with twelve silver wires. The wound was dressed with terebene and olive oil (1 part to 3); then a pad of salicylic silk, covered with jaconett, etc. A suppository of half a grain of morphia was given. Temperature, 90°; pulse, 96. He had no pain; and passed urine. He was fed by enemata of four ounces of beef tea, with ten minims of tincture of opium every three hours, and a beef suppository night and morning.

May 15th.—Temperature 100.2°; in the evening normal. Pulse 100. He had no pain; retained the enemata; and slept well.

May 16th.—Temperature 98°; pulse 100. Egg and milk were given alternately with the beef-tea. At 9.30 P.M., he had had hiccough since 3 P.M. No pain.

May 17th.—The hiccough was better. The wound was dressed. It looked well; there was no pus. Temperature 99.2°; pulse 102.

May 19th.—The bowels were moved. A drachm of brandy was added to each enema.

May 21st. Temperature 97.4°; pulse 84. He had kept up well, retaining the bulk of the injections. I finished the operation by passing a tenotomy-knife into the stomach, between the silk ligatures left in the first stage of the operation, making an opening one-eighth of an inch wide. I injected, through the œsophageal tube (the size of No. 6 catheter), four ounces of warm milk, and repeated it at 8.30 P.M. The injections by the rectum were continued. Two patches of ecchymosis appeared above the wound.

May 22d.—Temperature 98.2°; pulse 80. He had two hours' sleep. The ecchymosis was fainter. Beef-tea was given by the stomach; there was no difficulty in passing the tube. I removed three stitches; the wound granulating.

May 23d.—Temperature 98°; pulse 80. He was fed three times a day by the stomach.

May 24th.—The remaining nine stitches were removed. The ecchymosis was disappearing. Maltine was added to the food given by the stomach. He had a loose motion.

May 28th.—The wound was closing rapidly. Iced water and milk were allowed occasionally, but pain was caused by swallowing.

June 4th.—He sat up to have the bed made. He had a troublesome cough. He was fed every three hours by the stomach.

June 7th.—There was no oozing when he was fed; he had finely-minced mutton with maltine.

June 10th.—The wound was healed, all but a few granulations round the fistula.

June 17th.—He had peptonized milk or beef-tea every three hours.

June 25th—(sixth week). The fistula did not close entirely after the injection. There was slight oozing, occasionally tinged with blood. From this date the patient lost ground, the old pain in the chest continuing.

July 6th.—He died, having lived seven weeks and four days after the operation.

At the necropsy, the stomach was found healthy. The stricture of the œsophagus was almost impervious, just above the entrance of the stomach.

REMARKS.—In this case I followed, as nearly as possible, the one reported in the *Lancet* (May 6th 1882) by Mr. Bryant. I urged the man to have the operation done when he had some strength left, dividing it into two stages, as recommended by Mr. Howse. The two long silk threads I found a great help in the second stage. The beef-suppositories were of much benefit, the man saying he felt great comfort from their use. The man was saved the pangs of starvation, from which he was fast sinking when I first saw him. He certainly lived six weeks longer than if he had not had the operation performed, and was fairly comfortable during that time. There are cases on record who have lived much longer, and I had every reason to hope this might have been one more. I have retained the fistulous opening into the stomach, to show how strong the adhesions between the surfaces had become.—*Brit. Med. Jour.*

CASE OF SO-CALLED IMPERFORATE HYMEN.

A paper on this subject, by Dr. Matthews Duncan, was read before the Obstetrical Society of London. He was induced to relate the case by three circumstances. 1. There was a remarkable absence of any kind of suffering during nearly the whole time of the development of the disease. The patient had never menstruated, nor suffered from any uneasiness in connection with that function, until eight months before admission, when she was told by a medical man that she had a lump in the lower belly. Since then, she had suffered from irregular achings. The author thought the probable explanation of this was, that the uterine body was not distended; for facts showed that dilatation of the uterine body was more difficult and painful than dilatation of the vagina and uterine cervix. 2. The case illustrated the treatment without any injections, which had been the subject of remarks at a recent meeting of the society. An incision was made by Paquelin's cauterizing-knife. About 25 ounces of the usual treacly fluid escaped; about 20 ounces on the following day, and the last of it on the fifth day; in all about 50 ounces. At no time had it any fœtor. No hypogastric pressure or interference with the flow was permitted. A piece of carbolized lint was put to the vulva. The patient made an uninterrupted recovery. He thought the risk of peritonitis was increased by the washing out sometimes practised. He thought the cauterizing-knife was preferable to any other mode of making the incision, because its wound was not an absorbing surface. 3. The condition of the pudendum rendered the term "imperforate hymen" erroneous and misleading. The vagina was closed by the membrane, upon which the hymen could be seen, entire and healthy; and after the operation, the hymen could be seen to have its normal position and relations. He had made the same observation in other cases; and he had seen the hymen present when vagina and uterus were both absent. On these grounds, he regarded the view of M. Budin (that the hymen was nothing but the anterior extremity of the vagina) as incorrect.—Dr. Robert Barnes said that, in these cases, toxæmia arose before the blood was evacuated, from decomposition of the hæmato-globulin in the retained fluid. He had not used injections; they were not called for in all cases.—Dr. Gervis could hardly accept Dr. Duncan's view, that the membrane occupying the area within the hymen was the vaginal wall. He thought the variations in shape of the hymen, and the absence of muscular fibres in it, militated against M. Budin's view.—Dr. Carter had had under his care a case similar to that described by Dr. Gervis. He had divided the septum, and the patient did well. He thought washing out was meddlesome, unless the discharge were offensive, or there were symptoms of septicæmia.—Dr. Rogers mentioned a case under his own care. Some pyrexia followed the operation. The vagina was not washed out till a week after the operation, and, when this had been done, the pyrexia subsided.—Dr. Galabin thought it an important question whether, in these cases, it was desirable to use injections immediately, after an interval, or not at all. The danger was greater the higher the atresia was situated. He had known of two cases of high obstruction, in which death had followed evacuation, although no syringing was used. Emmet had published a number of cases, many of them of atresia high up, in which recovery had followed treatment by injections. He (Dr. Galabin) generally let the fluid flow for twenty-four hours, and then began antiseptic

injections. All his cases so treated had been successful. Perhaps it would be best if a perfectly aseptic condition could be maintained by antiseptic dressings.—The President said that Dohrn had entered elaborately into the developmental histories of vaginal closures. What he (Dr. Duncan) wished to show was that cases with blue thin-walled bulging between the labia were generally, often erroneously, called imperforate hymen; whereas in many, and also in cases where there was no vagina, a hymen could be distinctly seen.—*Brit. Med. Jour.*

CASES IN THE PRACTICE OF PROF. VON NUSSBAUM.

Dr. ISENSCHMID of Munich has published, under the name of "A Vade-Mecum for the Practical Surgeon," a first number of a series of sketches from the surgical practice of Professor von Nussbaum, consisting of short accounts of special cases, and a summary of the clinical observations made upon them. The following are some of the most valuable communications.

1. In a case of lymphatic swelling in the neck, after incision and evacuation of pus, iodoform was freely introduced into the wound with successful results. Its action is described as excellent in such cases, as it has both a chemical and mechanical effect, setting up local irritation, and inducing granulation in the callous tissue. In the case of an officer who had a whole chain of glands simultaneously affected, the sprinkling of coarsely powdered iodoform into the wounds, after evacuation of pus, rapidly induced a complete cure. Iodoform should always be employed in coarse powder.

2. A small encysted tumor of the scalp was operated on in Dr. Heim's method. A fine incision being made into the tumor, a piece of caustic potash was introduced into it, and firm pressure applied for four minutes. After a fortnight's interval, the contents of the tumor had become saponified, and after removing the scab, the collapsed mass could easily be drawn out by forceps. This method is entirely painless.

3. The case of an old woman, who for three days had had fœcal vomiting, and in whom no hernia could be detected, called for decision between the operations of laparotomy and enterotomy. The latter operation was performed through an incision over the descending colon on the left side, the peritoneum being stitched to the skin before the bowel was brought through the opening and secured. The more serious risks of laparotomy, and the frequent difficulty of seizing the coils of intestine, render the other operation preferable, especially with the assistance of the Listerian precautions.

4. Neuralgia of the infra-orbital nerve may be either centripetal or centrifugal. In cases of the former kind, resection of the nerve will be effective; but in the latter class, the result of the operation is less certain. In one such case, however, in which the teeth, whether healthy or diseased, had been extracted from the right side, the following operation was performed. An incision through the skin, parallel to the lower margin of the orbit, was met by a deep vertical cut, exposing the infra-orbital foramen. With hammer and chisel, a small triangular wedge of bone was then removed, and the nerve drawn out, and a piece of it cut off. By slightly opening up the antrum of Highmore, the nerve-tendrils can be reached and lacerated as they pass to their respective teeth. Failing success in this operation, it might become necessary to ligature the carotid, but this should only be resorted to after resection has fail-

ed. In ninety-five cases out of every hundred who seek relief for face-ache or swollen face, the starting-point of the mischief can be traced to a diseased tooth or fang, although patients themselves will suggest almost any other cause in preference.

5. In the reduction of an incarcerated hernia, the best of accessory means is the production of deep anæsthesia by chloroform. Baths, tobacco, clysters, ice-bags, etc., only serve to waste time in such cases. If reduction fail under deep narcosis, operative measures should be undertaken there and then. Taxis should never be used to excess. The dangers of operation are less serious under antiseptic precautions than are those of forced taxis. Small painful and inflamed incarcerated herniæ should be operated on once. With the larger painless and non-inflamed tumors, there is always less urgency.

6. Amputation of the breast for fungating carcinoma may be undertaken without the use of the spray. In such cases, it is better to wash the wound thoroughly with chloride of zinc, and then to sprinkle it with salicylic acid and dress it with salicylic lint. The wound should not be closed by stitches. It may be necessary to employ compression to check subsequent hæmorrhage; and for this purpose an ordinary bath-sponge, squeezed dry and enveloped in gutta-percha tissue, forms an elastic pad which is always well borne. The whole breast should always be removed, even when a few outlying glands only are secondarily infected; but in cases where the disease has so far extended as to leave no margin of healthy tissue, it is better to leave it untouched. Cancer of the penis has the least, and cancer of the breast the greatest tendency to recurrence.

7. Prolapsus ani in a small child was treated by purgation and then by opium, preparatory to the operation of returning the bowel by means of the index finger, and cauterising the sphincter in five or six places with a Paquelin's instrument; a perforated plate being used to prevent injury from being done to the surrounding parts.—*Lond. Med. Rec.*

CHOREA AND ITS RELATION TO RHEUMATISM. By EDWIN RICHARDS, M. B., Physician to the General Hospital, Birmingham.

The purport of this paper is to support the view, that chorea is a functional disease of the brain. From my observation of a large number of cases, of many of which I have records, I have been led to believe that chorea occurs exclusively in individuals of an excitable nervous temperament, and at a time of life when the mind is least stable; that it may arise solely from excessive nervousness, which is frequently brought to chorea-point by fright, or some condition calculated to produce nervous debility. If it were not that I think that all will admit that fright is of itself capable of causing the disorder, I should cite cases which would, I think, carry conviction that such was the case. The fact that mental disturbance is a potential cause of chorea, is, to my mind, presumptive evidence that it is the constant cause. In three of my cases, chronic movements followed the occasion of excitement within twenty-four hours. Now, if organic changes are brought about in so short a time, it is reasonable to suppose that, in protracted cases, terminating fatally, constant grave structural alterations would be found. Such, however, in my experience, is not the case. The proposition, that chorea is caused by mental disturbance, is supported by the fact, that the movements are to a variable extent under the control of the will;

and when the mind is at rest, as in sleep, cease. The shifting, too, of the movements, seem to contraindicate any fixed lesion. It might be urged: Why does not fright more frequently cause chorea? To this objection, I would reply, that an attack of chorea from fright is determined by the nature of the terrifying agent, and the mental constitution of the individual. A trivial incident may seriously impress a nervous child, while a child who is not of a nervous temperament might not be shocked by a far more formidable occurrence.

And now, as to the connection between chorea and rheumatism. The causal relationship between these two diseases must, I think, at present be purely speculative, as the etiology of rheumatism is as yet undetermined. I am inclined to think that we must look to the nervous system for the primary cause of that disease. It seems to me probable that functional nervous disorder may lead to blood changes, which give rise to the symptoms indicative of rheumatism; and, if this were so, we should, as I think, have a common cause for the two diseases. I have been much impressed by observing what nervous temperaments rheumatic patients possess—how great is the nervous debility during and after an attack; it is out of all proportion to what might be accounted for by the pain they suffer, and the *régimen* they undergo. My experience, up to the present time, has led me to the conclusion, that valvular disease of the heart is associated with chorea only through rheumatism. Four, and only four, chorea cases, have been admitted into my hospital under me without heart-disease, and discharged from it with damaged valves. In these four cases, the endocarditis was accompanied by well-marked symptoms of acute rheumatism. In no one instance have I seen valvulitis develop in a choreic patient unconnected with rheumatism.—*Brit. Med. Jour.*

A SUCCESSFUL CASE OF NEPHRECTOMY. BY LAWSON TAIT, F.R.C.S.

M. A. L., aged 24, was placed under my care by Dr. Mark Fenton of Coventry in December, 1880, on account of a tumor of the right kidney. The girl was in wretched health, suffered constant pain in the mass, and her urine was loaded with pus.

I admitted her into the hospital, and, after some preliminary treatment, I opened the abdomen in the middle line on January 28th, 1881, for the purpose of removing the kidney. In this I failed, for the intestines were matted in front of it, so that I could not reach it. I had the satisfaction of learning, however, that the left kidney was healthy. She recovered speedily from the exploratory incision, and left the hospital. As very often happens, she improved immensely in health after this proceeding, the tumor got less, and she was under the belief that nothing more would be required. The improvement was only temporary, however, and she came back to me in April last quite as ill as she originally was, and desirous of having the kidney removed. I had informed her, after the exploratory incision, that I could remove the kidney from the back, should she wish another attempt made. On May 8th, in the presence of Dr. Bishop of Edinburgh, the Messrs. Garman of Wednesbury, and Dr. Savage, and assisted by Mr. Raffles Harmar, I made a transverse incision over the curvature of the ribs, about four inches long, cutting carefully down till I reached the renal fat, which was very abundant. I separated the mass entirely with my fingers, and then

dragged the upper part of the kidney through the wound. In this I made a mistake, for I tore a vein so large as to give me a few seconds of great anxiety. I secured it with three pairs of forceps, eased out the rest of the tumor, and tied its pedicle in a lump, by means of the "Staffordshire knot." I cut the ligature short, and then tied the vein I had torn, cutting that ligature also short. These ligatures were both of common silk. I then found that I had torn the peritoneum at the upper part of the tumor, and the edge of the liver was protruding. I put in a large-sized drainage-tube, and closed the wound. The operation was performed without a drop of carbolic acid or any other of the so-called disinfectants touching the patient. The drainage-tube was removed on the sixth day, and the patient recovered without giving me five minutes' anxiety. She is now (August 3d, 1882) in perfect health, and her urine is perfectly normal.

Dr. Charles J. Cullingworth (Manchester) mentioned the case of a single woman, aged 36, who was admitted into St. Mary's Hospital, Manchester, on account of a large cystic tumor in the abdomen, which was first observed five or six years previously. She had been tapped several times in the infirmaries of Leeds and Manchester. The tumor now occupied almost the whole of the left side, extending from the spine to about an inch on the right of the umbilicus, and from within one finger's breadth of the left lower ribs above to the level of the superior spinous process of the ilium below. Over the area thus bounded there was dullness on percussion; below this, namely, from a line two inches below the umbilicus to the pubes, there was resonance, which extended outwards to the outer border of the ilium. The urine was clear, acid, slightly albuminous, of specific gravity 1012. The diagnosis was cystic tumor of the left kidney. As the general health had not materially suffered, and as the constant pain having rendered her incapable of following her occupation as a dressmaker had made her most anxious to have an operation, it was decided to attempt removal of abdominal section. This was accordingly done, with full antiseptic precautions, on June 9th, 1882. An incision, six inches in length, was made in the linea alba. The layer of peritoneum in front of the tumor was thickened and traversed by a number of very large veins. This was carefully divided, and the tumor (which, with its contents, weighed 5 pounds) was then shelled out, with some difficulty, without rupturing the cyst. The ureter was divided, and tied, as also was the pedicle containing the renal vessels. The intestines were scarcely seen during the operation. All bleeding vessels having been secured, and the abdominal cavity well sponged out, the omentum was drawn down, and parietal incision closed by ligatures of carbolic silk. In spite of free stimulation, the patient never rallied, and died twelve hours after the operation. The specimen, a typical example of hydronephrosis, with nothing remaining save the bare walls of the pyramids, without a trace of kidney-structure, was exhibited to the section. The microscope detected cloudy swelling of the epithelium of the convoluted tubes of the right kidney, which otherwise, however, was healthy.—*Brit. Med. Journal*.

THE USE OF CAFFEIN IN DISEASES OF THE HEART.

Caffein, experimented on by Gubler, has been employed for four years in cardiac diseases by Lepine. He prefers it to digitalis, for the purpose of showing

the contractions, and to revive the energy of the action of the heart. He administers citrate of caffein in doses of 0.75 centigramme, 1 gramme, sometimes 1.50 grammes, and in some cases as much as 2 grammes, and 2.50 grammes daily. The advantages he finds in it are: 1. The relative rapidity of its action; 2. The greater tolerance of it on account of its more rapid elimination. Not a single case of poisoning has been noted amongst his patients. As objections he points out: 1. The insomnia and nervous condition which it produces in certain cases; these cases, however, are very rare; 2. The price of an active dose of caffein is considerably higher than that of a similar dose of digitalis. He terminates his paper by the following conclusions. "I have no need to add that caffein does not always cure asystolia, any more than does digitalis; whatever power these two substances may have, their effect does not extend to all cases. I can only say that, in my knowledge, there is not a single case amenable to digitalis which is not always so to caffein. In a patient with whom caffein has failed I have never succeeded with digitalis; on the contrary, perhaps in consequence of the rapidity of the action of caffein, but especially owing to the relative facility with which it is tolerated, I have sometimes succeeded with it where digitalis had been completely useless. I have notes of two cases which put this fact beyond doubt. I conclude from this, that the use of caffein in cardiac cases is not a superfetation, and that this drug is not a common substitute for digitalis, but its equal; only, I insist most particularly on this point, the delicacy of its posology. A sufficient dose of it must be administered; and success is not attained by its use when the administrator is not thoroughly accustomed to it, but by a series of tentative efforts. It is not at once that as much as two grammes may be administered without the risk of being extremely imprudent; on the other hand, we must not delay with insufficient doses, as the patient is discouraged and disgusted, and what is worse, time is lost, the cardiac affection is allowed to grow worse, at the same time the ground is prepared for want of tolerance of the medicine; in short, in the handling of caffein, not only clinical tact, but experience, which is only acquired with time, must be brought to bear."—M. Huchard, at a recent meeting of the Société de Thérapeutique de Paris, read a paper (*Journal de Méd. de Paris*, Sept. 23d, 1882) on the use of caffein in asystolia. This drug, he said, has the effect of increasing arterial tension and of diminishing after a short period of acceleration the frequency of the cardiac pulsation. It cannot be used in all cases of asystolia, any more than other medicines which are in good estimation in heart affections; but it sometimes renders great services, especially when digitalis is powerless, and morphia is contra indicated in consequence of the oliguria which it brings on. Caffeine promptly induces diuresis which reaches from two to three pints; its elimination is likewise rapid, and prevents any danger from accumulation. M. Dujardin-Beaumetz said that he used in hypodermic injections the double benzoate of caffein and soda obtained by M. Tanret. Pure caffein would be too little soluble to be administered by this method. The intolerance of cirrhotic patients for caffein seemed to indicate that this alkaloid needs to pass through the liver to have an efficacious action. Perhaps guarana, which contains a larger proportion of caffein than coffee, might be useful in the treatment of cardiac affections. M. Martineau stated that he had given, following Pelletan's example, infusion of raw coffee (40 grammes to a cup) as a diuretic, and had found it to possess some advantages. M. Huchard pointed out

that the physiological action of caffein is still imperfectly known; thus, according to some, it increases the excretion of urea; according to others, it diminishes it. These two opinions are both correct, for it diminishes the urea after having first produced a transitory increase.—*London Medical Record*.

TREATMENT OF CERTAIN AFFECTIONS OF THE JOINTS BY ELECTRICITY.

Dr. A. Joffroy, writing in the *Archives Générales de Med.*, Nov. 1881, says that electrotherapy is only efficacious in cases of chronic arthritis, and is contra-indicated when the acute and subacute phenomena have not disappeared. In the joint-affections of progressive chronic articular rheumatism, the results are but small; and when they are successful, they may be rather attributed to rest than to electrotherapy. In chronic articular rheumatism with uncertain localization and progress, and especially in the chronic forms of arthritis, consecutive on blennorrhagia, the puerperal state, or injury, more satisfactory results are obtained. The operation consists in fixing the positive pole of a continuous current battery, with from twenty to forty elements, either on the sides or on the upper or lower portion of the swollen joint, and moving about the pad representing the negative pile over the cutaneous surface. The skin becomes red and sensitive where the pad is applied. In the successful cases, the lesions were situated especially on the tissues surrounding the joint, which were indurated and resistant. There were neither fungosities, nor osseous lesions. This clinical fact explains why this treatment does not yield favorable results in gout and in chronic articular rheumatism. It is, therefore, especially in affections of joints, produced by wounds, by the puerperal state, or by blennorrhagia, but only after the disappearance of all the acute symptoms, that the continuous current may bring on either a complete cure, or at least a rapid improvement of the circumarticular changes and the restoration of movement.—*London Medical Record*.

THE ADMINISTRATION OF CHLORAL.

At a meeting of the Paris Société de Chirurgie on October 11th (*L'Union Médicale*), M. Nicaise communicated a case of a patient then under his care, in which chloral, administered in relatively small doses, brought on very serious symptoms, which obliged him to suspend its use. The case was that of a man, aged 37, the third toe of whose left foot had been crushed. He continued to work during ten days. On the tenth day, a surgeon, wishing to put the wound into order, removed the nail of the crushed toe. From that day the patient began to suffer; and on the 14th Sept., fifteen days after the accident, tetanic symptoms commenced by dysphagia, and went on to trismus, stiffness of the muscles of the neck, and opisthotonos. On the 21st September the patient came into M. Nicaise's wards. The wound of the toe was then almost completely cicatrised and entirely free from pain, which indicated the absence of any foreign body in the tissues. Tetanus was very slightly marked, although there was opisthotonos and trismus, allowing slight separation of the jaws. From time to time, though rarely, general shocks affected the whole body, accompanied by slight pain in the region of the injured toe. During five days, M. Nicaise submitted the patient to the use of vapor-baths and of opium in large doses; but seeing that the tetanic symptoms did not improve

he prescribed four grammes (a drachm) of chloral to be given in three doses at intervals of two hours. As this dose produced no effect, the next day the dose of chloral was raised to six grammes. Symptoms of extreme excitement appeared, and were followed by almost complete resolution of the contracted muscles. M. Nicaise then thought it right, on the following days, to reduce the dose of chloral to four grammes. The condition of the patient remained the same during some days; then, on the 3rd October, there was an aggravation following a chill, caused by the opening of a window near the patient's bed. The dose of chloral was then raised to five grammes in a draught, besides two grammes as an enema; seven grammes being thus given during the day. The enema having been expelled almost immediately after its administration, there was really little or no chloral absorbed by that method, and the entire amount of the drug taken during the whole day may be estimated at about five grammes. However, the patient soon afterwards fell into a peculiar comatose condition, not answering to any questions addressed to him, and having become insensible to any kind of stimulation. M. Nicaise, attributing this condition to the action of the chloral, immediately stopped its administration, and by degrees the coma disappeared and the patient awoke. The man completely recovered. M. Nicaise thought it well to call attention to the effects of poisoning by chloral, which showed themselves when that medicine had been taken in a dose of only five grammes. He believes that chloral should be given carefully, beginning by small doses, and only increasing them progressively. The action of chloral is of short duration; but if the dose be repeated, more than three or four grammes at a time should not be given.—*London Medical Record*.

MEDICAL NOTES AND NEWS.

Thought-Measurement.—French scientific men, and especially M. Parville in the *Journal des Débats*, have lately called attention to a system of thought-measurement, by which it is proposed to test the brain-power of candidates for public appointments. The new machine can also be used for estimating the degree of emotion caused by a sudden shock to the nervous system. It is recommended as affording a useful corrective to the judgment now formed exclusively on the basis of examination papers which may or may not have been executed with great labor, and which in many cases are no sure index of the mental power enjoyed by the person who has written them. It has been calculated that the seventh part of a second passes between the moment when the will commands and the moment when the hand obeys. A sound which strikes the ear can only be indicated by the hand one-sixth of a second afterward. When a ray of light falls upon the retina one-fifth of a second must elapse before the hand can be raised in token thereof; for to reach the hand the external impression has to pass through a whole series of organs; and the degree of rapidity with which this transmission takes place is said to be accurately measured by the new machine. The average human being requires the twenty-third part of a second for a simple thought, as for comparing two different impressions; and he takes more time to get at the meaning of a word by reading it than by hearing it spoken.

The apparatus by which the rapidity of the thinking process may be measured in each individual is the in-

vention of Dr. Mosso of Turin; and it was presented to the French Académie des Sciences by the late Claude Bernard. Not only does Dr. Mosso's apparatus reflect faithfully the amount of energy consumed by a man in the act of thinking: it also takes note of the degree of vigor with which he dreams. The observer can see by the results which it registers, whether the thought dealt with is simple or complex; but it is above all useful as showing whether a man thinks with difficulty or with ease: and it is suggested that by a proper use of the mechanical thought-measurer it will be easy to find out, not indeed what a man knows or what he thinks, but the degree of quickness with which he can think and the amount of mental disturbance caused to him by thinking. The arm of the thinker about to be measured is, according to Dr. Mosso's rules for self-measurement, put into a "sort of muff," which in more scientific language is described as a cylinder of glass filled with water, and closed at each of its orifices with a collar of india-rubber which admits the arm of the patient and afterward shuts upon it so that not a drop of water can escape. When the arm is thus immersed in the water, the hand is placed in communication with an indicator that notes down the degree of agitation caused to the patient by the rush of blood to the head which must accompany even the simplest mental operation, such for instance as the determination of the result obtained by adding two to two. A person well trained in the multiplication table suffers but little until the limit of twelve times twelve is passed. Then he begins to show signs of trepidation; and it is only with considerable pain, and high scoring on the part of the indicator, that the ordinary man can solve such an abstruse problem as thirteen times thirteen. One can conceive, however, a great thinker being staggered by a request to multiply thirteen by thirteen "in his head," and a quick schoolboy or schoolgirl being able to answer such a question almost before it had been proposed. At this sort of work a banker's clerk would beyond doubt beat the inventor of the thought-measuring machine himself. But Dr. Mosso does not pretend to take account of anything in regard to thought except its rapidity and the amount of labor with which it is performed. It is interesting to know that when a student from a university, after having his arm placed in the glass cylinder and his hand connected with the indicator, was asked to read a Latin book, the indicator marked but comparatively few points; whereas the points became numerous upon a Greek book being placed into his hand. On inquiry it turned out, as anyone placing trust in the thought-measuring machine must already have known, that the student read Latin more easily than Greek.

In some cases the persons experimented upon with the thought-measurer were in the first place put to sleep; when the indicator recorded faithfully the degree of energy displayed by them in their dreams. Some, however, did not dream at all. Others, again, dreamed with remarkable liveliness, keeping the indicator perpetually at play. Occasionally a man who had gone to sleep, and on waking felt sure he had not dreamed, was proved by the unerring evidence of the indicator to have been dreaming in a very active manner. Such pleasant dreams as are habitually associated with "sweet repose" do not give the indicator much employment; and it is only when dreams assume a hideous character that the hand of the thought-measurer takes serious action.—*St. James's Gazette.*

An Amputation of the Cervix Uteri for Malignant Disease.—In a paper read before the Société de Médecine, Paris, M. Polaillon, after relating a series of cases, makes the following summary of his opinions on the subject. 1. Amputation of the cancerous cervix by the galvanic cautery is not a serious operation; a perfect cure may be expected if all the visible disease be removed. If traces of diseased tissue are seen in the uterine stump, immediately after the cervix has been severed, complete cauterisation of the affected tissue will be necessary; for this purpose, solid chloride of zinc points are very efficacious. M. Polaillon thrusts one point into the cervical canal of the stump, and one or more into any diseased tissue on the raw surface of the stump. After separation of the eschars, this process of cauterisation may have to be continued till all trace of disease is removed. Unsuccessful results have been due, not only to delay in operating, but also to neglect in thoroughly destroying all traces of disease in the stump. Amputation of the cervix by the knife, as practised by Dupuytren and Lisfranc, is, in M. Polaillon's opinion, a most dangerous operation; amputation by galvanic cautery causes no risk to life, in the vast majority of cases, when it is performed by experienced hands. In one case, however, serious secondary hæmorrhage occurred on the tenth day after operation; it was checked by plugging the vagina, and recovery was complete. Another case was complicated, not only by hæmorrhage on the second day, but by a severe attack of quotidian ague, from which the patient had suffered several years previously. Cicatrisation of the uterine stump was uninterrupted during the course of the ague, and the patient left the hospital in good health.—*British Medical Journal.*

The Origin of the Bothriocephalus Lutus.—Having succeeded in demonstrating the presence of scolices of the bothriocephalus in the muscles, the liver, and organs of generation of the pike and other animals, Braun (*St. Petersburg Med. Week.*, No. 16, 1882) endeavored to breed a tapeworm out of the healthy scolices in the intestine of a mammal, succeeding, beyond his hopes, in the case of cats and dogs, and proving conclusively that the worm found in their intestines, after appropriate feeding, differed in no particular from the bothriocephalus of man beyond being of a smaller calibre, corresponding to the altered situs. This, then, is a solution of the hitherto vexed question as to the origin of this parasite, the source from which it springs being the pike, as the source of the tænia solium is the pig, medium-sized pikes concealing forty or fifty of these worms, and larger ones more. In sixty pikes examined for them, there was only one in which traces of the bothriocephalus could not be found in the muscles.

Post Mortem Injuries from Insects.—The ravages inflicted upon the dead body by ants and other insects must not be overlooked by the medical jurist. Attention is drawn to the injuries resulting from the stings of ants in an actual case (*Pharm. Zeitung*, No. 102, 1881). On the corpse of an infant, which had died from convulsions, considerable injuries, simulating those of an *ante mortem* character, and which might have given rise to a false charge of violence, were observed. It was conclusively proved that the origin of these was due to the action of ants after death, and formic acid was extracted from the injured portions of the corpse.

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TWO CASES OF SARCOMA.

A CLINICAL LECTURE, DELIVERED AT THE COLLEGE OF
PHYSICIANS AND SURGEONS, NEW YORK.

BY

HENRY B. SANDS, M.D.,

Professor of the Practice of Surgery.

I.—SARCOMA OF THE HEART.

GENTLEMEN: This patient is a Bohemian, and does not speak English, so we have to get at his history through an interpreter. He is thirty years of age and comes here because he has a tumor on his back, which he says began to appear about three years ago without any assignable cause. But he thinks that it may have occurred in consequence of straining at stool, brought about by reason of a large accumulation of fæces while he was on board ship, where there was no privy or accommodations for relieving his bowels. Of course this explanation of its occurrence must be considered as wholly imaginary on his part. The tumor is very odd looking, and I do not remember ever to have seen another just like it. It occupies a position about the centre of the back and to the right of the spinal column, and measures about eight inches transversely, and six inches in its shorter or vertical diameter. Its edges are well defined and nearly straight,

being rounded off slightly at the angles, and its surface is flattened, though somewhat elevated above the general level of the back; but it is most remarkable for its lividity, the discoloration affecting the entire surface. As I press it with my fingers it feels firm and resistible, and I get no sense of fluctuation, the tumor being evidently solid. As I try to discover whether it has any deep attachments I find that it moves freely on the muscles of the back, and therefore I conclude that it is developed in the subcutaneous connective tissue. This swelling has grown quite rapidly, for it has only existed for three years and the increase in size has been quite marked. When I first saw the color of this tumor, I thought it was pigmented, and that there had been a deposit of dark pigment matter within the substance of the integument; but now I see that I was in error, because pressure upon it with my finger leaves the surface white for only a moment, showing that I have merely pressed the blood out of the superficial capillaries temporarily, whereas true pigmentation is due to a deposit entirely outside of the vessels. As I examine him further I find that he has no other swelling, nor any secondary enlargements of glands or lymphatics elsewhere, and his general health, he informs me, has not changed since this tumor appeared.

Now the question arises:—What is it? It can hardly be a cancer, for a carcinoma or an epithelioma could scarcely exist for three years without undergoing ulceration, or being attended by secondary deposits in the lymphatic glands, or without some impairment of his general health. Then his age is also against cancer, for he is only 30 years old, and epithelioma, as you know, usually occurs in persons who are beyond the middle period of life. As you look at it, from its color you would say that it is an angioma or vascular tumor, but as it is solid it can hardly be caused by a collection of blood-vessels beneath the integument. This tumor, I think, must belong to the class of sarcomata. Sarcomata, as you are aware, vary much in their structure; some being hard; others being almost gelatinous; some being mainly fibrous; others cellular in texture; they may be developed in bone or periosteum, or appear in the subcutaneous areolar tissues; they may be benign or malignant, and they are disposed to return after removal. They are not so liable as cancer to be reproduced in remote parts of the body or in the lymphatic ganglia. Secondary formations in distant parts occur rather through the medium of the blood-vessels than through the lymphatics, as in carcinoma.

The question with this case now is, whether or not this tumor had better be removed by a surgical operation. It has reached such a size that removal will be quite a serious matter, and it is a pity that it was not operated on at an earlier period, when it was of small size. The operation now necessary would consist in excision of the entire mass, leaving behind a large

gaping wound to heal by granulation, for it would be impossible to bring together the edges of so large a surface. I think I could remove it without any immediate danger, for it is not attached to the muscles or softer structures beneath, nor does it seem to be connected with the bones of the spinal column. The incision I should make, if I attempted to remove it, would pass about an inch or an inch and a half outside of the red line surrounding the tumor, so as to be sure to leave behind nothing but healthy tissues; the denuded surface could then be left to heal by granulation.

This is just one of those cases in which a conscientious surgeon often finds himself in doubt as to what is best to do. The only alternative here, as in all such cases, is to tell the man the possible dangers and benefits of an operation, and then to let him choose for himself. One cannot help wondering in these days, when there are so many physicians everywhere, that cases like this can go on for so long a time without being brought to the notice of some surgeon who, by timely operation, might easily cure the patient, and with but little risk. It is quite certain that this man might have been relieved two or two and a half years ago, before this swelling had reached any considerable size, by a very trifling operation, while now it will be a matter to be decided upon only after serious deliberation.

II.—SARCOMA OF THE INGUINAL GLANDS.

This patient is 60 years of age, and he comes to us on account of a swelling in the left groin, which he says first appeared a little over a year ago. He complains of no pain or other symptoms except that he thinks the left leg has swollen a little lately.

We will now let the patient lie down so that we can examine the leg and see if there is any primary source of trouble to which this swelling in the groin might be secondary. By inspection you will see that the man is pretty fleshy, and both thighs are unusually large, but the left shows a prominence to the left side of the scrotum, forming a tumor about three inches in diameter, and you notice that the swelling lies principally below Poupart's ligament. This is an important point in considering the possibility of its being a hernia. If it is, it must be a femoral hernia, because that would emerge from below Poupart's ligament, and occupy about the position which this does, while an inguinal hernia emerges from a higher point, and after passing through the external ring it lies within the scrotum, and not external to it, as here. There may be a slight swelling of the left limb, as he says, though it is not very apparent in the thigh; but I can see that about the ankle the leg is a little wider than the other. This swelling about the ankle is most probably due to oedema. I therefore resort to the pressure test to determine this point, and if an indentation of the surface is left by my finger it is because the leg is dropsical. It does pit on pressure, and the other limb does not, so this swelling of the left ankle is evidently due to oedema. I now examine the foot, and I find no primary sore there or elsewhere to which the tumor in the groin may be secondary. The next thing I notice is a varicosity of the internal saphenous vein; and I will say that the subcutaneous veins are very likely to be prominent in old people, and the internal saphenous, or saphena magna, is the most likely vein to be distended in the lower extremities. Possibly this varicosity of the saphena magna may be the cause of the enlargement of this man's leg. We will now return to the tumor and examine it first as to the possibility of its being a hernia. We can say it is not an inguinal

hernia because, as I told you just now, it is lying entirely below Poupart's ligament. An inguinal hernia, though it may lie partly below, is also situated above this ligament, and it passes along the spermatic cord to the scrotum in the male, or along the round ligament to the labium as in the female. The next thing to decide therefore is, whether it is a femoral hernia. I therefore examine it to see if it is elastic to the feel or resonant on percussion, and I find that it is not elastic, and it is dull on percussion, and hence it is not an intestinal hernia. But may it not be an omental hernia? I get no impulse on coughing here, as I should if the tumor opened directly into the abdominal cavity. The reason why a femoral hernia forms a tumor just at this point is, because it is prevented from going further down the thigh by reason of the attachment of the fascia lata to the deeper muscles, below the level of the saphenous opening. The absence of an impulse on coughing and the resistance to the fingers here show that this is not a hernia, nor is it a varicose condition of the femoral veins, but it is a solid tumor—a new formation, or neoplasm.

Now what is the nature of this tumor? It is hard to say definitely, but there are many kinds of tumor that we can exclude at once. Without however giving my reasons at present for excluding these other varieties, I will assume directly the diagnosis of sarcoma. The age of the patient, it is true, is against its being a sarcoma; still, while it is a fact that sarcomata are more commonly found in the young and carcinomata in the old, yet the reverse is sometimes also the case, namely that carcinomata may be found in the young and sarcomata in the aged.

The tumor he tells us is not painful, and so he probably thought it was not a very serious matter. He has been here before to be examined, at a time when the tumor was comparatively small, and since then it has increased very much in size. At first there was, no doubt, a question in the mind of the surgeon who examined it, whether this was a really new formation or merely an hyper-trophied lymphatic gland, and this was a question to be settled by time, so he was probably sent away with instructions to come back later if the tumor should continue to grow. Now he returns, after the lapse of nearly a year, hoping to have the swelling removed, but he should have come back several months ago. The probability of its having been simply an hypertrophied lymphatic gland is ruled out by the size of the tumor, though I will not say that it could not have possibly so originated. I will now therefore examine his body elsewhere, for other enlargements of the lymphatic glands, and if they existed they would probably be situated in the lower portion of the abdomen. By crowding my fingers down through the abdominal walls to the seat of the lumbar glands however, I do not find any signs of a tumor there. This method of examination is imperfect, it is true, but by manual exploration of the rectum you can explore the whole pelvis and thus sometimes find lymphatic glands enlarged which could not be found otherwise. I think however that there are no secondary glandular enlargements here. Many of you who have recently come here probably do not know the usual classifications of tumors of the lymphatic glands. So I will mention the different varieties briefly. Many glandular enlargements are simply an hypertrophy of the normal structure, others consist of a cheesy degeneration which is identical with what is called, scrofulous degeneration, while some are the result of leucocythemia. In some round or spindle shaped cells are found in the glands which have

the texture of sarcoma. I suspect that this patient's tumor is a sarcoma of one of the inguinal glands. It is not an ordinary simple hypertrophy because of its size, and because there are no other glands affected; nor has it the character of a scrofulous lymphoma; neither is it from leucocythemia for the man is not pale and anaemic, nor has he any enlargement of the spleen; nor is it a case of multiple lymphoma, or Hodgkin's disease, for there is swelling of only one gland; but it is probably a sarcoma of one of the lymphatic glands of the groin. Sarcoma effects one gland as a rule, and this helps us in the diagnosis here.

I have sent the patient out side, you see, so as not to trouble his mind just now by what I am about to say, for he evidently considers this tumor as a very trivial matter and thinks it can be easily removed. But he could scarcely have a more serious disease, the growth being a sarcoma, and in a situation where the tumor is very dangerous because of its proximity to the femoral vessels. I do not know, from the mobility of the tumor, whether the vessels are implicated or not; for a quite movable tumor may nevertheless involve the sheath of the vessels. Van Langenbeck has written an excellent treatise on the relation of tumors to the larger veins, and has shown that this is sometimes very intimate but that, if only the sheath of the vessels is involved the tumor may yet be safely removed, though great care is required. In other cases where the vessels are incorporated with the tumor you will be obliged to divide them in effecting removal. So here, if this tumor should prove to be incorporated with the femoral artery and vein their division would cause a gangrene of the limb.

The patient wants to know if we can not remove this tumor without the use of the knife. There is no known medicine which will control this variety of lymphoma. In Hodgkin's disease, arsenic has a reputed efficacy, but it is useless here. Hence we are driven to the alternative of a surgical operation with its dangers, unless we prefer to leave the tumor alone. It is difficult to decide as to the course which should be pursued, but I told the patient I should request the surgeon to attempt its removal. I cannot tell before the operation whether it would be a moderately easy or a very difficult proceeding. But after the tumor has been exposed by an incision, if the adhesions are found intimately connecting it with the neighboring vessels that the operation is deemed unsafe or impracticable the wound can then be closed and the patient may be no worse off than before. So I shall state the risks to this man and then advise him to go to the hospital and have the tumor taken out, and if after exposing it I should find that the completion of the operation would be attended by too great peril I would abandon it. This is a case in which the real condition must be doubtful, and it can not be solved except on the operating table. From the moderate size of the growth you can not infer that its removal would not be dangerous. For it is not the size of a tumor, but the difficulty or ease with which it can be removed, that constitutes the chief danger. Though the tumor may be small, yet if it has close adhesions to dangerous parts, it may not be advisable to complete the operation. But, if it is not removed, the disease will progress, and will, sooner or later, prove fatal.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, NOV. 22, 1882.

The Vice-President, Dr. Peabody, presided. The minutes of the preceding meeting were read and approved.

Dr. Shrady presented in behalf of a candidate a specimen which was discharged by a patient after an attack of puerperal metritis. The mass was globular in shape and was composed of smooth muscular fibre. The candidate thought it to be broken down uterine tissue. It had been taken to an eminent gynecologist of this city, who found it to consist of striped muscular fibre with connective tissue. It was then thought probable that it was a monstrosity in which the heart alone was developed. The specimen was presented to the society to be referred to the Microscopical Committee. The patient entirely recovered.

Dr. J. Lewis Smith presented a specimen for a candidate, viz:

"AN ACEPHALOUS MONSTER."

The mother had before given birth to a healthy child. Some months before the birth of the monster, the mother was discovered to have Bright's disease. The monster was born after a normal labor but died a few hours after. The brain was entirely absent. In pressing upon the medulla, spasmodic movements were produced.

Dr. Smith presented a second specimen for a candidate,

"A CHILD'S BRAIN SHOWING LESIONS OF CEREBRO-SPINAL MENINGITIS."

Up to the age of 2½ years the child had always been blithe and healthy. It was brought up by farming. November 6th it had been taken with vomiting. November 11th was in a condition of stupor. November 12th head was thrown back—constipated. November 13th, in addition to former symptoms, twitching of the limbs was noticed, pulse 160, temperature 102. Child died on November 17th. On autopsy body was well nourished—no rash or discoloration anywhere. Dura mater congested. Ventricular exudation. Arachnoid cloudy. Vessels much congested.

Dr. Sell presented two specimens of *tænia solium*.

Dr. Tauszky presented a specimen of

ATHEROMATA.

Removed three weeks ago from vagina of a lady aged 35. She had been ten years married and had no children. She complained of excessive pain in walking and sitting, and especially in coitus. A tumor the size of a walnut was found on the left side of the vagina. It was a fluctuating cyst of benign character. It was readily removed, the wound healing kindly. The tumor was referred to the Committee on Microscopy.

Dr. Liautard presented a specimen of

FRACTURE OF THE 13th DORSAL VERTEBRA

of a horse. This fracture was caused by the struggles of the horse when thrown down for a surgical operation. The animal, as a rule, struggles violently, there is overbending of the vertebral column and fracture takes place. The horse at once remains quiet, and on attempting to rise after the operation, falls dead. The vertebra usually fractured is the last dorsal.

Dr. Liautard presented a second specimen which was unique, viz :

MALFORMATION OF THE JAW

of a horse, each molar arch presenting seven, instead of six molar teeth. Horses had 36 to 40 teeth, depending on sex. The horse had come under his care for difficulty in mastication. The teeth were found to be worn on their flat surface. The palate was destroyed and the food passed into the nose. The angle of the teeth to the jaw on account of the irregular mastication was much more oblique than normal.

Ap[ro]pos of the first specimen an animated discussion took place as to the methods of training horses and the applicability of such methods in rendering a horse docile under surgical treatment. Dr. Sell thought a horse's struggles might be controlled to a large extent so that such a fracture as presented would not be likely to occur. Dr. Liautard maintained that with the most approved methods of control, including partial anæsthesia, it was often impossible to prevent violent struggling.

Dr. Garrigues presented several specimens taken from a patient on whom he had performed Cæsarian section. The child was dead before the end of the operation.

The mother had a complication of diseases. She was 31 years old, and had had spinal disease since 4 years old. The pelvis was very badly malformed. Its longest diameter was antero-posteriorly instead of laterally; some of the lower vertebræ were entirely absent.

Dr. Tauszky questioned the necessity for the operation in Dr. Garrigues' case. Dr. Garrigues replied at length, discussing the three forms of section resorted to in such cases where delivery through the pelvic strait was impossible, and stated that after consultation and a careful study of the case Cæsarian section had been chosen.

Dr. Louis Elsberg presented two specimens of

INTRA-LARYNGEAL TUMORS.

The patient from whom the first specimen was taken he had first seen six years ago, when there was no interference with respiration or phonation. He again saw him two months ago. The tumor had given the patient no uneasiness until about six months ago, when the patient had gone to a physician who, in his fruitless attempts to remove the growth, had picked at it till the surface became ulcerated. Dr. Elsberg feared that the growth was malignant, though there was no involvement of the glands nor any cachexia. He had removed it and found it to be a cancer of moderate malignancy. The point to be emphasized in connection with the case was the fact that irritation might turn a benign into a malignant growth, and the rule was to either leave such tumors alone or thoroughly remove them.

Dr. Elsberg presented a second tumor which had been removed from a lady of 70. The tumor was attached to the base of the tongue covering over the pharynx and larynx. The patient was in danger of starvation. The tumor had been removed by the wire snare. It was exceedingly vascular. It proved to be a myxo-angioma. Dr. Elsberg said regarding the first tumor, that he had met with upwards of 300 such growths in his practice, Dr. Robinson thought that Dr. Elsberg's experience as to the frequency of these tumors was not borne out by

other observers. Only 15 or 20 were met with at N. Y. Hospital during nine years. Dr. Robinson had also removed an epitheliomatous growth of the larynx, in which case tracheotomy was done, and the growth had rapidly changed its shape, growing smaller, as in Dr. Elsberg's case. Tracheotomy apparently rendered these tumors less malignant.

Dr. Garrish inquired as to Dr. Elsberg's experience regarding the return of these malignant tumors after excision. Dr. Elsberg replied that he had patients under observation for 12 years after operation, and there was no evidence of a return of the growth.

Dr. Dalton presented a specimen showing

"EXTRA-UTERINE PREGNANCY OF THE TUBULAR VARIETY."

The case had progressed till about the third month. The patient was unmarried and being seized with acute symptoms and dying suddenly her parents had desired an autopsy made to ascertain the cause of death. Dr. Dalton inclines to the belief that the case was one of ovarian pregnancy.

Dr. Lee inquired if extra-uterine pregnancy was suspected before death. Dr. Dalton replied that it was not, the patient had been treated for ovaritis. She died of exhaustion from hæmorrhage.

Dr. Janeway said the case was an interesting one. It was the 2nd case of the kind presented to the society, he having presented a similar one which was obtained under similar circumstances. In this case the corpus luteum was on the opposite side to that of pregnancy.

Dr. Garrigues in this connection alluded to experiments on rabbits in which the fallopian tube on one side was tied and pregnancy took place.

Dr. J. Lewis Smith presented a specimen of

PERITONITIS IN THE NEW BORN CHILD.

The child had not vomited and had had regular evacuations from the bowels. Post mortem the lesions of general peritonitis were found. The thoracic organs were normal. The under surface of the liver and spleen were covered with false membrane. Erysipelas, or disease of the umbilical cord might lead to peritonitis in the new born child.

Dr. Beverly Robinson presented

CEREBRAL ARTERIES WITH THROMBUS

in left middle cerebral artery. The patient was 49 years old, an inmate of St. Luke's Hospital. He had presented symptoms of atrophic degeneration of the kidneys and of hypertrophy of the heart. Oct. 10th, He was observed to be notably failing in mental powers. He became delirious on the 23rd and fell to the floor paralyzed on the right side. There was no paralysis of deglutition but almost complete aphasia. Post mortem a thrombus was found in left middle cerebral artery. A calculus was also found in the kidney.

Dr. Robinson also presented a specimen of abdominal cyst.

Dr. Janeway presented a specimen illustrating

CHRONIC FIBROUS THICKENING OF THE SPLEEN, LIVER, PLEURA AND PERICARIUM.

The liver was greatly enlarged principally on account of the thickening around the portal vein. The patient had been tapped for ascites 14 times.

Dr. Janeway presented a second specimen illustrating

CHRONIC PERITONITIS

The patient had been tapped seven times. The small intestine was glued together forming a hard tumor. There had been paralysis of the right leg and post mortem a thrombus was found to have formed in the aorta.

The Society then went into executive session.

ABOUT BOOKS.

The Hospital Treatment of Diseases of the Heart and Lungs, as Exemplified in the Hospitals of New York City. By C. H. Goodwin, M. D. Published by the Author (245 West 53d street), New York, 1882. 12mo., pp. 200. Price \$1.50.

We have often thought that practitioners, and especially those away from the great metropolitan centre, stood very much in need of just such a book as this. A certain number of our country brethren visit this city each year, at no little expense and loss of time, for the purpose of attending these hospitals and acquainting themselves with the views of the prominent and recognized authorities connected therewith. How valuable such information proves to them is evident to all, and beyond question. We are therefore glad to see this serviceable knowledge placed before the profession in a manner which makes it easy for all to avail themselves of it, and in doing which, moreover, no one should have a moment's hesitation.

In the present volume the author has endeavored to give a résumé of the hospital treatment of the several diseases of the lungs and heart, as practiced in the various hospitals of New York city—Bellevue, New York, Charity, Roosevelt, St. Luke's, Presbyterian, etc., etc.—in the services of the leading medical men of the times: Drs. Alonzo Clark, Austin Flint, Loomis, Janeway, Thomson, Leaming, Jacobi, J. Lewis Smith, etc., etc. The work represents the practical treatment of disease, exhibiting the various plans adopted, the means employed as best adapted to the special requirements of each disease, and the measures resorted to in cases of emergency, etc. The arrangement is highly commendable. Each disease is taken up by itself, and its treatment in the various hospitals and in the services of the several visiting physicians presented seriatim, thus avoiding all confusion. The work throughout is furthermore replete with numerous prescriptions and formulæ, some three hundred and fifty in number, and altogether represents an epitome of useful and necessary practical information which no practitioner should fail to possess.

SELECTIONS FROM JOURNALS.

THE OLD AGE OF THE SKIN. BY JAMES C. WHITE, M.D.

The skin in old age always undergoes some surface changes due to senile degeneration of its tissues which may be considered normal, for the natural processes of decay or degeneration are as much under physiological law as those of growth and repair. It is also liable to certain special diseases caused by alterations in its structure and functions more or less peculiar to this

period of life. The hair follicles are generally the earliest to exhibit indications of the first named condition, either by the failure of the papilla to produce the pigment cells of the hair shaft or by gradually ceasing to form hair tissue altogether. But senile forms of cavities and alopecia often show themselves, of local or quite general distribution, in middle or even early life, long before old age may be said to affect other tissues of the integument or body; manifestations, it may be, that this appendage of the human skin is in process of gradual race extinction upon those parts of its surface also where it still attains its full development. In fact, premature loss of the hair from simple decline of vitality in the power of reproduction in the follicles of the scalp is often coincident with the first period of the most vigorous growth of the beard in full manhood. The changes which take place in such early forms of baldness, not dependent upon positive disease of the cutaneous tissues, and in premature blanching of the hair, are the same as those which occur in advanced age and which are accompanied by other and marked alterations in the structures of the skin. They are merely a functional decline to manufacture pigment matter and an atrophy of the papilla and productive layers, with a final shrinking of the whole follicle to its condition of second childhood, as a lanugo or empty appendage to the sebaceous gland.

The appearance of the skin in an old person differs from that of infancy and adult life in various ways. It is generally thinner, dryer, paler, rougher, more wrinkled, and in parts inclined to exhibit discolorations and excrescences. The roughness is due to a change in the character of the epidermal cells, by which they lose the power of individual desquamation and collect in masses in places like reptilian scales. This is especially noticeable upon the backs of the hands and face, particularly in persons who have been much exposed to the varying influences of out-of-door life. This tendency becomes so pronounced at times as to give rise to the accumulation of great masses of epidermal cells accompanied by more or less underlying papillary hypertrophy, constituting a special disease, to be hereafter considered, keratosis senilis. The seat of such excrescences is mainly in the face, hands and upper chest. With this thickening there is often associated an excessive formation of pigment, both in its diffused and granular state, not only in the cells of the rete but in the root-sheaths of the hair and in the tissues of the corium as well. Such accumulations of pigmented cells often form marked, deep brown, or black discolorations of considerable extent, of the same level as, or elevated above, the general surface. The scaly and roughened condition of such parts is generally accompanied by a uniform dryness and inelastic state of the skin due to a want of activity of the cutaneous glands. The sebaceous follicles are sometimes found almost wholly atrophied, at others greatly distended and converted into a cyst-like structure and incapable of active secretion. Such dilatation gives rise to the distended openings of the surface and the minute milium-like accumulations seen beneath it. The sweat glands, although their functions are often greatly diminished, are generally found but little changed in structure. This dryness of the surface with the loss of elasticity, due to changes in the corium beneath, dispose the skin to chap easily and to excoriation under trivial injuries. The uniform pallor of the skin in advanced age, although interrupted in some regions by a marked enlargement of the superficial arterioles, is due both to the diminished driving power of the central organ of circulation and to the dilatation of the cutaneous vessels, or the

atrophy of those especially connected with the glandular structures. The beautifully serene look of repose of this period of life, poetically attributed to a mind at ease, is in no small measure the result of such physical changes in the texture of the skin. The thinning of skin is due to a shrinkage in all three of its layers. The cells of the rete are relatively diminished, and approximate in their character those of the horny layer; the panniculus adiposus is often largely absorbed, and the fat cells are not fully distended, and the corium becomes greatly changed throughout. The papillæ flatten down and often wholly disappear, the bundles of fibrous tissue become less distinct, and the fibres themselves infiltrated with granular material, and greatly reduced in size. In another form of degeneration the whole fibrous skeleton of the cutis is converted into a homogeneous, structureless mass, which is brittle and easily split or fissured, the so-called hyaline, amyloid, colloid, or glassy degeneration. In both forms the corium shrinks materially in bulk. With the loss of elasticity and plumpness attendant upon these changes it is not to be wondered at that the skin should present a shriveled aspect or be permanently drawn into small wrinkles, or larger furrows and ridges under the action of its muscles, so that in some persons it presents a remarkable multiplicity and complexity of pattern. Such are the principal, functional, and structural changes in the skin which constitute the condition called *atrophia seniles*, changes which affect every individual during senescence in greater or less degree, and which are to be regarded, therefore, as the normal process of decay.

There are, however, certain alterations in its tissues and disorders in its economy, which must be considered as pathological processes characteristic of this period of life, although not peculiar to it. The most important of these will now be briefly described.

PRURITUS SENILIS.

Pruritus senilis is a very distressing affection. It is a purely subjective condition of the integument,—not attended primarily by any perceptible changes in its structure. The principal sensation is an intense itching, which may be universal or limited to restricted areas. Sometimes a feeling of burning or formication is a prominent symptom. These sensations appear in marked exacerbations, generally most pronounced towards night. They are most always aggravated on exposing the skin while undressing, but sometimes reach their most intense grade when the patient becomes warm in bed, and continue to torment him with intermissions until morning. Generally the itching is much diminished during the day, but may be readily excited by overheating the skin, or by the use of hot or stimulating drinks. Scratching is invariably resorted to for a relief to the suffering, which it affords by blunting for a short time the sensibility of the part. It is performed at times with intense frenzy, not only with the nails but with any more affective weapon at hand, and until a pitch of general nervous excitement is induced resembling the sexual orgasm, and followed by a like reaction and profound exhaustion. As a consequence of such insults and repeated violence the skin, sooner or later according to individual power of resistance, undergoes various changes in its tissues. Its surface presents scratch marks of different depths, or inflammatory lesions of all grades, from the papule to the ecchymatous type, more or less excoriated by direct violence. The hairs upon the extremities are often worn off by the constant friction to the level of the tips of the prominent papillæ, and the skin thus

attains a harsh feeling and eventually assumes a dark hue, from the pigmentation induced by the prolonged hyperæmia caused by scratching. The seat of the pruritus is chiefly the extremities, especially the legs, where the vitality of the skin is lowest from the enfeebled circulation. The genital region is also frequently affected, the whole district assuming the most advanced grade of secondary eczematous tissue-changes, with the well-known intense suffering peculiar to these parts of that affection. It is not surprising that with the sleeplessness and constant peripheral nerve agitation attendant upon this disease, it should at times eventually lead to disturbances of the central nervous system and intellectual faculties, and thus react upon the whole economy. It is generally aggravated during the winter season, as are other forms of pruritus, owing to the drier atmosphere, the overheated house, and the rougher texture of the clothing worn next the skin.

The treatment of pruritus senilis does not differ from that in other forms of this neurosis of the skin. The varied list of anti-pruritics offers not a few remedies which, judiciously applied, are capable of controlling in some measure the subjective symptoms of the disease. Their action is always temporary, however, and at times limited to furnishing only momentary relief. Even with this restricted power the patient must often depend upon their constant or intermittent use for his comfort and ability to withstand his sufferings. The use of such applications is often determined by the secondary changes in the skin, the result of long continued scratching before treatment is begun. All grades of eczema may demand their appropriate care before the case is reduced to one of simple pruritus, and sometimes mechanical aids to self-restraint are absolutely necessary in order to obtain any degree of control over it. Among the most reliable anti-pruritic remedies in this affection are carbolic acid, tar, chloral hydrate, camphor, corrosive sublimate, and hydrocyanic acid. They may be applied in several forms, and more or less combined with advantage at times. The most useful formulæ are, perhaps, the following:—

- R Carbolyzed and camphorated cosmoline, p. e.
- R Acid. carbolic, 3ss, glycerine ʒj, aq. calcis, ʒ viij.
- R Ol. cadin. 3ss, adipis ʒj.
- R Ol. cadin. ʒj, sapon. virid., glycerine, āā ʒ ss, alcohol ʒvj.
- R Chloral hydr. ʒj, aq. camph., alcohol, āā ʒiv.
- R Chloral hydr. ʒj, acid carbol. 3ss, glycerine ʒ ss, aquæ, alcohol, āā ʒiv.
- R Chloral hydr., camphor, āā 3j, glycerine ʒ ss.
- R Hydrarg. bichlor. gr. viii., acid carbol. 3ss, aquæ ʒ viij., for restricted use.
- R Acid. hydrocyan. dil. 3j, emuls. amygd. ʒ viij.

They are to be applied in the evening as early as practicable in anticipation of the nocturnal exacerbation, at all events at bed-time, and are to be repeated through the night or at other times, as freely and frequently as may be required to relieve the attacks of itching, without producing so much irritation of the skin that they may not be used as freely at the next application. They are never to be rubbed on or in, but sopped or smeared on so gently as not to excite the cutaneous nerves. If the surface should be overstimulated by them some soothing ointment, as "cold cream" or a very mild oxide of zinc salve (gr. v. to ʒj), may be applied to such parts in the morning. In order that any of these formulæ may not lose their effect by prolonged employment, it is well to change from one to another after a time. It may often be

necessary to try several of them before that best adapted to the individual case is found. By their properly directed use alone a life of perpetual misery may generally be changed to one of comparative comfort. Internal remedies addressed to the nervous system for the purpose of blunting or benumbing the peripheral nerves are not advisable, for they must be given in increasing quantities to control the sufferings of the patient, and almost always to his general detriment. Granting that their temporary use is sometimes necessary, chloral and the bromides will be found most effective. It must not be forgotten, however, that they are capable of producing serious disturbances of the skin. The patient's diet should be so regulated that no stimulating substances are taken. No hot drinks are to be allowed, tea and coffee, that is, are to be drunk lukewarm, nor any alcoholic liquors after the noon meal. The habit of taking whiskey at bed-time to produce sleep is especially to be prohibited. The patient is not to be permitted to approach the fire or furnace flue, particularly at night when the desire of warming the feet before going to bed is strongly felt by old people. If necessary warmth may be restored to these extremities by a foot-bath. The thinnest old linen or cotton garments should be worn next the skin, beneath the ordinary woolen shirt and drawers. By such means we may generally make the disease at least endurable in every case.

PURPURA SENILIS.

The vessels share in the general enfeeblement of the cutaneous structures in old age. In the most dependent portions of the body they allow their fluid contents to leak, giving rise to a passive œdema of the skin of the feet and lower legs, which may disappear after the horizontal position of night time. The capillaries undergo dilatation, so that the superficial plexus becomes visible as a greatly magnified mesh-work of a deep purple or blue color, as prominent at times as *nævus* tissue. The varicose condition of the larger veins adds to the difficulties of the cutaneous circulation. Under these circumstances extravasations of blood take place easily, sometimes in the form of minute dots, sometimes in areas of considerable extent and irregular shape, which are reabsorbed slowly, and if of frequent recurrence, are transformed into permanent stains of a reddish-brown or black color. Such deposits of modified blood pigment are of frequent occurrence about the ankles of old people. They often follow, moreover, prolonged hyperæmia dependent upon inflammatory dermatoses (of these parts). Sometimes the hæmorrhage is more general, in the form of the petechiæ and vibices of ordinary purpura, occurring without subjective symptoms or indications of constitutional disturbance, and affecting the whole lower extremities. Such forms, the result of simple loss of vitality during senescence, have been called *purpura senilis*. It does not differ from the simple purpura of earlier periods of life excepting in its more persistent recurrence. Internal hæmostatics have little influence in overcoming the tendency to local hæmorrhage at this age, and it must be controlled mainly by such mechanical agencies as rest, a horizontal position for the legs, and the constant use of the elastic stocking or rubber bandage.

PIGMENTATION.

Distinct from these permanent strains of hæmorrhagic origin is to be considered another kind of discoloration which often affects the skin of old people. It is a hyperplasia of the natural pigment cells of the rete, and

shows itself in the form of more or less circular spots or patches, varying in size from a minute point to a pea or large bean generally, and in color from a yellowish-brown to a deep black. These resemble at times ordinary freckles, when they are not accompanied by any thickening of the cuticle, but as the process continues the whole epidermis thus affected is apt to undergo hypertrophy, so that the spots become elevated above the general surface, forming one of the varieties of keratosis, presently to be considered. The favorite seat of such pigmentation is the backs of the hands and fore-arm, the face and neck. Upon the first-named parts, especially in old men whose lives have been passed in the open air, the skin sometimes presents an almost continuous discoloration of varying intensity by the confluence of individual spots of all sizes. Such spots may form, as we shall see, the beginnings of more serious disturbances, but they may continue to extend or last indefinitely without undergoing further change as a harmless disfigurement simply. They rarely undergo spontaneous involution. Their depth of color is sometimes obscured by a slight scaliness of surface, but ordinarily, unless the whole epidermis shares in the hypertrophy of the colored cells of the rete, the skin remains smooth. For the removal of these pigment spots no treatment is necessary or possible.

DISORDERS OF THE SEBACEOUS GLANDS.

A false pigmentation is sometimes produced by the sebaceous glands, which, when retaining their activity late in life, often secrete in some parts a modified sebum of a cheesy consistence, which forms upon the scalp a continuous, firm coating, gradually changing by the retention of dirt, to a brownish or black color, presenting a most unsightly appearance. Similar concretions sometimes form also about the openings of the glands of the face, which may attain a considerable thickness and give rise to bleeding if removed by violence. They are not always to be easily distinguished from other affections of the glands in which a modified cell growth is transformed into epitheliomatous neoplasm. All such simple collections of sebum may be readily prevented from forming by proper care of the skin, and are easily removed. The scalp should be saturated with sweet oil for a half hour or so daily. A bit of sponge or flannel rag smeared with toilet soap, or dipped in a strong solution of soft soap in alcohol, should then be rubbed into the part, gradually adding water until a thorough lather is obtained. This mixture of fatty scales, oil, and soap is then to be thoroughly rinsed off with much water, and the scalp smeared with lard or vaseline. This is to be repeated daily until the accumulation is entirely removed and ceases to form again. Afterwards the scalp should be washed off enough to keep it active and clean. Upon the face and other parts the concretions may be smeared at night with an ointment (hydrarg. am. chlor. gr. Ḑi. , vaseline ʒi.), and treated in the morning with oil and soap, as above directed. This course is to be followed until the glands involved return to their healthy action.

That sebaceous cysts, or wens, occur with greater frequency upon the old than upon the young is well known, but they require no special consideration here, as they are in no way peculiar to old age.

KERATOSIS SENILIS.

This affection has been described by Neumann under the name *keratosis pigmentosa*, which is not exact, as the increase of pigment, although highly characteristic, is not always present; and under the title *verruca senilis* by Hebra and Kaposi, which is not correct, as

the papillary hypertrophy, the essential element of wart growth, is generally wanting. It first shows itself in the form of collections of scales, hardly elevated above the general surface, of somewhat darker color than the surrounding skin, of an irregularly circular or oval outline, resembling in fact, without close inspection, freckles of light tint. The surface of these spots is sometimes shining and smooth, sometimes dry and covered with minute lightly adherent scales. They attract little attention at first, although seated in greatest abundance generally upon the most conspicuous parts of the person, namely, the upper half of the face and the backs of the hands. They may also appear over more extensive areas, the fore-arms and chest especially. Gradually they become more noticeable by increase of thickness and depth of color, but their development is very slow, and years may pass before they have attained sufficient growth to become troublesome. In their most advanced condition they present elevations an eighth of an inch above the general surface, consisting of dry, horn-like scales, which vary in color from the faintest yellow to the deepest black, and which may be removed with a little violence by the nail or a blunt-edged instrument, leaving exposed a superficial excoriation. Examined by the microscope, according to Neumann, the underlying and surrounding tissues present the ordinary appearances of senile atrophy and an accumulation of pigment in granular form about the vessels. The sebaceous glands are often enlarged, and their mouths plugged or obstructed, so that they project above the surface of the skin in the form of wart-like elevations when the overlying epidermal scales are removed. The growths differ, therefore, from the true wart in the natural condition of the cutaneous papillæ, the mass of the excrescences being composed of horny epithelial cells more or less pigmented. When fully developed they may be a third or half an inch in diameter, and they have generally a flat surface. They may occur singly or in considerable numbers upon the face or hands, and they often give to these parts an appearance suggesting, in connection with the age of the patient at which they attain their fullest development, the corresponding tegumentary changes in the bark of an old tree. They rarely appear before the age of fifty in numbers, and are seldom very conspicuous before that of sixty-five or seventy. They are much less likely to develop upon persons who have kept their cuticle and sebaceous glands in proper order through life by sufficient use of soap than upon those who have neglected this custom. When very prominent they are easily knocked off, so that the hands especially often present excoriated, bleeding surfaces, when the growths upon them are numerous. The scales, when reproduced, are then more or less discolored by the admixture of blood pigment.

The prognosis in the case of such simple collections of epidermal scales would naturally seem to be most favorable, and so it generally is if treatment be resorted to in good time, but the most simple changes in the cutaneous tissues of the face in old people are always to be held under suspicion. A wart or mole which has existed through life, a more recent accumulation of sebaceous material or of hardened scales, may eventually be transformed into epitheliomatous disease. So this affection is a very common starting-point of this form of cancer. The transition from this simple epidermal hypertrophy to this more serious new-growth is unmarked by any striking change in the condition of the part. The patient's attention becomes finally attracted to the fact that the scaly patch is not as firmly

fixed as formerly, or that the tissues beneath are softer or more boggy when it is pressed upon, or that the covering of scales is changing to a crust or scab, which enlarges at a more rapid rate, or that the part is no longer wholly without unnatural sensations. Little nodules begin to appear at its edge, minute globular elevations, containing a soft material resembling milia, which may be squeezed out, and are found to consist of epithelial cells. These in turn become excoriated, and add to the size of the crust. Thus in time a circular, prominent patch, of a dull-red color, consisting partly of scales, partly of crusts, is formed, varying in size from a pea to a dime, and eventually the whole central portion softens and is cast off, leaving a shallow ulcerating surface. Its shape is generally irregularly circular, separated from the surrounding skin in part at times by a slightly elevated, hard border, which overlies a deeper infiltration. Such is the final history of keratosis senilis in many cases, such the beginning of a large proportion of superficial cancers (rodent ulcers) of the face in old people.

In the earliest stages of this affection it will be sufficient to wash the parts daily with soap and water, to keep under restraint the tendency to accumulation of epidermal cells. Generally the use of a little sweet oil, rubbed into the patch and allowed to remain a few minutes before applying the soap, will make its removal easier. When the growths are thicker and firmer, and when there is much pigment change, it is well to use upon them over night some fatty material like lard, or diachylon ointment, in the form of a plaster, and to rub into them in the morning on a piece of flannel cloth some of the strong soaps, like domestic soft soap or *sapo viridis*, or their concentrated solutions in alcohol. Water is next to be rubbed in until a thorough lather is made, which is then to be washed off. Should any excoriations be thus produced they may be protected by a patch of cloth spread with diachylon ointment until healed. In this way the ordinary growths may be gradually thinned and made to disappear, but the parts will always require extra care and washing subsequently. If the epidermal masses are unusually prominent, or if the sebaceous glands are involved to any great degree, severer measures are called for. Concentrated nitric acid may be repeatedly, if necessary, bored into the underlying tissues upon a sharply pointed stick, or the sharp spoon or curette may be used to scrape out at once all diseased elements. As soon as any suspicion of transition to epitheliomatous growth arises, the part should be dealt with according to the rules for treatment in that affection, which, however, is one in no way peculiar to old age, and therefore not to be here considered.—*Boston Medical and Surgical Journal*.

COLD WET-PACKING.

After numerous very carefully performed observations on healthy and diseased subjects, Dr. Stelmahovich (*St. Petersb. Inaug. Dissertation*, 1882) has come to the following conclusions: A. In healthy persons, cold wet-packings, of thirty to forty-five minutes' duration, the temperature of water being 3 deg. to 8 deg. Reau. (38.75 deg. to 50 deg. Fahr.), produce these changes. 1. During a packing, the rectal temperature in the majority of cases at first rises 0.1 deg. Reau., and then sinks; the temperature in the ear and mouth falls from the beginning; the axillary temperature either very slowly falls, or at first remains unchanged, and after sinks rather rapidly. The reduction lasts after the termination of a packing. The amount of reduc-

tion varies for the rectum from 0.2 deg. to 0.5 deg. Reau.; for the axilla and mouth from 0.4 deg. to 0.7 deg.; for the ear from 0.4 deg. to 0.8 deg. (The temperature was taken every fifteen minutes, the last observation each time being made by the end of the first hour after a packing.) 2. The blood-pressure (taken in the radial artery) invariably rises at first; then, by the end of a packing, sinks; and within half an hour after the termination of the latter, returns to the primary level in some patients, falls below it in others. 3. The number of cardiac beats diminishes. 4. Respiration at first becomes deeper and more frequent, and, by the end of a packing, returns to its primary frequency. 5. The muscular power of the hands, tested by means of a dynamometer, in the majority of cases is increased. 6. The sense of touch, examined by means of a Weber's æthesiometer, is always increased. Electro-cutaneous sensibility, in a large majority of cases (in fifteen out of seventeen), is increased; the increase being greatest in the umbilical region. B. In febrile patients: 1. The temperature, after four successive packings, was reduced in the rectum at the rate of 0.5 deg. to 2.0 deg. Reau.; in the axilla, 0.7 to 2.3 deg.; in the ear, 0.6 deg. to 2.2 deg. The amount of reduction is influenced by the quantity and temperature of the water with which the packing-sheet is moistened, as well as by the day of the disease, and the rapidity of the succession of packings; the degree of reduction is the less, the more rapidly packings follow one another. 2. In five experiments on recurrent fever, the loss of heat by skin, measured by a Winternitz's calorimeter, became greater after packings than it was before. 3. After several successive packings the sense of touch decreased, and the electro-cutaneous sensibility increased. 4. The number of cardiac beats decreased. 5. Respiration became deeper, and less frequent. 6. The muscular power increased.—*Lond. Med. Rec.*

THE DIETING OF INFANTS.

Professor Widerhofer of Vienna (*Wien. Allgen. Med. Zeit.*, Nos. 27, 28, 1882) has recently discussed the subject of infant dietetics, laying down clearly the indications which justify the feeding of babies by other than the natural means. Children of feeble vitality are frequently unable to suck, and require artificial feeding. By means of the scales, we may get a fair indication of the degree of vital strength, by assuming the average weight of a healthy child at birth to average 3 kilogrammes. Any less weight would then indicate weakness, whilst any child of less weight than 2 kilogrammes would be classed as one of feeble vitality. With this diminished weight, there are usually definite symptoms of feebleness to be found. Irregular cardiac action, shallow breathing and depressed temperature are often present, and must be treated with especial care. At first, the mother's milk should be given either with the spoon to the mouth, or by means of injection through the nose, by which the movements of swallowing are more easily excited. These cases are frequently lost from very trifling ailments, especially from slight bronchial catarrh. Children who are able to suck may be fed (1) by the mother's milk, (2) by that of a nurse, or (3) by artificial means, either entirely or in addition to breast milk. Of these, the mother's milk is to be preferred, even if imperfect, to the most perfect of wet-nurses. Various causes, however, may interfere with the function in the mother; malformed nipples or imperfect secretion of milk constitutional disease,

as tubercle, epilepsy, etc., or previous inability to rear children. A breast in proper condition for suckling should have veins distinctly visible, an easily erectile nipple, and should discharge from seven to eight points. Breasts which ooze spontaneously are never good, producing but little milk, which lasts but a short time. The best guide to the choice of a nurse is the state of health of her own child. Especially, the state of the bowels and its digestive powers should be regarded. The period of weaning cannot be fixed as a hard and fast rule. Generally speaking, after the nurse has menstruated once or twice, the milk becomes altered, and disagrees. If this occur early, it is sometimes advisable to provide another nurse for a period, before commencing to wean. No special diet is necessary for a wet-nurse, but abundant fluids should be taken; her weight should not fluctuate during suckling. The indications for weaning given by the child itself are usually the outcrop of the teeth and the amount of salivary secretion. The time of year, however, is also of importance, since the quality of cows' milk of necessity varies with the season. In March and April it is generally at its worst. Weaning should be avoided at times when diseases of digestive organs are most common, as, for instance, in July and August. Artificial feeding may be complete, or may interchange with breast-feeding. The latter is of necessity most in vogue with the poorer classes. Of all milks, mares' comes nearest to human milk in composition. Then follow asses', cows' and goats' milk. Imperfect digestion of milk must be met by varying the source of the milk, or by making various additions to it. Carrot-meal, stale bread-crumbs, arrowroot, soda or salt, are often of service. The familiar device of rendering cows' milk available for children by the addition of water and sugar, may be made more complete by the further addition of a small quantity of cream, which renders the subsequent transition to undiluted milk more easy. In all cases, the cows' milk should be boiled before use. Condensed milk is valuable on a long journey, especially by sea, but in such cases children should be trained to its use for a short time before starting. "The numerous foods for infants," concludes Professor Widerhofer, "though much puffed, are of no value whatever."—*Lond. Med. Rec.*

MILK POLLUTION AND DISEASE. BY DR.

JOHN DOUGALL, M.D., M.B., F.F.P.S., Glasg., Physician to, and Lecturer on Materia Medica, Glasgow Royal Infirmary.

The lecturer having selected "Milk Pollution and the Spread of Disease" as the subject for the opening address at the eighty-first annual meeting of the Glasgow Philosophical Society, began by referring to a communication on the dissemination of zymotic diseases by milk, which he read to the sanitary section of the society about ten years ago, when strong suspicion was culminating in fact that milk was a vehicle of specific infection. At that period several medical men had either clearly traced or strongly suspected impure milk to have caused numerous cases of typhoid, scarlatina, cholera, and small-pox. Still, a considerable number were sceptical about the matter, while many actually refused to believe it. It was in consequence of this diversity of opinion that he set about collecting the facts of alleged cases of milk poisoning, and of examining the chemical constitution of milk with special reference to its forming a favorable nidus for the reception and dissemination of zymotic poison. The results of his investigations clearly showed that

sweet milk was a congenial soil for the preservation and probably even the multiplication of infectious viruses. Since that time the views he then enunciated, had had many sad witnesses to their truth in the shape of a great number of epidemics, chiefly of typhoid, throughout Britain, due to the distribution and swallowing of poisoned milk. The serious character and frequency of these outbreaks latterly obtained for Local Authorities power to control the milk supplies, so that milk-retailers in many towns were now placed under certain restrictions to prevent contamination of the milk. Dr. Dougall then described the chemical composition of milk, showing how perfectly it was adapted for building up all the tissues of the body. The changes which ensued in milk were noticed, and he observed that it was obviously to prevent these changes that milk was intended by nature to pass at once from the milk gland of the mother into the stomach of her young. Such changes were hastened in milk by its being jumbled about in carts and railways, and being exposed to the to the air by remaining on sale and frequently transferred to different vessels. He also remarked that the large percentage of water in pure milk rendered it very prone to absorb gases and vapors of an offensive nature. Dr. Dougall then related his experiments, which consisted in exposing uniform portions of milk in a glass jar to the emanations of coal gas, paraffin oil, turpentine, onions, tobacco smoke, sulphuretted hydrogen, ammonia, sulphide of ammonium, musk, assafoetida, stale urine, creosote, stale cheese, chloroform, putrid fish, camphor, decayed cabbage, etc. In every instance he found the milk had become more or less impregnated with the characteristic odors of these bodies. After stating his strong conviction that milk absorbed and could communicate infection, the lecturer referred to the belief of some germ theorists, who hold that the alleged germs of infection withstand a temperature of 212 Fah., and yet they recommend the boiling of milk to render it non-infective by destroying such germs. It had always far exceeded the utmost boundary of his conception to fancy that a temperature which utterly destroys every form of tangible ovum, and every kind of visible seed known, would be resisted by ultra-microscopical organisms. He would accept this statement as true when he was shown a hen hatching a chick from a hard-boiled egg, or a boiled potato sprouting. It followed as a corollary to his view that he believed the boiling of milk destroyed every organism and germ which it contained; and not only so, but he was certain also all infective putrid particles, which he still believed was the form assumed by zymotic poisons. Specimens of milk sugar and sealed capillary tubes filled with milk directly from the cow's teat were shown to illustrate some of his remarks.—*Med. Press*.

MEDICAL NOTES AND NEWS.

Malaria in Skin Diseases—a Correction.—

Some time since the following paragraph appeared in the Michigan Medical News, and has been widely copied in the medical journals of this country:

A century ago John Hunter divided all skin diseases into three classes, one of which is cured by mercury and the iodides, a second by sulphur, and a third class which the devil himself can't cure. Dr. L. P. Yandell, who quotes Hunter as above, is given credit for a much less complex classification than even this. He attributes all skin eruptions to malaria. Quinine is a specific for malaria; ergo, quinine is the remedy for all skin eruptions.

Q. E. D.

I trust that my confrères of the press will do me the kindness and the justice to publish the correction now given, as the matter is not only one of personal interest to the writer, but is of scientific interest to the profession. The subjoined extracts are from a supplement to a report read to the American Dermatological Association, September, 1877. A copy of this report will be gladly sent to any one desiring it:

"From the criticisms which have been made on my views, I find that I have not succeeded in making myself perfectly understood. What I have contended for, and what I have reiterated, is simply this: Malaria is the chief source of acute skin disease. Scrofula is the chief source of chronic skin disease. The more inveterate cases of skin disease are often due to the co-existence of these two things. The specific xanthems, of course, are not included here, but I contend that their progress and termination are often largely influenced by the presence of malaria, or struma. I do not claim that malaria and struma are the sole causes of the dermatoses. Indeed, many of the dermatoses may exist independently of malaria or struma, and most frequently some exciting cause is necessary to develop the cutaneous eruption. Among the exciting causes are irritants, injuries, insufficient or improper ingesta, vicissitudes of temperature, alcohol, dentition, menstruation, parturition, lactation, etc. The proofs of the truth of my views are, in the first place, that the diseases of the skin are cured more certainly and more quickly by the antimalarial remedies on the one hand, and by the antistrumous on the other, than can be done by any other line of therapeutics; and in the second place, that careful and painstaking investigation will, in the majority of dermatoses, make apparent the existence of the malaria or the struma, as the case may be.

"In conclusion, I desire to impress upon the reader that my views are not confined to the skin diseases. What produces disease here will produce it in all other organs of the body. What is true of dermatology is equally true of gynecology and ophthalmology and otology, and it is just as true of the diseases of all the other regions of the body."

Subsequent observation has confirmed my belief in the correctness of these views.

LUNSFORD P. YANDELL.

Sanitary Items.—"The inspections which have been impartially made show conclusively that at least nine-tenths of all the houses in the city which are provided with so-called 'modern improvements,' are cursed by the presence of sewer gas."—*Chicago Times*, Aug. 6th, 1879.

"We have every reason to believe that not five per cent. of the house drains in our abodes are sewage and gas tight."—*Sanitary Journal*, London.

"Until quite recently I should have said that a soil-pipe jointed with caulked lead was one of the complete elements of satisfactory house drainage. Retent experience in testing such pipe by closing their outlets and filling them with water, has led to the conclusion that of all the lead-jointed iron soil-pipe now in existence in American houses, not one in a hundred would fail to leak under the test."—*American Architect and Building News*, Aug. 12th, 1882.

"The plumbers are not necessarily vicious, careless or incompetent; but the plumber's soil-pipe, and the plumber's joints in the soil-pipe are absolutely worthless for the purpose in view. The house-holder may

secure the services of the best plumber, and pay the most exorbitant price for his drainage—executed under the regulations of the most intelligent Board of Health—and then be unable to secure exemption from sewer malaria."

"Lead soil-pipes afford no security; they are destroyed by gases, by vermin and by nails."—*Durham-house Drainage Company's Circular*.

Dr. Joseph Richardson, Professor of Hygiene etc., University of Pennsylvania, in the *Medical News* for Sept. 2, 1882, has discussed the question whether water-traps are a desirable means for excluding sewer-gas from our houses, and has arrived at the conclusion that they are not. His reasons for this conclusion are embodied in the following three propositions:

1st. That diphtheria, typhoid fever, scarlet fever, and probably other contagious diseases, are connected with, if not solely due to, the development of spores or germs of vegetable organisms in the human body.

2d. That these germs propagate in sewers and float to us on the sewer air, penetrating into our dwellings through water closets, sinks, stationary wash-stands, etc.

3d. That the reason our various ingenious traps fail to protect us against these fatal sewer diseases is that sometimes a layer of micrococcus and mycelium creeps along the interior of the contrivance until it forms a new depot of development in the slimy vegetable lining extended into the *inner or house side* of the trap, from which, without obstruction, its deadly germs may be given off into the very bed-chambers of its victims.

He concludes, therefore, that "the true method of obviating this danger is by sterilizing with slow currents or drippings of solutions of sulphate of iron, corrosive sublimate, arsenic, carbolic acid, etc., the whole interior of our waste pipes, just as the shores of the Dead Sea and the banks of certain small streams are sterilized by mineral ingredients, or poisonous metallic substances from manufacturing refuse, with which these waters are mingled." Dr. Richardson would retain the fixtures and pipes, but destroy the deadly germs by chemicals.

The question which remains to the practical hygienist is, can the drains and pipes and fixtures of a great city be thus disinfected? or, if it can be done, will it be done?

It may be well for the instruction of those few skeptical physicians and the more numerous skeptical plumbers and architects, who do not see any danger in sewer gas, to quote a few of the "stubborn facts" referred to by Dr. Richardson:

"Dr. Wm. N. Thursfield, of Birmingham, England, reports tracing an isolated case of diphtheria to temporary exposure to 'sewer gas' in a house on a short line of sewer which he *knew* to be specifically contaminated by diphtheria. This sewer, when opened and examined by a surveyor, produced in him a severe diphtheritic attack (*London Lancet*, August, 1878, p. 211)." Dr. Wm. V. Keating details at length four cases of typhoid fever attributed to sewer gas from untrapped drain pipes, and refers (on page 117) to cases of measles, scarlet fever, and diphtheria in two other families apparently from the same cause ('Trans. of College of Physicians of Philadelphia,' 1879, p. 85). Dr. C. W. Chamberlin, of Hartford, relates a remarkable case of fatal erysipelas seemingly due to sewer gas from a waste pipe carelessly left open beneath the bed of the patient ('Connecticut State Board of Health for 1880,' p. 5). Dr. Geo. Wilson quotes the account of 20 out of 22 boys at Clapham, England, in

1829, who were attacked with violent vomiting, purging, and fever within three hours after standing over a choked-up drain, watching the workmen clean it out (Wilson's Handbook of Hygiene, 3d American edition, p. 68). Nor are these isolated instances, for the medical journals of America and Europe record numerous similar examples of dangerous or fatal effects from disease poisons in sewer air when inhaled by human beings."

A number of additional facts may be found in Dr. F. H. Hamilton's paper on sewer gas contained in the November number of the *Popular Science Monthly*.

Bismuth in Dyspepsia of Children.—In the *Practitioner* for September, p. 184, Dr. Dunbar calls attention to the efficacy of bismuth in that form of dyspepsia occurring in children, characterized by enlarged papillæ fungiformes on a coated tongue, loss of appetite, dulness, and languor. He gives two minims of liquor bismuthi to a child under one year, three or four times a day. Under this treatment, besides the improvement in the symptoms enumerated, the action of the bowels becomes more regular. This remedy is useless in dyspepsia when the tongue is smooth and clean, and shows no enlargement or redness of the papillæ.

Acute Rickets.—The case is described by Dr. Fürst in the *Jahrb. für Kinderh.*, Band xviii, p. 192. The patient, an infant, aged 2 years and 1 month, had been fed largely on starch-food, and suffered at the age of 6 months from sweating and dyspeptic symptoms. Teething commenced in the thirteenth month, and walking was learnt several months later. Spasmodic croup, and swelling of the epiphyses, appeared at that time. At the above-mentioned age, the child suddenly fell ill with acute febrile symptoms. Besides the above rachitic symptoms, there were also open anterior fontanelle, cranio-tabes, and rachitic alterations in the thorax. The upper extremities were free from pain, and not swollen; but the left femur and both tibiæ showed a diffuse cylindrical swelling, with red, tight, and glancing skin, presenting the appearance of a diffuse cellular infiltration proceeding from the periosteum, or an osteomyelitis. Calomel was given internally, and iodine and cold applied locally. And in a few days the right forearm was affected; then the right arm and the left forearm were affected, while the parts first attacked began to recover, the fever also abating. Withing four weeks the child was free from fever and pain, but there remained swelling of the epiphyses and deformities of various bones not previously present. Four weeks later there was a slight recurrence of the attack, leaving a curve in the right femur. Dr. Fürst would term such an attack as this, not acute rickets, but the acute initial stage of rickets, differing from the usual symptoms only in the acuteness of the attack.

Paper-Soap.—Dr. Addinell Hewson, of Philadelphia, has recently found that tissue and manilla paper can be so impregnated by immersion in a hot solution of English glycerine soap, that a slip of the size of a visiting card will answer for washing the hands or shaving. This furnishes not only a great convenience to travelers and others, as well as a saving of soap, but also a way of preventing contamination both in public and private.

Virehow on Soups and Broths.—The distinguished German professor and politician has been accused of being the chief opponent of soup. He says that this is not true, for he had merely said that meat-broths are neither nutritious nor "substantial"; that, if all the meat which one uses should be boiled and soup made of it, the meat would become, for the greater part, indigestible, and the soup would not be a substitute for it. Ordinary meat-broth or bouillon, in its pure form, can only be recognized as a condiment. By the addition of eggs, flour, fat and other things, it may acquire a certain nourishing and heating value. It is, primarily, only a very dilute aqueous solution of substances that are in part of low value as heat-producers, such as gelatine, and in part of the stimulating aromatic parts of the meat. Taken warm, it is of nearly the same value as coffee or tea, but is inferior to wine, schnapps or beer; it only stimulates the nerves. It has one advantage over every other condiment, namely, it contains no poisonous substance; it is incomparably milder, hence much better adapted to feeble persons; and, finally, it can be conveniently combined with substances that are actually nutritious, and imparts to them an agreeable and "substantial" taste.—*Scientific American*.

Toilet Drunkenness.—Dr. Groussin (*Journal de Médecine de Paris*, 9th September, 1882) has a letter on the curious form of drunkenness which he mildly describes as toilet drunkenness. Those who, by birth or fortune, or by a combination of both, belong to what we call the upper classes, are subject, like other mortals, to all the faults and vices inherent in our nature; but their respectable position, and the money at their disposal, enable them to throw over their bad habits a veil which the world in general cannot see through, and which even the doctor can hardly raise. A lady whom Dr. Groussin lately attended four times complained of giddiness, headache, difficulty in walking, and a want of accuracy in manual movements. Fearing apoplexy, he turned all his attention in that direction, and prescribed purgatives, mustard foot-baths and bicarbonate of soda to dilute the blood. He found by accident that this lady, otherwise excellent and kind to the poor, got drunk regularly four times a week on eau de Botot. She drank this water instead of using it to wash her mouth, and no one discovered it. Had she drunk wine, chartreuse or cognac her breath would have betrayed her to the least knowing person. Eau de Cologne and other toilet tinctures are used in the same way.

Noises for Invalids.—Mr. G. A. Sala, in his recent book on America, writes: "On this particular Sunday morning, I own I should have liked to remain an extra half-hour between the sheets. I was constrained, however, to rise, by the persistent booming of the church bells. They rang me into nervousness, they rang me into consternation and præcordial anxiety, they rang me into a most irreverent and un-Sunday-like state of exasperation, and they rang me temporarily very nearly mad. There may have been a good many people sick unto death that morning at Baltimore, and the incessant clanging and jangling of the bells may have been as efficacious as the old 'Mrs. Gamp' pulling the pillow from beneath their heads in order to terminate their sufferings. I suppose that campanology is a science, and I wish its votaries joy of it. I can understand the zeal of the 'college youths' and other amateur bell-ringers who ring triple-bob-majors by the

ten thousand, because at the conclusion of their labors they are sometimes regaled with a leg of mutton and trimmings for supper; but I do seriously trust that the time has arrived for quiet people all over the world to unite in a protest against the senseless, cruel and barbarous practice of jangling bells in order to invite the public to attend divine worship. . . . I want to know, in the interest of the sick and nervous, what good these bells do anywhere? Do they render anybody more serious, virtuous or devout? . . . I recommend the campanological nuisance to the attention of all sensible physicians." The editor of the *Edinburgh Medical Journal* here states: "*Mutato nomine*, what clever, wise Mr. Sala writes of Baltimore might be written of the West End of Edinburgh, where, not only on Sundays, but on two or three evenings during the week, conversation is rendered impossible and life made unendurable by the fearful noises proceeding from a so-called peal of bells in a new cathedral spire.

Oleoresin of Male Fern: Increasing its Efficacy Against Tape-worm.—According to E. Dieterich, the frequent failure of oleoresin of male fern as a remedy against tape-worm is to be ascribed to its irrational administration. It has become known that the popular "worm-doctors," who use almost exclusively the oleoresin of male fern, and who hardly ever meet with a failure, administer the remedy in conjunction with castor-oil, instead of following it by the oil after one or two hours, as is usually done by practitioners. The object is to bring the extract, in an unaltered or undigested condition, into contact with the worm. The experiments which have been made by mixing one part of the oleoresin with two parts of castor-oil have been very successful, and this mode of administration deserves, therefore, the preference. Oleoresin of male fern is apt to derange the stomach, and, when enveloped partly in the oil, is likely to pass it more rapidly, which constitutes another advantage. The mixture has, it is true, an unpleasant taste. This may, however, be disguised by filling it in capsules of about 45 grains each. The dose may be regulated for six capsules to seven or eight more, according to circumstances. It is advisable to empty the bowels the preceding day by a mild purgative, best by castor-oil.

Hereditary Transmission of Artificially Produced Lesions.—Dr. Brown-Séquard (*Comptes Rendus*, tome xciv, s. 627), many years ago, drew attention to the hereditary transmission of epilepsy in guinea-pigs, rendered epileptic by section of the sciatic nerve or cord, of alterations in the eye and ear after section of the cervical sympathetic, of ecchymosis and dry gangrene after destruction of the corpus testiforme, of exophthalmos after section of the spinal cord, and of loss of phalanges or digits after section of the sciatic nerve. He now adds a fresh series of changes in the eye, after section of the corpus testiforme, which causes in the parent, atrophy of the globe, and in the descendants various opacities of the cornea, aqueous, lens or vitreous humour with atrophy of the globe in one case; also muscular atrophy after section of the sciatic. With the exception of the epileptic attacks, the changes in the descendants were often bilateral when they were unilateral in the parent, or *vice versa*, or the same side was not affected. Females transmitted the changes more readily than males. One generation often escaped. He has seen an abnormality transmitted to the sixth generation.

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CLINICAL REMARKS ON A CASE OF APHASIA.

BY

W. H. THOMSON, M.D.

Professor of Mat. Medica and of Nervous Diseases, University
Medical College, N. Y.

The patient B, 32 years old, says that he enjoyed good health till his present trouble began, which was over a year ago. He then noticed a difficulty with his speech, which consisted in such a forgetfulness of words that he could not express himself. He knew what he wanted to say, but he had no words with which to say it. He not only could not speak, but was equally helpless for words if he tried to write, though if he looked at written or printed words he readily recognized what they meant.

Under treatment this loss of both spoken and written power of expression has disappeared, and he talks now with great freedom and volubility. He had temporary aphasia, and to understand his case we will briefly analyze first this curious mental affliction. The term itself means without speech, and should be divided into 1, speechlessness due to functional derangements, and 2, into disordered speech from organic changes in some part, or parts, of the mechanism of speech. Examples of functional aphasia are met with in certain cases of megrim or sick headache; for in some patients, when the paroxysm takes the form of

severe hemicrania, they lose the power of speech altogether, both articulate and written, until the attack subsides. The most remarkable case of functional aphasia which I have seen, however, occurred regularly in a patient of mine as a precursor of epileptic fits. He is an exceptionally intelligent gentleman twenty-five years of age and educated both in American and German Universities. His first attack was while attending a course of instruction in England, when having a walk with a friend he suddenly found himself unable to remember a word. He tried to write what he wished to speak, but was surprised to find that though he knew perfectly what he intended to say, not a word would come to him for writing, any better than for speaking. After a time he noticed that he was becoming confused in his thinking as well, and shortly after this he lost consciousness, when he passed into a violent epileptic fit, after a whole hour of pure aphasia, without anything else. Since that first attack he has had a repetition of them for about four years, averaging six a year, and they always begin with sudden aphasia, lasting from a quarter of an hour to more than an hour, and terminating in a most severe epileptic convulsion. Besides these he has had numerous attacks of the same aphasia but milder and shorter in duration, and passing off without loss of consciousness or motor spasm of any kind. Being, as just stated, a highly educated man and very clear minded, he has paid strict attention to his strange affliction, and has made a number of interesting observations on himself during his attacks of speechlessness. The loss of words he says is instantaneous for articulation, but more gradual for writing. Meantime his consciousness of ideas is perfect, and knowing what he wishes to express, he hastens to write, lest, before he can compose the sentence, the power of wording in writing be gone also. Thus, being taken once on shipboard, he went to his trunk, and removed the clothes to get at his writing materials, which he was vexed with himself then for packing at the bottom; he then took these out to write on a slip of paper that he wished the steamer's surgeon to be sent for. He noticed by this time however, that he wrote the sentence half in English and half in German, and that a wrong word was at the close of the sentence. Trying again, he found that he could not write sense either in English or in German, and shortly after this the fit came on. At another time he made a very interesting observation. He is an accomplished musician, and was singing a piece and accompanying the words with a guitar. He suddenly lost all power of recalling the words which were very familiar to him, but was able repeatedly to sing the tune and to play it on the instrument up to the intervention of the loss of consciousness and the convulsion.

You may be surprised to know that such a common trouble as sick-headache is a variety of epilepsy, but so a true case of it is, and you will never treat this disease

right as long as you think it is a stomach or liver trouble. In many pronounced cases of it there are often whole groups of significant symptoms quite distinct from the ache in the head or sudden disorder of vision, ranging from slight double sight to total blindness, or a transient delirium, or a sense of numbness with more or less paralysis running down one side and involving arm or leg, just as in hemiplegia, or lastly attacks of pure aphasia, like those in the epileptic patient just mentioned.

I mention these instances of functional aphasia because functional diseases of the nervous system are so obscure that we must welcome every hint which we can obtain about them, and such I think we may suppose is derivable from some parts in organic aphasia. By a functional nervous disease, we mean an affection which, like epilepsy, is associated with no known demonstrable lesion of nerve texture, peripheral or central. With many cases of aphasia, on the other hand, lesions of special kinds, and occurring in special localities in the brain, have been found often enough to warrant the deduction of a causative relation between the speechlessness observed in life and the anatomical changes found after death, and as far as the symptoms go there is no difference between those which are thus associated with tissue damage, and those which are not, and which therefore we provisionally term functional.

Examples of greater or less loss of power of speech occurring in diseases accompanied by organic lesions in the nervous system, are found in certain cases of general spinal paralysis, general paralysis of the insane, in denominated sclerosis, in locomotor ataxia, in left hemiplegia, and even in chorea, and yet in all of them the defect of speech may be only because of the loss of control over the muscles of articulation. This variety of aphasia is not loss of speech, but of articulation, and sometimes of phonation, the voice being also affected in the way of altered tone or quality. Speech by writing continues meantime and the words for objects or ideas are still known. It is difficult to explain the mechanism of some few of these cases however, for they will be able to use the same muscles, *i. e.*, of the lips and tongue and larynx, for other purposes, but not for speech, while the hand can speak both by gesture and by pen. Complete aphasia is different, in that not only is speech gone from the apparatus of articulation, but, from the brain centre itself, which tells the muscles of articulation what to say. In other words, the patient is suddenly made a foreigner to his mother tongue, and may not know a single word of his own language, any more than if he had never heard it. If he ever learns it again, he does so with the same difficulty as a person of his age would learn a totally unknown speech among Asiatics or Africans. In an instant, perhaps, he has forgotten it all, and therefore does no better, if, when in distress, he attempts to write, than if he tried his hand at Japanese.

This remarkable aphasia from the loss of all memory of words is therefore termed amnesia, and occurs so uniformly in connection with organic change in the posterior part of the third frontal convolution of the left brain, that we can have no doubt that this same part is the chief speech center. The great majority of cases of aphasia, therefore, are due to some accident occurring to the left middle cerebral artery, which supplies this convolution with blood. If we could suddenly tie this artery, amnesic aphasia, complete and permanent (for above Willis' circle there are no anastomoses) would instantly occur. What we cannot do experimentally is, however, often done by the effects of a rheumatic carditis, which leaves a fibrous growth on a

heart valve, till this breaking away, it is washed up to the middle cerebral artery and plugs it, with the effect of producing immediate hemiplegia with aphasia. After death we find as a result of this sudden shutting off of blood, a softening and disorganization of the parts supplied by the artery, the third frontal convolution among the rest. The same kind of mischief also often follows a break of this artery, or a branch of it, with the production of right hemiplegia from hæmorrhage. In these cases, however, the severity or permanence of the aphasia depends upon the degree in which the speech center is disorganized by the clot. It may be barely compressed by it, and hence in time speech will return; if its texture be torn up, or if it softens from resultant inflammatory processes, then the aphasia grows worse and more complete.

Now, one theory of the production of that most formidable of functional diseases, namely, epilepsy, is that it is due to the sudden shutting off of blood from certain nerve centres by spasm of their arteries, and I think that the case of aphasia preceding the convulsion, which I have just described, lends a strong confirmation of that view. In him we have a case of as perfect amnesic aphasia as is ever caused by the closure of the middle cerebral artery by an embolus, produced by some transient cause which comes and arrests speech in tongue and hand both, because it paralyzes the speech convolution itself, but in a few hours that convolution resumes its function as if nothing had happened to it. To imagine the nerve cells of that convolution spontaneously paralyzing themselves, is difficult; to imagine them as prevented from remembering words by a transmitted irritation from some other part of the brain, is also difficult, and both these theories, moreover, are about as speculative as they can be. Spasm of arteries, however, sufficient to produce their closure, is a well known occurrence both by observation and experiment, and that such spasm would produce typical aphasia if it occurred in the middle cerebral artery, we know from the facts of organic aphasia. We also know by experiment that vasomotor spasm is sometimes slowly progressive, comparatively speaking, spreading from one artery to another, and in such a case, if it occurred in a plexus of cerebral arteries, we would have either progressive motor symptoms setting in one after the other, or sensor, or purely intellectual symptoms, according as the affected vessels supplied motor or sensor or intellectual centres. Such a variety of effects exactly are to be observed in the study of those precursors of epileptic fits technically termed *aures*. Some of them begin by local spasms in the extremities or elsewhere; others begin as strange sensations of endless variety as to seat, while others again begin with sudden mental symptoms, such as hallucinations of sight, hearing, smell or taste, or else in purely crazy actions.

This patient, B., however, before us now, presents symptoms which are not according to rule. He had perfect amnesic aphasia with a widely distributed hemiplegia. *En passant* let me repeat what I have frequently said before, that hemiplegia does not mean paralysis of one side, but only *on* one side. I never saw but one case of real paralysis of one side, and that was hysterical. In nearly every case of hemiplegia, though arm, leg, and face are motionless on one side, the muscles of the neck and trunk are quite unaffected. On the other hand you may have only the slightest possible drag in one foot, a little weakness in one thumb and a slight mumbling in speech, and yet that is as true a case of hemiplegia, as if the patient was bed ridden in his paralysis. But to return, B. had amnesic aphasia with hemiplegia, but the paralysis instead of

being on his right side, as it should be if the left brain was affected, was on his left side, and therefore an affection of the right brain, which is supposed not to have a speech center in its third frontal convolution; for aphasia with left paralysis is very uncommon. Left paralysis with aphasia, however, does occur sometimes, as in B., but the very interesting observation has been made that the patients have nearly always been *left-handed*. B. tells us that this is the case with himself. This fact raises the question why should the left brain own the speech center so exclusively in right-handed persons? What has the right hand to do with it? for that the hand has something to do with it is shown by right paralysis occurring in left-handed persons, without causing aphasia and conversely, as in B., aphasia occurring with left paralysis in left-handed persons.

Pathological anatomy therefore seems to give us a better clue to the origin of speech than all the laborious introspection of metaphysicians. From these parts in aphasia we naturally go both to that remote period when all speech was by gesture, as it is now between those who do not know each others language. The hand therefore spoke before the tongue, and of the hands, the right did the most of course. Gradually the tongue supplemented the hand and finally supplanted it; but to this day a very great part of communication among semi-civilized nations is by gesticulation, as it is also among children. The same parts of the brain therefore were taught to work both hand and tongue simultaneously for certain special purposes, and in left-handed children the art of expression would finally locate itself in the right brain, for the same reason that the left brain talks in right handed persons.

This young man however, has recovered his speech, as we said, by medicines, or rather we should say by a medicine. This medicine is on that account good for diagnosis, because if he had had a functional aphasia, it would not have cured that, if it had been an organic aphasia from an embolus in his right middle cerebral artery it would not have cured that either; nor if he had had a hæmorrhage in his brain; but if his hemiplegia and aphasia were due to syphilis, it would, because the medicine was iodide of potassium. Syphilitic hemiplegia may be caused by thickening of cerebral blood-vessels through a syphilitic inflammation of their coats: or it may cause the same symptoms by an exudation pressing upon the arteries from the outside, or finally from a pressure exerted on the convolutions themselves. When you have a case of hemiplegia therefore, the suspicion that it is of syphilitic origin is strong, firstly, in proportion to the patient being younger than forty, if he has no signs of heart-disease, and secondly, if preceeding the hemiplegia, or during its development, or immediately following it, he has headache, and thirdly, if examination of his arteries show that they are soft and no where thickened. Meantime do not trust to the patient's denials. The ancient Greeks in their mythology did not show their usual fine sense of the fitness of things when they failed to make Mercury, the god of lying, a son of Venus. But if you tell your patient what is a fact, namely, that the prognosis of a syphilitic hemiplegia is much better, as a rule, than vascular or embolic hemiplegia, it will often have the effect of refreshing his memory, so that he believes that he did once put himself in the way of becoming syphilized. Here, however, I will show you a sign of syphilis which as patients are not apt to know anything about it, is a valuable confirmation of your suspicions in any case when it is present; though unfortunately this sign may be absent although there be

syphilitic infection. It is so commonly present however, that I place a good deal of store upon its significance, and it is this: press firmly with your thumb on those transverse lines across the sternum which mark the separate pieces of that bone in foetal life, and you will find the patient wince from tenderness there; especially at the upper, and the lower ridge, at the junction of the ensiform cartilage. In this patient I can scarcely find any other sign of syphilis, but he cannot endure this testing of his breast bone.

CARCINOMA OF THE NECK.

A CLINICAL LECTURE DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS.

BY

HENRY B. SANDS, M. D.

Professor of the Practice of Surgery.

Patient's age is 53. He gives no antecedent history of any importance. The point of interest in this case lies in the presence of a tumor of the neck which is different in character from any I have yet shown you this year. He says that three months ago he first perceived a swelling on the left side of his neck, and at that time it was movable on the parts beneath, though now it is not and it seemed to him as if it was located between the skin and the flesh, and was as large as the end of his finger. Now it fills a large part of the posterior triangle of the neck. Another point of interest is that almost as soon as he noticed this tumor there occurred some loss of voice, and you may observe that the aphonia is quite marked. He does not complain of pain. His appetite has not been as good as before this tumor appeared and he has had much difficulty in swallowing solids. To recapitulate then, we have found here a tumor of rapid growth in the neck, in a man past middle life, accompanied by a partial loss of voice, a marked degree of emaciation, and a difficulty in deglutition.

A closer examination shows that the left side of the neck is evidently prominent, and the tumor extends along the line of the clavicle and upward to a line half way between the clavicle and the mastoid process of the temporal bone; its limit forwards is the external border of the sterno-mastoid muscle, while it extends back to the trapezius muscle, which it overlaps slightly. It does not present a perfectly even surface, but appears to be marked by a number of nodular elevations.

Now, by palpation, I find in the first place that the tumor is uneven on its surface, thus verifying the ocular observation. But I am not able to make the different nodules move separately from the general mass, except that at the upper and posterior angle, where there is one which appears to be movable by itself, and this may be a detached tumor. As to whether this swelling was originally composed of but one or a number of separate lymphatic glands I can not at present decide. The tumor is evidently very firm, and beyond question it is a solid growth, suggesting the idea that it may be a scirrhus tumor or carcinoma. With my fingers placed on each side of the tumor, so as to grasp it firmly, I find that it is only slightly movable on the underlying parts, and it has not that free movement which you have seen here in a case of fatty tumor, or in the bronchocele I showed you a short time ago. As it has but slight mobility it is therefore either an outgrowth from some immovable part in this region, such as a vertebra, or else it has become

firmly attached to the deeper tendinous structures. It extends so deeply that I can not get my fingers down far enough on the spinal side to determine its posterior limits, but I infer that it lies very deep because certain symptoms are present. The most marked of these is a loss of voice. This may be due to one or two causes, if the tumor accounts at all for the aphonia. In the first place, it may possibly be caused by direct pressure on the trachea. But this is improbable, because a considerable amount of pressure may be made on the trachea without causing a loss of voice, and if the tumor was located so as to cause such pressure, this could easily be verified by manual examination. In the second place, the aphonia may be caused by the tumor implicating in some way one of the nerves going to supply the laryngeal muscles. The only mode by which these muscles can be satisfactorily examined is by the laryngoscope, and Dr. Abbe has made such an examination, and finds that there is complete paralysis of the left vocal cord. This therefore accounts for the aphonia. This unilateral paralysis on the same side as the tumor points to a connection of some sort between the tumor and the larynx, and hence I have no doubt that the recurrent laryngeal nerve is pressed upon or involved in the growth.

Again, as to the cause of the difficulty in deglutition. It may be, that a small portion of the tumor is projecting into the space between the trachea and the œsophagus, and presses on the œsophagus so that he can not swallow meat and solid food, though he can swallow fluids. Or the dysphagia may be due to some implication of the pneumogastric nerve.

We know that this is a solid growth and not a cystic tumor, nor an aneurism, because it is too hard. Solid tumors in this region may be either benign or malignant. If benign, they are usually due to an enlargement of the lymphatic glands, and sometimes there are also malignant tumors of the lymphatic glands, but these are soft and not hard as in this case. This tumor I think must be either a fibroma or a carcinoma. I think that a fibroma may be excluded because such tumors are of very slow growth, while here we have a swelling which has increased very rapidly. This fact, together with the patient's age, the adhesions to surrounding parts, the pressure on the recurrent nerve, and the difficulty in deglutition, make it probable that the tumor is a hard cancer of the neck. This is a rare position for such tumors, but it has been shown that carcinomata do occur in the deep seated tissues of the neck, and I have seen this fact confirmed by a microscopical examination of the growth. One question in regard to these tumors is, whether they present indications for surgical interference. You know that the rule is to extirpate malignant growths if practicable, but mainly as an alternative, and not with the expectation of obtaining a radical cure, except in rare cases. Now the question is whether we should interfere in this case. With this firm adhesion and close relation to surrounding parts, including numerous and important arteries, veins and nerves, as well as to the respiratory organs, you would be doing a very hazardous operation by using the knife and you would not succeed in removing every portion of the growth. I would therefore advise against an operation. There are other methods of surgical treatment which may sometimes be employed where extirpation is not thought advisable. These are, the local injection of carbolic acid, electrolysis, and the use of caustics; and these measures I should condemn here as useless or worse than useless, and I should advise palliative remedies and the avoidance of all active measures.

There are remedies which have gained a certain amount of reputation for slowing the progress of the disease, and I think it is proper to employ these where there is no opportunity for operative interference, and there is any hope of their doing good. I am disposed to try anything in such cases that will not do harm. Of these remedies arsenic, I think, best deserves its reputation, and it is believed by many that if it does not actually cure, it at least retards the growth. Then there is a preparation of *arbor vitæ*, the fluid extract, which has been recommended for arresting these growths. The remedy that has been most talked about of late years is Chian turpentine, which was first introduced in England by a prominent surgeon of Manchester. Carbolic acid has been used hypodermically by a French surgeon as a specific, but I never knew any good to come from its use, and I have known of very sad accidents which were caused by it. Finally, you had better be very careful in deciding to extirpate a tumor of the neck with deep attachments, in the neighborhood of important structures. Even if the growth be very small its removal may be attended with disaster if it is attached to the neighboring vessels, if these are large or important.

ORIGINAL ARTICLES.

LARYNGEAL PHTHISIS.*

BY

J. P. CREVELING, M. D.,
Auburn, N. Y.

MR. PRESIDENT,—One year ago, I had the pleasure of exhibiting to this Society some of the pathological conditions characteristic of laryngeal phthisis; to-day I wish to illustrate some of the lesions peculiar to secondary and tertiary syphilis of the larynx. The drawing before you is intended to represent a magnified normal larynx, but let me remind you that there is no unit of color (so to speak) for the healthy throat, and therefore we must not expect all to present precisely the same color or appearance in nature; these pathological illustrations, however are drawn in reference to the one before you, and any variation in color, shape or size will be considered abnormal. I will now place this illustration by the side of the normal one, and you will observe the difference in color, this being of an extremely red and injected appearance. Not only is it red, but it is very dark, almost approaching purple, and has a thick opaque look. In simple catarrhal laryngitis the throat may become very highly colored, but there still remains a certain transparency, which is lost in severe syphilitic inflammation of the parts. In milder cases the diagnosis is not plain, and may even require a syphilitic history to confirm your supposition. In this case, as you see, the whole larynx is involved in the inflammatory process, the vocal cords are red, the ventricular bands are much swollen, so much so that they overlap the cords and almost hide them from view, the epiglottis is red, thick and turban-shape drooping over the larynx, and can be raised only by extreme effort, while the arytenoids are very much thickened, especially at their base, and roll inward, thus encroaching upon the calibre of the larynx, producing aphonia and embarrassment to rapid respiration. You will observe

* Read before the Central New York Medical Association, and reported.

that this condition is much more marked on the right than on the left, as also is the swelling of the ventricular band. Now in laryngeal phthisis, we also have swelling, but it is generally more symmetrical, it extends along the ary-epiglottic folds, giving them more of a club appearance, the color is too intense, for in that disease we have an anæmic condition, with a pale, boggy look.

These changes occurred too suddenly for phthisis, they having developed in a few days, while phthisis would probably have required a number of months. The history of this case is as follows: Some ten months since, this young man contracted syphilis, which was followed by the usual constitutional symptoms, such as glandular swelling, skin eruption, etc., but he had had no sore throat until a few days before being referred to me for treatment; and at this time the skin manifestations were still visible.

The next illustration is one also of the disease in its secondary stage. You will notice the general character of the disease is the same as in the one just shown, but here we have two conditions we did not have in that one, viz., condylomata and ulceration. The principal interest in this plate is the ulceration, it is situated on the left arytenoid and ventricular band of the same side, it is merely superficial and does not involve the tissues beneath the mucous surface, it is not very large, the margin is but slightly elevated, yet the surrounding tissue is extremely inflamed, the surface is covered with a yellowish white material or secretion. This lesion occurred $2\frac{1}{2}$ years after the initial sore, now all manifestations after the first year are regarded by some of our best writers as tertiary. I am convinced, however, that this does not belong to that stage of the disease, it surely is not the deep destructive ulcer so characteristic of that date, and it rapidly yielded to the treatment of the secondary form. The throat had been sore a week or ten days before he applied to me. You will please remember that while many cases of syphilitic sore throat develop and run a rapid course, as in the two cases exhibited, other cases require much more time to produce such decided changes. The disease for which this condition is most apt to be mistaken is laryngeal phthisis, but here too we lack the club-shaped arytenoids, the general anæmia of the throat, and the constitutional disturbance of phthisis, etc. Ulceration in simple catarrhal laryngitis not influenced by some general dyscrasia, is as far as my experience goes very rare. The next plate is one of tertiary date, the disease having been contracted while in the U. S. Army, some twenty years ago. Here we have one of the most destructive forms of ulceration to which the larynx is subject. The history is more protracted. This man has had more or less hoarseness and sore throat for a long time, especially at intervals. You will compare the dark angry look of this, with the pink and rosy tint of the first plate. The left side of the epiglottis is more than half eaten away by a foul looking ulcer, the free margin of the ventricular band and the vocal cord of that side are also involved in the same process, the edges are ragged, the areola red and swollen. Only the edge of the vocal cord can be seen and that is well covered by the thick purulent discharge from the ventricular band above it. The band appears to ride upon the surface of the cord, the ventricle being occupied by the swollen tissue. The base or floor of the ulcer is deep and covered with a yellow purulent discharge. The most decided characteristics of this ulcer then are excavation, sharp well defined edges, red and raised areola, profuse yellowish purulent discharge.

One of the most dreaded results of this disease is contraction from cicatrization producing laryngeal stenosis. You will please observe that this process is confined to the left side of the larynx, this too is quite peculiar to syphilis, however it is not universal. It is difficult to tell how long this man has had laryngitis, but it is quite certain that after the ulcerative process once became established, its progress was very rapid. On the right arytenoid here you see a gummy tumor or gummata, which doubtless would soon have degenerated had the ulcerative process been commenced in that locality. It is held by many that such is always the origin of tertiary ulceration. I am not prepared to commit myself on this point. The last plate I will show is one that presents a mixed history. The young man is twenty years old, his mother died of phthisis when he was about eight years old, his father has been suffering from the same disease for the last three or four years. About a year and a half ago he contracted syphilis, and has had no sore throat until recently. His general health appears good and there is no evidence of chest disease on examination. The pharynx and trachea and also the epiglottis have a pale, thick, anæmic aspect, while as you see the arytenoids and ventricular bands are swollen and have a dark red hue. On the left ventricular band is a superficial ulcer, covered with a moderate amount of discharge of a yellow nature. The left side of the larynx is rather more swollen than the right. The arytenoids do not have the club-shaped appearance so common in laryngeal phthisis. The color is more intensely red unless possibly from an intercurrent catarrhal attack. There is but a very slight cough, and no profound constitutional disturbance. The impairment of the voice, which is very marked, is due to the swelling of the arytenoids thus hampering their action. There is no evidence of the syphilitic dyscrasia except in the larynx. In such cases, Mr. President, it is often extremely difficult to make a differential diagnosis, in fact they seem to become blended together or so intermixed that it is hard to say which is in the ascendency. In this case the ulceration disappeared by anti-syphilitic treatment and the ventricular bands resumed their natural size, while the arytenoids still remain thickened but have lost their intense color. The appearance of the throat in general, is that which very often precedes the development of laryngeal phthisis.

TRAUMATIC TETANUS: NERVE STRETCHING: RECOVERY.

BY

J. G. CARPENTER.

Stanford, Ky.

Mr. T., age 28 years, of robust constitution, subject to malarial attacks every summer since 1877, was, on the 18th day of July, 1881, shot with a No. 32 rifle ball while target shooting, through the posterior part of the thigh, about one inch exterior to the great sciatic nerve; the ball made its exit on the inner surface of the thigh, wounding the anterior crural nerve. Drs. Hunn, Johnson and Carter attended Mr. T., who recovered in twelve days, the wound having healed.

Aug. 3rd, Mr. T. came to Crab Orchard Springs, Ky., a famous health resort, and met numerous friends, the temperature of the weather being 100° F., was greatly agitated on his arrival at 2:30 P. M.; in five minutes after arriving traumatic tetanus supervened. Morphine sulph., gr. $\frac{1}{4}$, was given hypodermi-

cally every fifteen or twenty minutes for an hour, and patient inhaled chloroform during this period, in half an hour from the last insertion of morphine.

Morphiæ sulp. gr. $\frac{1}{4}$; atropiæ sulph. $\frac{1}{10}$ was given hypodermically, symptoms subsided, 5 P. M. Chloral hydrate, bromide of potash, ãã grs. xxx were given; in half an hour patient was sleeping profoundly, and slept all night. The 4th, 5th and 6th days of August were passed without any recurrence of the tetanic symptoms, though hyperæsthesia and mental excitement were constantly present. During this interval milk, whiskey and quinine were given freely; chloral hydrate and bromide of potash ãã grs. xxx were given every four or eight hours, to control the hyperæsthesia and mental excitement. On the 7th, at 11 A. M., the tetanic symptoms all returned with great violence. Morphiæ and atropia were given as above described, and checked the disease again, chloral mixture continued, also quinine grs. xx per day, and whiskey and milk. There were exacerbations on the 8th at 11 A. M., quinine was given in xx gr. dose twice a day, and the anodyne and anæsthetic treatment resumed as on previous days, and the disease abated; but, on the 9th, exacerbations returned at 1 P. M., and lasted until 7 P. M., and yielded to same treatment as before. I had repeatedly advised exploration of the wound and nerve stretching, but patient and family opposed it. A consultation was now held.

Drs. Johnson of Danville, Bailey and Peyton of Stanford, and Carter of Versailles having been called, they unanimously agreed with me in having the wound explored and stretching the anterior crural and sciatic nerves, one or more. The bowels and bladder were closely attended to all the time. Examination at 9 A. M. on the 10th showed that there had been exacerbations during the night, though the patient was then composed. Two hours later there was another exacerbation; is controlled with morphiæ grs. $\frac{3}{4}$ and atropiæ grs. $\frac{1}{10}$ hypodermically, 2 P. M. another violent exacerbation, same sized dose of morphiæ and atropia is again inserted. Patient is chloroformed, the wound explored, the cicatrix is hard, dense and tough, was very tender before and since tetanus began, the exacerbations were always preceded by neuralgic pains, beginning in the cicatrix and extending down and up the thigh for half an hour. It was very difficult to cut through the dense cicatrix, which was bluish color, and changed to a black color when the incision was extended to the fasciæ lata. The cicatrix was an inch and a-half long, extending from the fasciæ lata obliquely to the surface of skin, the anterior crural nerve was embedded in this cicatricial tissue, and was inflamed and of a bluish red color for two inches, and rather soft and greatly swollen; the adjacent tissue was also much congested and discolored subcutaneously, the cicatricial tissue and two inches of the diseased nerve were excised, the distal and approximal ends of the nerve stretched. At 9 A. M. on the 11th, I found that the patient had rested well all night and had taken milk, quinine and whiskey; at 10 A. M. trismus developed and lasted about ten minutes, but was controlled by morphiæ grs. ss; atropia $\frac{1}{10}$. By half-past ten trismus had subsided. From this day to the 26th there were no unfavorable symptoms. On the 26th, at 9 A. M., a storm of rain, thunder and lightning continued for several hours. At 2 P. M. the patient was nervous, restless, hyperæsthetic, crying, lamenting, and is passing large quantities of urine of low specific gravity. At 5 P. M., the above symptoms continue, though chloral hydrate and bromide of potash ãã grs. xxx have been given, the urine is

passed in larger quantities than before, sp. gr. 1.005. A loud clap of thunder instantly produces opisthotonos, which is soon controlled by morphiæ grs. ss. hypodermically.

By September 17th the patient had convalesced rapidly, though he was for a month hysterical and neurasthenic, good nutritious diet and nerve tonics have been given freely. Oct. 20th, the muscles supplied by the anterior crural nerve have been paralyzed, but are now fully restored.

SOCIETY PROCEEDINGS.

ADJOURNED ANNUAL AND STATED MEETING OF THE NEW YORK COUNTY MEDICAL SOCIETY, NOVEMBER 27th, 1882.

Dr. F. R. Sturgis presided at the adjourned annual meeting. Dr. Webster, the newly elected President, at the stated meeting. The minutes of the preceding meeting were read and approved.

Dr. Jacobi, as chairman of the committee appointed to consider the propriety of endorsing a petition to the Board of Education, which had for its object the extension of the summer vacation in the public schools, presented an elaborate report, the substance of which was as follows:

That the committee most heartily approved of lengthening the summer vacation, inasmuch as a return to the city and school life during the heated term of early September was most injurious to the children. However, as the petition was now drawn it proposed to close the schools two weeks later in July and open them the third week in September. This the committee did not approve of, but advised instead that the vacation begin at the usual time and terminate the middle of September. The committee reported the petition should be acted upon by the Society. It was necessary that the Legislature pass a special act to provide for this change, but this would meet with no objection. The petition to the Board of Education was drawn by gentlemen who were good citizens and good physicians, and the object was one of great import to the health of the children of New York.

The report was accepted and adopted by the Society and ordered to be entered on the minutes.

The address of Dr. F. R. Sturgis, the retiring President, was next delivered.

Dr. Sturgis briefly reviewed the work that had been done by the Society during the past year. The Board of Censors, who had been entrusted with securing the enforcement of the registration law, had faithfully performed their duty, and many illegal practitioners were now debarred from practice in this city. Other States had followed the example of New York in this matter. The law passed had many good provisions, but there were still some things omitted which were necessary to its perfection.

Dr. Sturgis alluded to the fullness of the reports which had been presented so that little was left for him to say.

It was necessary to have some men at Albany to watch over the bills presented that no improper measures be permitted to be pushed through. For this purpose the Board of Censors must necessarily have more money and the Society should see to it that this was provided.

In conclusion, Dr. Sturgis expressed the hope that the Society would soon be better housed than at

present. He eloquently pleaded that the dignity and wealth represented by the Society, its name, history, importance, etc., demanded, that something better than a hired hall be secured for its meetings.

Dr. David Webster, the president elect, was then introduced, and delivered his inaugural address, after which the standing committees were appointed.

The scientific paper of the evening, entitled

"MALARIA IN CHILDREN,"

was read by its author, Dr. L. Emmet Holt. The following is a brief summary of Dr. Holt's paper, which comprised an analysis of 184 cases, and was confined chiefly to a discussion of symptomatology and diagnosis.

The organism of the child was peculiarly susceptible to malarial influences, and so varied was the form in which these influences manifested themselves that the most careful were often misled in diagnosis. The cases analyzed were those met with at his clinic at the North Western Dispensary, and lived in a district west of Ninth avenue, which was regarded the most malarious in the city.

Dr. Holt detailed the symptoms of malaria, and stated that these were not developed in children in the same manner as in adults. In children there is often no decided chill or subsequent sweating stage. The onset is much more gradual than in adults, there is anæmia, muscular weakness, nausea, furred tongue, slight cough, enlarged spleen, and fever, which, later, is the most important symptom. Only one child in five has the cold stage.

Dr. Holt divided the cases he had met with into three groups. First, those in which the temperature is high at the outset and remains so. Second, those in which the increase is at first slight, but gradually develops in intensity. Third, those in which the fever assumes a distinct type at the outset and remains regular.

The general impression regarding the temperature in this fever was erroneous. In the majority of cases it did not rise above 104° , and usually ranged from 101° to 103° . Cerebral symptoms were the rule in children. Pain in the head, chiefly frontal, was much complained of, and was accompanied by drowsiness, dullness, and apathy. He had met with convulsions in four cases. Vertigo was seldom present in children. Pain in the epigastric region was present in 101 out of 128 cases, and was diagnostic. Mothers considered this a pathognomonic symptom. It had no relation to the taking of food. The epigastric pain was probably neuralgic, and was probably due to congestion of the stomach. There was tenderness of the spleen in one-fifth of the cases analyzed, spleen enlarged in 64 cases, hepatic tenderness in a few instances. In considering enlargement of the spleen in children it was to be remembered that at the age of five the spleen was normally relatively larger than at any other age. He had met vomiting in 78 out of 112 cases, and in 17 it was persistent. There was complete anorexia. The tongue was red at the tip and edges. The clearing up of the tongue was the best guide to treatment. In 55 cases constipation was present, in 27 diarrhoea. There were no thoracic symptoms except bronchial catarrh. There were genito-urinary symptoms in 17 cases, incontinence of urine in 6. Urine was examined with negative results.

There were three groups of complications of malaria. The respiratory, gastro-intestinal and nervous. Bronchitis was the most frequent complication.

Pulmonary congestion as a complication was the most misleading in diagnosis. Vomiting and diarrhoea might occur every day or only every other day.

Derangements of the nervous system were frequent. Supra orbital neuralgia was often present. Torticollis was sometimes present. Vaginitis existed in three cases, nephritis in two cases, urticaria in two cases, tonsillitis, epistaxis and hæmorrhage from the lungs were sometimes complications.

Relapses occur in a great number of cases since the patients continue to be exposed to the cause producing the disease.

With respect to diagnosis no symptom should be regarded as pathognomonic, the history of symptoms was most important, next enlargement of the spleen, drowsiness, anorexia and anæmia. Recognition must be given to irregular or marked forms of the fever.

Perhaps in making a diagnosis the most important points to be considered were the periodicity of the symptoms. The splenic enlargement. The failure to secure relief by other agents than quinine. The relief from quinine.

The differential diagnosis was from bronchial pneumonia, gastritis, typhoid fever and meningitis.

Among the conclusions arrived at by Dr. Holt, as a result of his analysis, were the following: In early life malaria was as distinct as at any other time of life. That the present classification of these fevers was misleading. That the spleen should always be examined. In obstinate bronchitis and diarrhoea in children malaria should be suspected. Drowsiness also should awaken suspicion.

Dr. J. Lewis Smith, in discussing the paper, said that his practice lay in that portion of the city from which the cases analyzed in the paper had been taken. He had seen a large number of cases such as described, in family practice. The author of the paper had included two forms of malarial fever, those arising from marsh miasm and those arising from sewer gas.

A large number of these cases were typhoid in character. The majority being sewer gas fevers, not marsh miasm fevers.

He had found hyperæsthesia of the thigh as well as of the epigastrium. Dr. Smith believed there was a degree of contagiousness in these fevers which showed that they were typhoid in nature, and a typical case was cited to illustrate this. This exacerbation was usually in the afternoon. In three cases examined post-mortem, the intestinal lesions of typhoid were found. He did not believe, in view of his experience, that quinine shortened the duration of the disease, though it might modify the fever.

Dr. J. C. Peters thought the point made by Dr. Smith a good one, though it was difficult to separate intermittent from sewer gas fevers. He asked the author of the paper to include in his paper the age of the patients.

Dr. Fruitnight regarded convulsions in children as the analogue of chills in adults. Might it not be presumed in these cases that the convulsions did not occur on account of the inhibition of quinine. He had often noticed general hyperæsthesia and it might lead to a diagnosis of meningitis.

Dr. J. C. Peters called the attention of the society to the condition of the National Board of Health, which had been shorn of its influence and wealth, though it had proved itself to be a most useful board. He moved that a resolution be passed by the New York Medical Society to the effect that they deplored this condition of the National Board of Health, and hoped it would be restored.

Dr. Jacobi moved to amend Dr. Peters' motion to read that the comitia minora be instructed to draw resolutions representing the feeling of this Society and other physicians in this matter, and that Congress be memorialized.

Dr. Roosa moved that this matter be made a special order for the next meeting, which was carried. The Society then adjourned.

SELECTIONS FROM JOURNALS.

DEATH OF A CHILD UNDER THE USE OF CHLOROFORM. BY FRANK SHEARER, M.B.

Eliza B. C., aged seventeen months, died whilst under the influence of a limited quantity of chloroform. When little more than a fortnight old, this child had developed marked symptoms of hereditary syphilis, but improved so rapidly, and so soon attained an appearance of comparative health, that treatment was not persisted in, despite of warning to the contrary. When she was twelve months old an evanescent swelling of the right elbow showed itself; and this had no sooner disappeared than the patellar bursa of the right knee became acutely inflamed. The tissues round the joint became enormously swollen, and a large quantity of pus collected in the bursa, and burst spontaneously at the end of a week's time. After discharging for ten days or so, the openings were allowed to close, and there remained such marked thickening round the joint that, even after the lapse of four weeks, the right knee appeared twice the size of the left. This thickening subsided very slowly, and, in spite of passive motion having been begun early, the movement in the joint was both limited and painful. The child was, therefore, brought to the dispensary on September 29th, 1882, and put under chloroform, in order to discover the real amount of movement, the cause of its limitation, and, if possible, to break up the adhesions.

Between twelve and one o'clock the child had had a light dinner, and, owing to the number of patients to be seen, it was nearly four o'clock before chloroform was administered. The child was a little pale, but was quite lively, and had been playing with the other children. It had had no symptoms whatever of lung disease, and the pulse, though soft, was without any peculiar character. The child's clothing having been loosened, an indefinite quantity of chloroform, certainly less than a drachm, was poured upon a towel, and this was applied over the nose and mouth in the usual way. The child cried and struggled at first, and held its breath as much as it could; but, after a few deep inspirations and a slight attack of coughing, which brought some frothy mucus to its mouth, it went suddenly under the influence of the chloroform, and the towel was thrown to the other end of the couch. During the manipulation of the limb the child slept perfectly quietly, the breathing being, to all appearances, quite natural. After the lapse of a minute or so, the child began to move a little, and it was noticed that the lips were somewhat blue, and that the respiratory effort was weak. The child was immediately slapped on the face and chest to rouse it, and the window was opened. The breathing became still weaker, and artificial respiration by Sylvester's method was begun, whilst the tongue was pulled well forward with a pair of forceps. No obstruction could be felt with the finger above the epiglottis, and it was noted that the finger did not excite the slightest tendency to reflex action. The child was slapped with a cloth,

dipped first in cold and then in hot water. The mouth was swabbed out with brandy, and ammonia was held to the nose during artificial respiration. Ultimately, Sylvester's method not being very successful, direct inflation of the lungs was tried, the nostrils being closed, and air being blown in by the mouth, and then expelled by pressure on the thorax. This seemed more effective; but there can be little doubt that most of the air entered the stomach instead of the lungs. All was to no purpose. The attempts at respiration only came in the shape of brief gasps, at lengthening intervals, and soon ceased. There was no dyspnoea, and the lividity was so slight that, even after the attempts at resuscitation, lasting over half an hour, were given up, it was difficult to believe the child was dead. The sphincters relaxed soon after the beginning of the respiratory difficulty. Under chloroform the limb could not be quite straightened, nor could it be flexed beyond a right angle, and the adhesions were too dense to be broken up.

The *post mortem* examination was made very carefully by Dr. Waters twenty-four hours after death. The body was fairly nourished, 23½ inches long, and 6 inches broad across the shoulders. Rigor mortis was marked. *Post mortem* lividity was universal on the posterior surface of the body, and extended over both groins, labia, and the inner surface of the thighs. The pupils were equal, and moderately dilated. On opening the chest the muscles were found pale, and the superficial veins not at all dilated. The pericardium was very prominent. Both lungs were pushed aside; the left lower lobe, especially, being pushed almost out of sight. The pericardium contained also a small amount of fluid. The right side of the heart was very prominent, both cavities being fully dilated; the right auricular appendix overlapped not only the root of the aorta, but also part of the pulmonary artery. The left auricle was not visible at all, and the left ventricle was tilted almost out of sight. The coronary arteries were collapsed and empty; the veins were full of black blood. The maximum circumference of the ventricular portion of the heart was 6¼ inches. The right auricle and ventricle were both full of dark fluid blood; the left auricle was collapsed and almost empty; the left ventricle was apparently contracted, and contained a small, elongated, ill-formed, black clot. The greatest breadth of the opened out cavity of the right ventricle was 3¼ inches, and of the left ventricle 3 inches. The thickness of the right ventricular wall was one-eighth of an inch, and of the left three-eighths of an inch. The septum projected markedly into the cavity of the right ventricle. The myocardium, healthy and red, contrasted forcibly with the whitened endocardium. The valves were all healthy; the tricuspid orifice admitted the thumb, and the mitral orifice admitted the finger of a medium-sized hand. The weight of the empty heart was two ounces three and a half drachms. The epiglottis was quite erect; the laryngeal cords were almost indistinguishable, being closely applied to the wall of the larynx. The mucous membrane of the larynx, trachea, and larger bronchi, was slightly injected, and covered with a very distinct layer of frothy mucus. At the bifurcation of the trachea, the calibre of both bronchi was almost occluded by viscid mucus. The surface of the lungs exhibited large areas of collapse, plentifully broken by patches of inflated vesicles. The great mass of both lungs was hardly, if at all, crepitant; the exceptions being the margins of both lungs and the left base. On section, blood oozed out only in small quantity, and that only on pressure. Some sections, especially of

the right lung, when squeezed, showed frothy points at the apertures of the smaller bronchi. The lower lobe of the left lung was markedly concave where it came into contact with the heart. The lung tissue floated in water. The liver was normal; its veins were not turgid in the least. The kidneys were not enlarged; the stellate veins on the surface were well marked; the tissue was healthy. The spleen was normal in size; it showed the Malpighian corpuscles very distinctly, as large white bodies. The head was not opened. The tissues of the knee-joint were completely matted together with fibrous tissue; the cartilages were perfectly healthy. There was no smell of chloroform.

REMARKS.—The death in this case, was probably due to partial paralysis of the respiratory centre, occurring in a case where the bronchi were accidentally obstructed; for it is evident, from the *post mortem* examination, that the heart continued to act after the pulmonary circulation was interfered with, and yet there was no distinct dyspnoea. On looking back over the recorded cases of recovery from chloroform-poisoning, I regret that Nelaton's method of inverting the child was not tried. It occurred to me at the time, but I was loth to stop artificial respiration; and as, unfortunately, I had no assistance, the chance was allowed to slip. Previously to the occurrence of this case, I shared the impression, I believe with most members of the profession, that, as Mr. Lister puts it in the *British Medical Journal* for July 1871, young children enjoyed an "immunity from danger." However, on looking back over the records of those deaths, carefully kept in the pages of the *British Medical Journal*, I find that, in the eleven years from 1852 to 1856 and from 1863 to 1868 inclusive, three deaths under five years of age, out of a total of seventy deaths from chloroform, were registered in England; and, since that, I find a case of three years of age reported in the same journal. Almost the only definite note of warning on this subject comes from Mr. Jonathan Hutchinson, who, in emphatic language, declares that he would regard himself as criminally responsible if he placed any patient's life in danger from the use of chloroform between the extremes of life—from six months to old age. The youngest child, as far as I can discover, who has hitherto died from chloroform was "about two years" of age (*British Medical Journal*, June 1865, page 655); but Dr. J. D. Brown reports the case of an "infant" which, under chloroform, became "alarmingly pale and apparently dead"; the tongue was drawn forward and artificial respiration tried in vain, though the child recovered, almost at once, when inverted (*British Medical Journal*, July 1871, page 94). No doubt such cases are of more frequent occurrence than we are apt to suppose; and, even within the last few days, I have heard of a child, two years old, which completely stopped breathing on two occasions whilst under chloroform: artificial respiration was tried without much effect; but recovery was immediate on inversion.—*British Medical Journal*.

THE TREATMENT OF RHEUMATISM BY BLISTERS. BY A. B. R. MYERS, M.R.C.S., Eng.

About twenty-five years ago, I had the opportunity of studying the treatment of rheumatic fever by two physicians, in the same wards. One of them prescribed opium freely, and the other gave no internal remedies; both had the affected joints carefully enveloped in cotton-wool, as they became attacked, and then firmly bound with flannel bandages, free perspiration being encouraged also by blankets, etc. The results seemed

to me to be much the same: that the affected joints rapidly ceased to be painful, and that the patients made, as a rule, a good recovery.

Since that time, my treatment of rheumatic fever has kept very much within those lines (with, in some cases, the addition of salicin); and though I have seen many methods of treatment tried, and much extolled, I cannot say that they have appeared to me to have any special recommendations. But against one treatment I cannot resist, at the present moment, raising my humble protest, viz., the "garter blister," as again advocated by Dr. Davies in the journal of October 28th. When so eminent a physician, with all the authority of long experience of a treatment originated by himself, can still advocate it, he must be very confident of its specially beneficial action, and no doubt must have many followers; but of all treatments (except packing) it is the one which I would not have tried upon myself. I had quite hoped that, long ere this, it had died a natural death. I have seen patients suffer such great discomfort from the raw surfaces of these circular blisters above the knee-joints when other joints have become affected, as to make them beg not to have any more applied. I ask, therefore, why should patients be given this additional suffering as a local treatment, when rapid freedom from pain can almost certainly be obtained by careful bandaging, as above stated; and if it be intended as a constitutional treatment, why choose such a specially painful form of blister as the "garter."

It is some time since I have been able to watch closely this circular blister treatment; but it made a very decided impression upon me that it did not cut short the attack, and that it was very objectionable from the patient's point of view.—*Brit. Med. Jour.*

THE EARLY TREATMENT OF FLATFOOT.

By BERNARD ROTH, F. R. C. S. (Exam.)

Flat-foot is a very general term, and includes everything, from a slight relaxation of the plantar arch to extreme cases where the internal malleolus almost or quite touches the ground, as in some cases of infantile paralysis. Sir James Paget speaks of "the constant pain, and weariness of the lower limbs associated with flat-foot. The feet are elongated, flat, low without insteps; the heels are too little prominent, the plantar arches sunken, the ankles thick; the astragalus, navicular, and inner cuneiform bones are below their right level. The pains complained of are those of the muscles and tendons, which are habitually overworked in the task of keeping the body erect, when its proper bearings on its supports are disturbed. (*Medical Times and Gazette*.) A simple classification of flat-feet is to divide them into three groups.

1. Cases in which it is possible to restore the foot completely to the normal shape, by passive manipulation, without any decided force being employed.
2. Cases where the tarsal bones have become more or less fixed in their displaced positions, by fibrous ankylosis, shortened ligaments, or osseous deformity, and which require more or less severe operative interference under anæsthetics.
3. Intermediate cases, in which partial restoration of the normal plantar arch is possible by passive manipulation.

I intend, in the present paper, to deal only with groups 1 and 3. My attention is constantly being directed to the subject of flat-footedness, because the same constitutional relaxed habit of body that predisposes to lateral curvature of the spine, also tends frequently to produce flat-feet. Thus, out of seventy-

seven consecutive cases of lateral spinal curvature, under my care, since January, 1880, no fewer than forty-eight had flat-feet, some very severely—viz., upwards of 62 per cent. Many of these patients did not suffer any discomfort, while others experienced more or less constant pain and aching in their feet, even when but very slightly deformed.

Little has been written on the subject of the early treatment of flat-foot. Sir James Paget says: "Orthopædic apparatus is generally sufficient for the relief of the pain, rarely so for the cure of the deformity." (*loc. cit.*) Mr. Le Gros Clark, in one case, divided the tendons of the peronei and extensor longus digitorum muscles; and then a boot, with lateral steel support, was worn for a year. (*Medical Times and Gazette*, August 10th, 1881.) The late Mr. Maunder, in "an aggravated instance of the deformity," obtained a cure in two years by ordering laced boots, with a leather pad to raise the instep. He very rightly adds: "Every means of improving the general health should, of course, be employed." (*Medical Times and Gazette*, October 19th, 1871.)

The treatment I adopt has for its object, not only the replacement of the depressed plantar arch, in the most comfortable manner for the patient, but also the strengthening and approximation of the parts that support the normal instep.

The restoration and maintenance of the plantar arch is most important. It having been ascertained that the foot can be more or less completely replaced in a natural position, boots really shaped to the form of the feet should be worn. The boots exhibited in the Annual Museum, which have been made by Mr. Halt, of Edgware Road, London, according to my suggestion, are, as far as I know, the only ones which really fit the feet, and in which it is possible to walk with as much ease as if one were bare-footed. The human foot touches the ground, not only by the heel and the under surface of the metatarso-phalangeal joints and the toes, but also by the whole outer border of the sole, for a width of one-half to one inch, as may be seen by the wet impression left by the foot on the ground after our morning bath. It is hence essential that this portion of the sole should also touch the ground through the boot. These boots are, therefore, made without heels, and have the "waists" stiff. In walking, the chief motion of the foot takes place at the metatarso-phalangeal articulations, and not in the arch of the foot. A wedge-shaped oval pad, with the straight side forming the base, and corresponding in shape to the normal hollow of the plantar-arch, is fixed inside the boot. The best materials for the pad are superimposed layers of felt (which can be added, if necessary), or horse-hair, firmly packed in a suitably shaped leather case. Steel springs and solid india-rubber pads cause too much pain, in my experience, if they be fairly brought against the depressed plantar arch. In no case is the pad to extend right across the "waist" of the boot, as this at once interferes with the normal transverse plantar arch. The boots being without heels, the pad has the same effect on them as on the ground. I sometimes try loose pads at the first examination, when the patient generally at once appreciates the comfort of the support given. The boot must be made to the shape of the patient's foot—that is, with the inside margin straight, and parallel with that of its fellow. Laced boots only should be employed, because the pad, to be efficient, must be well braced up against the plantar arch. In severe cases, more or less increased stiffening of the inner side of the boot is necessary.

To strengthen and approximate the parts that sup-

port the plantar arch, I employ certain exercises, which act upon the muscles whose tendons are concerned in maintaining the normal shape of the sole. Mr. Le Gros Clark says: "In reviewing the action of the various muscles around the foot, it is obvious that their attachment is designed to preserve the plantar arch; and that such healthy condition must depend, in great measure, on the evenly balanced action of these muscles upon their several attachments. Thus, the peronei and tibial muscles antagonize each other, and the expanded insertions of two of them into the tarsal bones is very instrumental in preserving the transverse as well as the antero-posterior arch." (*loc. cit.*)

A useful exercise for flat-foot is what I have described as "ankle-circumduction down, in, up, and out, while the toes are directed inwards the whole time." (See *Journal*, May 13th, 1882.) The patient should be seated with the leg supported on another chair, while the foot and ankle project free beyond. This circumduction, which should be slowly repeated about twenty or thirty times, is chiefly performed by the tibialis posticus, the flexor longus pollicis, and flexor longus digitorum muscles behind the internal malleolus, and the tibialis anticus and extensor longus pollicis in front of it.

Another exercise is a voluntary slow adduction of the foot, while the surgeon or a trained assistant is resisting, more or less strongly, with one hand against the ball of the great toe; while the other hand is fixing the leg above the ankle-joint. This is followed by abduction of the foot by the surgeon or his assistant, while the patient exerts a gradually yielding resistance. This double exercise is repeated from ten to twenty times. The muscles just mentioned are also concerned in this movement.

A third exercise is for the patient to walk barefooted on the outside edge of his feet, with the soles looking inwards, for about forty or fifty steps forwards and backwards, several times daily. Lastly walking barefooted on the toes, with the heel raised as high as possible, is a very efficient exercise for flat-foot. Anything causing cold feet must be removed, as tight garters worn above or below the knee. The circulation of the lower extremities, if languid, must be promoted by extra clothing, if necessary; and by warm bath, followed by cold sponging and good friction in drying. Massage or firm kneading and rubbing of the muscles of the leg, front and back, is often useful where these are flabby and weak; olive or other oil should be employed to protect the skin, while sufficient pressure is being exerted to penetrate down to the muscular substance. I never employ so-called professional rubbers, if it can be avoided—much preferring any moderately strong servant or relative of the patient, who can be easily taught to do the massage. At least half an hour daily for each leg is necessary to produce a practical result. To sum up: by wearing properly shaped laced boots, without heels and with felt pads; by persevering daily with these exercises; and by improving the general health of the patient—the pain of flat-foot, if present, is generally relieved within a few days, and an improvement in the deformity is nearly always obtained within a month. —*Brit. Med. Jour.*

A THIRD SUCCESSFUL CASE OF CHOLECYSTOTOMY.—BY LAWSON TAIT, F.R.C.S., ETC.

On December 20th, 1881, Dr. Lycett, of Wolverhampton brought to me a lady, aged 28, suffering from severe paroxysmal pain in the right side, associated with a tumor which appeared and disappeared. It was found to be movable, situated on the right hypochondrium,

and was, in my opinion, distinctly cystic. In spite of the fact that it had been pronounced to be a "floating kidney" by several distinguished authorities, I gave the opinion that it was a gall-bladder, distended by an impacted gall-stone, and I advised the operation of cholecystotomy. Dr. Lycett has favored me with the following history of the case. At the time of puberty, she began to suffer from pain in the hepatic region, varying in degree and duration, but generally sudden in its onset, apt to be induced by exercise of any kind; and in this way it prevented her from engaging in dancing, and other pastimes. She first came under Dr. Lycett's care in March 1878, at which time he came to the conclusion that she was suffering from stone in the gall-bladder. One remarkable feature of the case has always been a perfect freedom from jaundice. She had her second child in 1880; and, after that, Dr. Lycett saw reason to alter his view of her case by the discovery of a freely movable tumor in the upper and right part of the abdomen. It seemed solid, and was shaped like a kidney. It was tender on pressure, and, when the hips were raised above the shoulders, it could be made to disappear. The patient stated that sometimes it could be felt below the umbilicus; but Dr. Lycett was never able to satisfy himself of this. He came to the conclusion that it was the right kidney floating, and Dr. George Johnson expressed a belief that, in addition to this, there must be a calculus in its pelvis to account for the paroxysmal pain. No abnormal condition of the urine was ever found.

After the birth of her third child she became much worse. Her sufferings were often intense, so that she suffered from serious symptoms of collapse, and she became very thin and anæmic. "Under such circumstances," writes Lycett, "I advised her to seek your advice, with the object of submitting to abdominal section, in the hope of that possibly affording relief. To this measure, however, she took some six months to make up her mind, but finally consented when she had become a chronic invalid and almost bedridden."

I saw her with Dr. Lycett last December, and was fortunate in discovering the tumor at once. It seemed to me to be cystic, to be attached above, and therefore I pronounced it to be the gall-bladder distended, on account of the occlusion of the duct by a calculus. I put the floating kidney theory altogether on one side, because I have never seen such a thing, either in life or in a museum, nor have I met any one who has. In fact, I have no belief in its existence as a pathological incident.

I proposed to open the abdomen and remove the calculus, but, as Dr. Lycett says, she took six months to make up her mind to the operation. She came back to me early in June, very much reduced in health, and on the 15th I opened the abdomen by a vertical incision over the tumor. I came at once upon it, and found it to be the gall-bladder distended. I emptied it by the aspirator, removing about a pint of thick glairy mucus. I then laid it open, and removed about eighty gall-stones of small size, the largest weighing fifteen grains. They were removed chiefly by the use of a *curette*.

I then stitched the aperture in the gall-bladder to the wound in the abdominal wall, carefully closing the peritoneum, and leaving a drainage-tube in the gall-bladder. The patient's recovery was uninterrupted; the highest temperature recorded was 100.4°, and the highest pulse record 84. The stitches were removed on the eighth day, the drainage-tube on the twentieth day, and in ten days more only a small sinus was left, from which some mucus still continues to be dis-

charged. The patient has gained flesh since the operation, and has been entirely free from pain.

Neither at the operation nor in the after treatment were any of the "antiseptic" methods of Professor Lister employed, as I have entirely discarded all these for about two years, with great advantage to my patients.

The fistula in the gall-bladder continued to discharge clear mucus till on August 5th, when "something seemed to give way," as she said, and bile flowed freely. This is very satisfactory, as it shows that the occlusion of the duct has been overcome, and the complete functions of the organ may be re-established by the closure of the fistula. This I shall take means of securing shortly.

A FOURTH CASE OF CHOLECYSTOTOMY.

V. B., aged 37, was placed under my care some weeks ago by my colleague Dr. Hickinbotham. A tumor in the position of the gall-bladder could be occasionally discovered, and she suffered intermittently from severe attacks of colic. It was clearly a case of distended gall-bladder. On October 13th, I performed an operation precisely similar to that narrated above, and removed sixteen gall-stones, varying from seven grains to thirty-five in weight. I removed the drainage-tube on the third day. The stitches are now (October 24th) all removed, and the wound is almost healed.—*Brit. Med. Jour.*

DR. DOUGLAS GRAHAM ON MASSAGE.

Dr. Douglas Graham, of Boston, has a judicious article on *Massage: Its Mode of Application and Effects*, in the October number of the *Popular Science Monthly*. Massage is a form of therapeutics about which a great deal of vague nonsense is talked and written; it is therefore timely that a valuable remedial agent should be protected from a reaction likely to arise against the exaggerations of ignorant enthusiasts and the pretensions of quackish manipulators. We welcome from an educated physician a temperate and expert statement of the proper methods of practicing massage and of the results which may reasonably be expected from its use.

Dr. Graham thinks that massage is less cultivated in France than formerly, but that considerably more attention is being given to it in Germany. As to the way in which massage is regarded, and as to its condition in the United States, he says:

"Except among very few,—epicures in this matter, if one may so speak,—there is as yet but little evidence of a desire to place massage, and those who do it, on their merits alone, irrespective of the policy of employing persons who are only rubbing machines, or of tolerating obnoxious individuals so long as the poor patients' minds are satisfied. This is too often the case, and then massage is said to have failed and valuable time is lost, when, if it had been properly applied, it might have been successful; or, on the other hand, perhaps it should have been omitted and other remedies employed. The writer of this, in a recent paper on the History of Massage, has said: 'In almost every city in the United States, and indeed of the whole civilized world there may be found individuals claiming mysterious and magical powers of curing disease, setting bones, and relieving pain by the immediate application of their hands. Some of these boldly assert that their art is a gift from heaven, due to some unknown power which they call magnetism, while others designate it by some peculiar word ending with *pathy* or *cure*, and it is astonishing how much credit they get

for their supposed genius by many of the most learned people.' Let a fisherman forsake his boat, or a blacksmith his anvil, or a carpenter his bench, or a shoemaker his shop, and proclaim that he has made the wonderful discovery that he is full of magnetism, and can cure all diseases, and, be he ever so ignorant and uncouth, he is likely to have, in a remarkably short space of time, a large *clientele* of educated gentlemen and refined ladies. It is not meant to imply that the previous occupation of such people is at all to their discredit, but were they capable of giving a rational explanation of their doings the halo of mystery would be removed from around them, and their prestige and patronage would suffer a sudden decline.

"In Boston and Philadelphia, and perhaps in other cities as well, efforts have been made by physicians who are thoroughly familiar with massage to instruct intelligent nurses and others how to apply it, and at the training schools for nurses the pupils receive some general instruction in the matter. In this way something has been accomplished to bring massage within the rules and regulations of common sense and rational therapeutics. But still there is great room for improvement even in this direction, for it is but too often the case that after one or two persons are especially trained to do massage they are requested to give instruction to some of the pupils at the school for nurses and to others, a few of whom, after having received some general desultory lessons, are in turn delegated or relegated to teach others, and so on until, by the time massage reaches the needy patient, there is often little left of it but the name. Hence it is not to be wondered at that many a shrewd, superannuated auntie, and others who are out of a job, having learned the meaning of the word massage, immediately have it printed on their cards, and keep on with their 'rubbin'' just as they always have done."

Dr. Graham states that "according to the requirements of individual cases massage may be of primary importance or of secondary importance, of no use at all, or even injurious. Concerning the extent of its usefulness it may with safety be said that at tolerably definite stages in one or more classes of affections in every special and general department of medicine, evidence can be found that it has proved either directly or indirectly beneficial, or led to recovery, sometimes when other means had been but slowly operative or apparently had failed altogether. In view of these facts it need hardly be said that those who would properly understand and apply massage should be familiar with its past and present literature, they should also be familiar not only with the natural history of the maladies in which massage may be applied when left to themselves, but also with the course of these affections when treated in the usual approved methods, so that improvements or relapses may be referred to their proper causes. Moreover, they should know something about the methods of others who have any claim to respectability in their manner of applying massage, so as to compare them with their own. And yet all these qualifications may fail if the operator has not in addition abundance of time, patience, strength, and skill, acquired by long and intelligent experience. Measured by these requirements I fear that good *masseurs* (manipulators) are scarce."

After describing the different methods of practicing massage, and explaining, as far as possible, the results which may fairly be expected, and the processes by which these are produced, Dr. Graham concludes that, "discuss any therapeutical agent as we may, there is something still peculiar to each that evades expression

by tongue or pen. Of what use is it to describe odors, tastes, sensations, sights, and sounds? They can only be comprehended by smelling, tasting, feeling, seeing, and hearing. Just so with the peculiar calm, soothing, restful, light feeling that so often results from massage, which cannot be understood until experienced. It doubtless arises to a great extent from the pressure of natural worn out *debris* being speedily removed from off terminal nerve filaments. Furthermore, massage excites and awakens the *muscular sense* in an agreeable and beneficial manner such as nothing else does, and we know that the state of our muscles indicates and often determines our feeling of health and vigor or of weariness and feebleness. To many minds a more satisfactory way of explaining the phenomena produced by massage would be by saying that they all occur in consequence of 'magnetism,' by which they have an indefinite understanding that this is some sort of imperceptible ethereal fluid passing from one person to another. Such an explanation is low, gross, and vulgar, and it is erroneously used as a synonym for personal influence by people who do not know the proper scientific meaning of magnetism. Those who claim to have a vast stock of 'magnetism' are like those who talk much of their bravery, sensible people find them devoid of either."

MASSAGE AS PRACTICED BY BARBARIANS.—The same article of Dr. Graham contains a quotation from Mr. Charles Nordhoff's book on the Sandwich Islands, describing a practice which he found prevalent among the natives under the name "lomi-lomi." It is curious as being identical with massage as now practiced in civilized countries, and Mr. Nordhoff does not seem to have observed the parallel. Writing in 1873, he says:

"Wherever you stop for lunch or for the night, if there are native people near, you will be greatly refreshed by the application of what they call 'lomi-lomi.' Almost everywhere you will find some one skillful in this peculiar, and, to tired muscles, delightful and refreshing treatment.

"To be lomi-lomied, you lie down on a mat, loosening your clothing or undressing for the night if you prefer. The less clothing you have on the more perfectly the operation can be performed. To you thereupon comes a stout native with soft fleshy hands but a strong grip, and beginning with your head and working down slowly over the whole body, seizes and squeezes with a quite peculiar art every tired muscle, working and kneading with indefatigable patience until, in half an hour, whereas you were sore and weary and worn out, you find yourself fresh, all soreness and weariness absolutely and entirely removed, and mind and body soothed to a healthful and refreshing sleep.

"The lomi-lomi is used not only by the natives but among almost all the foreign residents; and not merely to procure relief from weariness consequent on over-exertion, but to cure headache, to relieve the aching of neuralgic or rheumatic pains, and by the luxurious as one of the pleasures of life. I have known it to relieve violent headache in a very short time. The old chiefs used to keep skillful lomi-lomi men and women in their retinues; and the late king, who was for some years too stout to take exercise, and was yet a gross feeder, had himself lomi-lomied after every meal as a means of helping his digestion.

"It is a device for relieving pain or weariness which seems to have no injurious reaction, and no drawback but one—it is said to fatten the subjects of it."—*Boston Medical and Surgical Journal*.

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A CLINICAL LECTURE

DELIVERED AT

THE COLLEGE OF PHYSICIANS AND SURGEONS

BY

H. B. SANDS, M. D.

A CONGENITAL SACRAL TUMOR.

This patient I now show you is a child twenty months old, healthy in appearance, but presenting to our notice a congenital tumor, the nature of which is still doubtful, but it is very marked on account of its size. The mother says the child was born with a swelling about the size of a walnut in the sacral region. An attempt was early made to prevent its further growth by the application of pressure, but this failed to accomplish its purpose. About six weeks ago it established for itself an opening which exuded a fluid resembling serum. The mother knows of no cause for the appearance of this growth. This is a very remarkable tumor. You notice that it is situated in the median line of the body and on the posterior portion of the pelvic and sacral regions, and it is a tumor bearing a striking resemblance to a mammary gland, being rounded in outline, or rather spherical, and about four inches in diameter at its base, and there is a prominence closely resembling a nipple projecting from its upper part, which is composed simply of a mass of integument. Below the tumor there is an ulcer which somewhat

resembles a heart in appearance, and is three-fourths of an inch in its transverse, or long diameter, and at its upper part is an opening which evidently has a direct connection with the tumor above. As I have said the nature of this swelling is still doubtful. Two different varieties of tumors are wont to make their appearance in this region in early life. And between these we must make our diagnosis. One is known as spina bifida, where the spine is bifid or divided into two portions, because in early fetal life the spinal canal in this region has remained open behind, and the arches of the vertebræ are separated and have not grown in such a way as to completely close in the canal, and thus an opening is left through which protrude the membranes of the spinal cord, including the dura mater, the arachnoid, the pia mater, and the peculiar tissue of the spinal cord itself, or of the cauda equina, according to the situation. The other variety of tumor appearing in the sacral region is sometimes called a sacral tumor. This most often consists of some variety of embryonic tissue or of an immature glandular matter, or it may be a tumor containing nothing but fluid, and cystic in its nature. I am inclined to think that this is not a case of spina bifida. For where spina bifida exists the tumor is usually compressible, and may hence be diminished in size. This is the case because of the direct communication which exists between it and the spinal canal which allows the fluid to be forced out of itself and back into the spinal canal and the pressure made on the tumor is thus conveyed, through the spinal canal to the brain, and in this way symptoms of cerebral compression may be produced. But I have already made such pressure on the swelling while she was in the other room before she was brought in here, and this was not accompanied by any cerebral symptoms, nor was there any noticeable reduction in the size of the tumor. So that test is negative so far as the diagnosis of spina bifida is concerned. Again by running your finger down the spine you can frequently feel a depression between the arches in cases of spina bifida, but I find none here. This nipple-like protuberance upon the top of this tumor is also against its being due to spina bifida because such growths are much more common in tumors of other varieties.

Now, as I compress this swelling with my hands the child is evidently annoyed and it cries, but the tumor is not diminished in size and no insensibility is produced to give any evidence of pressure on the brain. I now feel along the spinous processes with my finger and I find that they are entirely natural and they give no evidence of any aperture of communication with the spinal canal. Further than this, in making the examination, I cannot proceed in your presence. The diagnosis might be made more certain by an examination through the rectum and by employing the light test. This consists in removing the patient to a dark

room, and, after placing a lighted candle opposite one side of the tumor you look at the other side through a tube of paper or other material, and if the light is transmitted through the tumor it is probably a case of spina bifida. Information as to its nature can also be obtained by means of the exploring needle, or by the aspirator, or by introducing the needle of a hypodermic syringe and drawing off a portion of its contents, if fluid, for examination. This tumor fluctuates upon palpation and so it gives you the idea that it must contain fluid, and it is probable that it does, but you can only be sure of this after tapping it.

When we come to speak of the treatment of this case I cannot express any decided opinion without first gaining more knowledge as to the character of the growth; but I should be very cautious in what I did so long as there was any doubt as to its possible communication with the spinal canal. If it was a case of spina bifida, though treatment would not be entirely hopeless, yet operations for its removal are, as a rule, attended by disastrous results. But if it should prove to be a congenital tumor composed of connective tissue I would advise its removal, if I found that it had no communication with the spinal canal. In such tumors recovery is the rule if they are extirpated. But this is not the case with spina bifida. If this should be found to be a spina bifida I should avoid any operation with a view to its excision, and if I used any form of treatment, it would probably be by the injection of iodine or some such fluid. I will have this child more carefully examined, and I will bring her before you again at a future clinic and report the result, and if any operation is to be done for the removal of this tumor I will acquaint you of it, so that you may be present at its performance.

A week later the lecturer remarked:

I will report to you that after the clinic last week, Dr. Weir and I made another, and more careful examination, at my office, of the little child you saw a week ago, where there was some doubt as to the diagnosis between a spina bifida and a congenital sacral tumor. On making pressure over the swelling here, a week ago, I could not notice any decrease in its size, and so I made the diagnosis of a congenital sacral tumor. But I was mistaken, for at my office we found that it did lessen in size under steady pressure, and we also discovered a fissure in the spinal column, and when we tried the light test we found that the tumor transmitted the light very plainly. So it was evident that it was really a case of spina bifida. I did not propose any treatment, because the results of operation are highly unsatisfactory, and the majority of cases die after its performance.

NECROSIS OF THE GREAT TOE.

This is a child three years old, and two years ago she stubbed her toe, and as a result of the injury it then received we have the state of things which you see here. You can see at once that it is a case of inflammation, and there is a good deal of swelling and redness of the great toe, accompanied with tenderness if touched, and it presents an opening also, which allows the escape of pus, and besides, upon introducing a probe, I can feel a solid substance which gives the sensation of necrosed bone. This is therefore a case of osteitis following an injury of the great toe, and it is accompanied by an exfoliation of the bone. There is an effort made by nature to discharge this dead bone, which is acting as a foreign substance, and she needs assistance in this process. I cannot yet say positively just where this disease is situated, whether

it is a necrosis of the bone itself merely, or whether it is accompanied by a disease of the joint. It is located at about the situation of the metatarso-phalangeal articulation of the great toe of the right foot. If upon closer examination this proves to be a case of very extensive disorganization of the joint, it will call for a greater operation than I would care to perform at this clinic. But I will now probe the toe and see if there is any more dead bone than we have already found, and I will also remove what I can now see with the polypus forceps.

Operation.—While the child was held by an assistant the surgeon grasped the piece of necrosed bone which presented nearest the orifice upon the inner aspect of the great toe, and removed only a small piece. A grooved director was then introduced, and as it was pushed upward it came in contact with another portion of dead bone. So the opening was enlarged by cutting upward with a curved bistoury until the remaining pieces could be reached by the forceps. After taking out a number of small pieces it was found that there was still more necrosed bone beyond, and as the operation of removing was attended by great pain to the child it was determined to etherize it and remove whatever more was found necessary after the clinic.

CURVATURE OF THE SPINE.

I show you this little girl as an example of a deformity which is by no means unusual, and known as curvature of the spine. She is now thirteen years of age and in feeble health, and she used to be affected with chorea.

This curvature of the spine began to make its appearance three years ago, and it has increased steadily until now, when it is so marked that you can all easily see it from any part of the room. You know, perhaps, that there are two essentially different varieties of curvature of the spine. One is the result of a morbid inflammatory process in the bodies of the vertebræ, which results in the destruction of these, and hence, there is a lack of support to the parts above, and the trunk becomes inclined forwards while the spinous processes become more prominent in the back. This variety is called by different names, such as angular curvature, or antero-posterior curvature of the spine, or Potts' disease. But this case is not one of that sort, for there is no prominence of the spines posteriorly. It is rather a lateral curvature which we have here, and this is not due to any bone disease. In this variety of curvature the spinal column gradually becomes deformed and it shows several points of curvature. The primary one is in the dorsal region, and then there are secondary or compensative curves in the cervical or upper dorsal, and in the lumbar region. These curvatures are chiefly lateral, and there are no special prominences of the spines. In the dorsal region the curvature is as a rule toward the right, and it is merely an exaggeration of the normal curve; but in this child the curve is to the left in the dorsal region, and so she is an exception to the rule. The deviations in the other regions here are also quite well marked. You also see that the left shoulder blade is very prominent, and the left shoulder is higher than the right, and there is some rotation of the bodies of the vertebræ. This is a very common deformity. Some authorities think that this curvature laterally is due to a relaxation of the ligaments which bind the sides of the bodies and spines of the vertebræ together, and some think that it is due to a want of tone in the muscles attached to the spines and sides of the vertebræ. What-

ever the cause, the fact remains that in the early stages the curvature can be effaced by appropriate apparatus. But when the disease has gone on for three or four years, and the child has approached to maturity this rectification of the deformity cannot be expected to take place. As this child is now being lifted up by hands being under her shoulders in the axillæ, you see that the curvature straightens out a little and although it is not entirely effaced, yet it is much less marked.

Without describing all the different applications for the treatment of this deformity, I shall simply state that it should be treated by such an apparatus as will prevent any further curvature or efface that which already exists. This is a somewhat favorable case for treatment because she is so young that her bones are not yet consolidated. You can hardly say what form of apparatus is the best for all cases. There are two principal forms. One consists of a steel contrivance for the back with a girdle for the pelvic region, and an upright piece with screws for applying the proper amount of pressure and for adjustment to different regions, and crutches for the axillæ. The other form is a plaster jacket to be put on only after the curvature has been effaced as much as possible. I think the steel apparatus is best to be used in those cases where the proper attention can be paid to adjusting it, but in cases where this can not be given the plaster jacket is, I think, the best. Another method of treatment which was formerly much used, and which is still, I believe, preferred by some, is to put the patient in bed and keep them lying either in the prone or the supine position for a long time. But the chief objection to this plan is that it is very tedious for a child to stay in bed for a year or more if necessary. These are very distressing deformities and they are most often seen in girls, and when they grow up to be women they are often the cause of great mortification. But the disease does not necessarily shorten life though it most often occurs in feeble persons. Yet most of you can no doubt recall a number of adults who have been the subjects of this disease in their youth but who now enjoy comparatively good health, while the deformity remains.

A SWELLING AT THE ELBOW JOINT.

This, again, is a very interesting case for diagnosis. It is a case of a swelling of the arm in the neighborhood of the left elbow joint. This man is twenty-one years of age, and he says that a year ago he had a syphilitic sore which was followed by secondary symptoms of the disease. But he also says that eight months ago he wrenched his arm in making an unusual muscular effort, and so he was afterwards unable to use his arm. Here, then, are two sets of causes, either of which might explain this swelling. An examination of the arm shows a swelling in the neighborhood of the elbow joint, and when I put my finger on one condyle of the humerus, and my thumb on the other, I see that the greater part of the swelling is below this line, and less than one-half is above the articulation. The swelling is painful even upon a slight pressure, and if firm compression is made upon it he finds it most disagreeable and winces under it. If now I grasp the upper arm with one hand and the forearm with the other, and then crowd the bones of the elbow joint together, this produces still more pain, and if I try to flex the forearm upon the arm he refuses to allow it. As regards the tissues which are implicated in the disease, it is now plain that the trouble involves the joints, and this is the cause of the pain on any attempt at motion. But upon manipulation of the bones I do

not distinguish any sensation which would indicate that the joint was disorganized or the cartilages diseased. Upon feeling behind the joint I get a sense of fluctuation as if there were fluid there, and on the inner aspect of the joint I find the lymphatic glands are enlarged. There are two possible diagnoses to be considered here. It lies between a syphilitic disease of the joint, characterized by a gummy deposit which has undergone softening, and an abscess which is the result of an injury and which involves the elbow joint. It is not worth while to explore the swelling with a needle, I think, for I am certain that it contains fluid.

It is still doubtful whether this is a case for surgical or for medical treatment. But it is safest to try the effects of medicine first, and these should be directed against the syphilis which may be the cause of the swelling. This alternative you will often have to adopt before you can finally decide as to the best treatment, and this is especially so when you are in doubt as to whether you are dealing with a cancerous or a syphilitic disease of the tongue. Here you should first give antisyphilitic remedies and then watch the result. So in this case we will give the man the benefit of antisyphilitic treatment, beginning with five or seven grains of the iodide of potassium, and increasing it gradually until he takes large doses of fifteen, twenty or thirty grains three times a day, before we attempt any surgical operation. But I must say I am somewhat doubtful if this be a case of syphilitic disease, and I fear that we will at least have to evacuate the abscess with the knife and treat the disease locally. If the joint is implicated it may be in one or two ways: Either there is a simple synovitis without the formation of any abscess, or the tissues have undergone suppuration and there has been a perforation of the pus into the joint. In the first class of cases the symptoms may all subside and the joint be restored to its former integrity, while in the other class though it is still possible, by taking precautions to prevent the access of air to the joint and by using antiseptics, to have the limb restored to its normal integrity, yet if the joint has become disorganized you will then have restricted motion as a result, and the integrity of the part is out of the question. Then you must determine upon one of two courses. You must either try to procure a permanent ankylosis between the adjoining bones, or else decide upon excision of the diseased parts, which will still leave the power of movement after recovery has taken place. I think that most surgeons would favor the treatment by excision. But there is no reason for haste in deciding upon an operation in such a case, and the success of an excision will be just as great later on as now, and in fact the operation is less likely to succeed if performed while the inflammation is at its height than after it has subsided to a considerable degree. So it is much better, in this case, to begin with the constitutional treatment for syphilis. If no effect seems to follow the administration of the potassium iodide alone a mercurial such as $\frac{1}{2}$ to $\frac{1}{6}$ of a grain of the iodide of mercury may be added. Meanwhile it will be advisable to defend the arm from further injury by a splint or by applying some sort of apparatus to prevent motion of the joint and the spread of the inflammation. He now complains of much pain, and especially at night, so it will be well to provide him with a splint to keep the arm quiet. At a future time I will announce to you the results of this plan of treatment.

CANCER OF THE TONGUE.

This patient is a man 56 years of age, and he comes to us for a soreness of the tongue. He says this sore-

ness began last June, and he did not notice any white patches on his tongue before the soreness began. He uses tobacco and smokes a pipe, and he had a bad tooth which made friction against his tongue, and these facts are interesting in relation to the cause of this soreness. On looking into his mouth I see that one side of his tongue is affected by an ulcer, beginning about one inch from the tip and extending backward about two inches to a point posterior to the right pillar of the fauces. It does not invade the dorsum of the tongue, but it involves the whole of one side and a part of the under surface, and it extends to the mucous membrane of the floor of the mouth, and to the periosteum on the inner surface of the inferior maxillary bone, and this is to a great extent destroyed. This ulcer is very uneven, and it is situated on a very hard base, and there is an induration of the tongue far beyond the limits of the ulcer, in a direction towards the median line. The edges of the ulcer are somewhat everted. He does not complain of any severe pain in his tongue. He says he never had syphilis.

You see that the whole drift of this examination is to enable us to decide whether this is a syphilitic gummy tumor of the tongue which has gone on to ulceration, or a carcinoma, or more properly an epithelioma. There are differences which will usually enable you to make the diagnosis between these. The history is always an important aid. This man says that he has never had syphilis, but you cannot often take a patient's word on this point, so you should inquire if he has ever had a severe sore throat, or an eruption on the skin, or falling out of the hair or any of the secondary symptoms of the disease. This man says he has had none of these, so we can exclude syphilis in this case.

When we consider the state of his tongue the symptoms are those of epithelioma rather than of a syphilitic gummy tumor. Ulcers on the sides of the tongue are more commonly epitheliomata, and while this is a single swelling there are apt to be a number if they are gummy tumors. This ulcer is long and narrow, and epitheliomata sometimes soften in the centre and their contents discharge, and a long ulcer with a sinuous track remains. Gummy tumors, after they discharge, diminish in size, but this has been increasing, and it has spread to the floor of the mouth and to the periosteum or substance of the bone of the lower jaw, and this looks more like epithelioma. I have never seen such a spreading of the ulcer in syphilis. It is plain then that this is a case of epithelioma of the tongue. It is difficult to assign a cause for it, but it is probably due to the irritation from tobacco smoke or juice, or to the friction of a carious tooth or to both. There is no reason to believe that the tobacco or the tooth had any specific action, but it is well known that any irritant action working continually will bring out the disease in a person who already has a predisposition to it, so any mechanical irritation may cause an epithelioma of the tongue where there is a predisposition to it, but not otherwise. There is not much doubt, therefore, that the disease here is an epithelioma of the tongue. It is exceptional to find a disease of this part so far advanced without any enlargement of the glands at the angle of the jaw, yet there is none here. This is also a rare case because he does not suffer any considerable amount of pain in the tongue, but he does have some pain in the ears and head, and it is quite common to have such pains in the neighboring parts. As a rule, too, there is a great amount of salivation and a dribbling of the saliva, and this case is again exceptional in this respect, for there is no marked salivation here.

Cancer of the tongue is also interesting on this account, for it is frequently overlooked in the beginning by medical men who mistake it for a simple ulcer or a gummy tumor and treat it as such, and so surgeons usually only see it in the advanced stages. If cases of cancer of the tongue were treated earlier the operation would not be so dangerous as it is now apt to be, when the ulcer is left to grow until a large part of the tongue is involved. In such cases extirpation, which is the usual operation, is a doubtful expedient. This Summer however, while I was in Halifax, I saw a man from whom I extirpated two thirds of the tongue some six years ago, and he is now a well man. This is the longest exemption from a recurrence of the disease which has come under my observation, for as a rule the recurrence is early.

The question now is, what to do with this case, and whether it is best to perform the operation for excision, which is the only remedy. There are reasons for and against this expedient. Against it are the facts that, he is suffering very little pain, and the disease is quite extensive, involving the base of the tongue and the jaw bone, so that a thorough extirpation of the morbid tissues would be difficult if not impossible.

In favor of the operation are the facts that this is the only remedy, while the disease if left to itself is usually fatal within twenty months, and this case has gone on for four months already. I have a patient at Roosevelt Hospital now, on whom I expect to operate for the removal of the tongue to-morrow, but in this case the ulcer is of very limited extent, and so I do not hesitate there. But this case is a little more doubtful as to the expediency of operating. So after stating the dangers either way I will follow the patient's desires in this case.

There are various possible operations for the removal of the tongue, and most of them are made through the mouth, but others through the floor of the mouth, or by dividing the lower jaw. Another method, which is the one that I would adopt if I should operate here, I think, consists in making an opening along the anterior border of the sterno mastoid muscles and cutting down to the pharynx, and after opening this, drawing down the tongue and removing it through this opening in the neck. If he declines to undergo this operation palliative treatment would be proper. Much can be done for the relief of suffering. Mouth washes can be used to prevent the accumulation of offensive discharges, and for this purpose the mouth should be frequently rinsed out with a solution of the permanganate of potash, Condy's fluid, or chlorate of potash. Opium should be given to alleviate the pain, but if this is not sufficient, there is yet left one expedient which is of the highest value for the pain, and that is the division of the gustatory nerve which supplies the tongue with sensation, and which may be severed by a single incision. This is a very excellent resource in these cases, and it also does good by markedly lessening the amount of salivation. I will talk with this man outside in reference to operating.

FRAC TURE OF THE SPINE

Dr. Weir has brought in here for exhibition to you to day, a very interesting case of a man who has recovered from an injury which is usually considered fatal. Last June he fell a distance of seventy feet and sustained an injury of the back in the lower dorsal region, and you can now see two prominences over the dorsal vertebrae, due to the injury of these points. After the accident there was paralysis, and loss of power and of sensibility in the lower limbs, and he was confined to

his bed for five or six weeks. Yet now he is so far recovered that he can walk about, and he walked here to-day. The principal trouble now is a slight paresis of the bladder which remains. His urine sometimes dribbles away, and he often has a sudden desire to pass his water, and he must attend to this at once. This is an example of partial, but not absolute incontinence, for the bladder does contain urine, but in complete incontinence, which is very rare, it contains no urine at all. Retention of urine is apt to be mistaken for incontinence. With a stricture of the urethra you may get a distention of the bladder from retention of urine, and then when it is not able to hold any more the sphincter yields, and the urine from the overflow comes away in dribblings. This man usually empties his bladder before it is much distended, but sometimes it holds nearly a pint at once, and then the pressure overcomes the sphincter and the water comes away. Here the paralysis is in the walls of the bladder, and not in the sphincter. It is probable that the evacuation of the bladder here is accomplished principally by the pressure upon it of the rectus and other abdominal muscles, rather than by the action of the muscles of the bladder. So he uses a catheter to empty his bladder, and he wears a urinal or a leather bag to catch any dribblings.

This case is remarkable because of the cure which has been effected, for fractures of the spine, especially in the lumbar region, are almost always fatal, for they lead to paralysis, and bed sores, and finally death, as a rule. Yet at the end of eighteen months from sustaining such a fracture, this man is so far recovered that he was able to walk here to the clinic.

As to treatment for the fracture, I don't know as much can be done. It is quite improbable that much more improvement will take place, so it is not worth while to administer medicines. It may be, however, that the electrical current will help him to regain the muscular power of his bladder, and I am inclined to suggest its trial. He should see that his bladder is emptied at least twice a day in order to prevent the urine from undergoing decomposition. The chief danger here is, that he will get up a bladder disease, but if he can escape that, he may live yet a long time. If cystitis does occur, you should wash out the bladder with a solution of borax and a catheter. This curvature of the spine is different from that one I showed you lately. Here the curve is in an antero-posterior direction, and it is a result of an accident in an adult. So it would be injurious to him to try to rectify the deformity, for you might thus set up an inflammation of the spinal cord. So it is best to let him go as he is.

ANEURISM OF THE COMMON CAROTID.

Dr. Weir has also brought in this woman, who is one of exceeding interest because of a tumor of the neck which she presents. You will not see many tumors of this kind in this location. Last week I showed you a case of bronchocele, but here is a much smaller swelling, but one of much greater gravity than that you saw a week ago. The patient is sixty years of age, and she says she first noticed a tumor in this place three or four years ago. Its situation is just to the right of the median line of the neck, and the swelling looks about the size and shape of a half of a hen's egg divided in its long axis. I notice that this tumor fluctuates, and this is the most conspicuous feature of this disease. The fact that the tumor pulsates and that it lies in the situation of the great vessels of the neck, suggests the possibility that it may be an aneurism. Not that this is necessarily the case in a pulsating tumor, for a soft tumor merely overlying the sub-

clavian or carotid artery might be lifted on the vessel at every pulse beat, so you must carefully discriminate between such tumors and an aneurism. You should notice then whether the tumor fluctuates in all its parts, and whether you can push it to one side and away from the artery. So here with my fingers upon it I notice that this tumor pulsates at the sides, and in all parts, as well as in front, but it would not have a lateral pulsation if it was not an aneurism. If it is an aneurism, you can cause a decrease in its size by compression over it, but you can not do this in the case of other tumors. In performing this manoeuvre you must be cautious, for fear of displacing a clot, which would be attended by disagreeable results. I am satisfied that this does diminish in size under pressure. I just now applied my ear to see if I could get an aneurismal murmur over the tumor, and I thought I obtained it, but I am not certain because I have not a stethoscope here. Dr. Weir has, however, already established the diagnosis, so this point is immaterial to us just now.

In this location, on the right side of the neck, the tumor must lie upon one of three vessels, the innominate, the subclavian, or the carotid artery. I infer that it is the carotid here, for if it was the subclavian the tumor should be located farther to the right side, and if it was the innominate there would be some prominence between the end of the clavicle and the sternum. It is therefore highly probable that we have here an aneurism of the common carotid artery of the right side. Yet it is very necessary for you to remember that a precise diagnosis is often very difficult, and sometimes impossible. Besides these aneurisms of which I have spoken, an aneurism of the upper portion of the arch of the aorta may rise so high as to be visible at the right side of the neck, and so simulate an aneurism of some one of its primary branches. Some years ago I operated on a woman who was believed by many of the best physicians and surgeons to have an aneurism of the innominate artery, and of all the many who examined her Dr. Draper was the only one who added to the diagnosis of the others, that there was a probable dilatation of the aorta co-existing. I tied both the carotid and the subclavian by the distal method successfully, but in fifteen or twenty months after, the case terminated fatally, by reason of pressure of the tumor on the trachea, and at the post mortem I found an aneurism of the aorta, the sac of which extended up into the neck, and hence the error in diagnosis. But I should say from the position of this tumor that it can hardly be an aneurism of the aorta.

The question now arises as to whether this aneurism may not be of specific origin, and there is a suspicion in her case that it may be. She has lately been under treatment by the potassium iodide and she has been very decidedly improved. The treatment of these tumors by the iodide of potash was introduced by Dr. Balfour, and I have often found very remarkable results from the use of this drug in aneurisms; and this woman has been much improved, for the pulsation is less, and the size is diminished, and the murmur has disappeared, under its use. See that you do not treat these aneurismal swellings at the root of the neck carelessly, under the impression that they are swellings of another nature. One of the greatest surgeons, Mr. Liston, once punctured an aneurism here, thinking that it was an abscess, and as a result the patient bled to death in a short time. But you must be more circumspect, for you can not stand such an experience with as little loss of professional standing, as Mr. Liston could.

NÆVUS.

This baby was born with "a mother's mark," as it is called, which involves the upper part of the nose, where it joins the forehead, and the integument between the two eyes. These marks are reddened irregular elevations on the skin, due to the development of blood vessels of undue size or number. Another name for it is nævus. Some nævi are arterial and some venous, some are subcutaneous and others superficial, some are prominent or elevated and others are flat. The disease usually begins as a small mark, and gradually spreads until it has reached a considerable extent, but sometimes the reverse happens and it constantly diminishes in size until it is cured spontaneously. If they do not become cured thus, it is generally advisable to remove them by the actual cautery or otherwise. Here I will use Paquelin's thermo-cautery and apply it freely enough to obliterate the vessels as far as possible, and to cause coagula to form in the others. The growth will thus be destroyed, and only a scar of cicatricial tissue will be left, but after awhile this will assume more of the condition of the natural skin, and the slight mark which may be left is preferable to that of the nævus. If the nævus extends deeply into the skin it is best to use a narrow pointed cautery iron such as I will use here.

While an assistant holds the child tightly with its head between his knees I apply the cautery at a red heat, using it quite freely so as to destroy all the vascular tissue, and then we leave the parts to slough off when they will. The operation sometimes needs to be repeated to insure a perfect cure. No ether was administered to the child, for the pain was only momentary.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, DEC. 7th, 1882.

The President Dr. Fordyce Barker presided. The minutes of the preceding meeting were read and approved.

Before proceeding to nominate officers, the President briefly alluded to the rapid growth of the Academy in influence and usefulness as well as numbers, its scientific status and prosperous financial condition, the harmony of its members, the growth and value of its library, and the excellent spirit manifested by the members in the management of its affairs and in scientific discussions. After this eulogium he thanked the Academy for the confidence, support and aid he had received as their presiding officer and said a sense of propriety bade him decline the honor of longer remaining the incumbent of the chair the more as there were many others who were able and willing to work as honestly and zealously for the interest of the Academy in the capacity of President. He would not mention selfish motives nor personal considerations as reasons against his further service, as that would be opposed to the spirit ever manifested by the members of the Academy.

The following nominations for officers were made:—

For President—Fordyce Barker, T. Gaillard Thomas, Austin Flint Senior, W. T. White (declined).

For Vice President—L. M. Yale, A. H. Smith, E. G. Janeway, Wm. H. Draper, L. D. Bulkley.

For Recording Secretary—Dr. Katzenbach, Dr. F. P. Foster, Dr. Ward (declined).

For Corresponding Secretary—Dr. Adams, Dr W. M. Carpenter.

For Treasurer—Wm. F. Cushman, A. B. Judson (declined).

For Trustee—Dr. D. B. St. John Roosa, G. M. Smith, Stuyvesant Morris, Wm. Young, Henry E. Crampton, E. F. Ward.

For Treasurer of Board of Trustees—Dr. Wright.

Committee on Admissions—F. R. Sturgis, E. L. Partidge, A. B. Judson (declined), Ellsworth Elliot (declined).

Committee on Medical Ethics—Ellsworth Elliot (declined), A. B. Judson (declined), E. G. Janeway, H. E. Crampton.

Library Committee—J. H. Emerson (declined), T. H. Allen (declined), E. G. Janeway, F. R. Sturgis, Dr. Wiener (declined), A. A. Smith, A. McLane Hamilton, H. G. Piffard, C. S. Wood.

Dr. Barker introduced to the Academy and invited to a seat on the platform Dr. ———, physician to Westminster Hospital London.

Dr. Purple representing the Council explained how members derelict in the payment of dues involved the Academy in avoidable expense and why it was desirable to pass the resolution to suspend such members from the privileges of the library. After some discussion the resolution of the Council was approved by the Academy and passed.

The scientific paper of the evening

"A CASE OF MYXEDEMA WITH A CONSIDERATION OF THE NEUROTIC ORIGIN OF THE DISEASE"

was read by its author A. McLane Hamilton, M. D.

The following is an abstract of Dr. Hamilton's paper and the discussion which followed.

In 1873, Sir Wm. Gull called the attention of the London Clinical Society to some curious cases which have since been seen and discussed by Ord and other English writers.

The cases were characterized by diffused swelling of the whole body, most evident in the face. A swelling not pitting on pressure and not due to ordinary nephritic disease. This condition was accompanied by a dulling of the faculties, a reduction of the bodily temperature, absence of the thyroid gland, and changes in the hair.

Gull thought the condition similar to that of cretinism.

In 1878, Ord exhibited five cases and since then others have brought forward cases so that about fifty cases are now recorded. In this country only three cases have been reported. It is probable that many cases regarded as chronic nephritis are examples of this disease. Dr. Hamilton here narrated the history of the cases which had come under his observation. The first patient was seen by him in Sept. 1882. She looked anæmic and badly nourished. The tissues were swollen and doughy to the touch. The special senses were impaired and she was morose and inclined to seek solitude. The swelling was greatest in the face though pretty generally diffused. The skin was the color of white wax and shiny like the surface of morocco. Her hair was thin and dark. Her temperature subnormal and the thyroid gland had disappeared. Her pulse indicated a condition of increased arterial tension. She had numbness of the hands and feet, and complained of a metallic taste in the mouth. Her gait was clumsy like that of the general paretic though improving by exercise. The tendon reflex

was greatly exaggerated. There were marked indications of mental failure. The urine on examination contained sugar and earthy phosphates but no albumen or casts, specific gravity 1022. The œdema pitted slightly after prolonged pressure though the tissues quickly returned to the general elevation.

Dr. Hamilton did not consider this disease an irregular form of Bright's disease as some claimed, the symptoms and facts were not consistent with those of Bright's disease. In the early stages of the disease no observer has found albumen in the urine though it existed in fatal cases in the later stages.

Hallucinations not uncommonly accompanied the disease. The trophic changes consisted of change in the color of the skin, bronzing, changes in perspiration, loss of hair and thyroidal atrophy. In the place of the thyroid fatty tissue is usually found. All observers have noticed a peculiar club shaped appearance of the fingers. It was claimed by some that the feebleness manifested by these patients was a result of bodily enlargement but this was not the case, the disease being attended by actual loss of muscular power.

The voice of the patient is nasal, guttural and thick, with defective intonation. No destructive ocular changes have been found. In some of the cases there was failure of accommodation. Hammond's case had double optic neuritis. Deafness is a striking feature of the disease.

The disease has been for the most part confined to adult women who have passed the menopause. The ages of cases reported ranged from fifty to seventy.

The pathology of myxœdema is an interesting study. Gull reported it as adult cretinism. Charcot did not accept this theory. Ord believed it was peripheral in origin.

The symptoms certainly lead to the conclusion that the nervous system is at fault.

The most acceptable theory of the origin of myxœdema is Hadden's, who maintains that the deposit of mucin depends upon lymphatic obstruction, and that the mental symptoms were due to the condition of the brain produced by lesions of the sympathetic system. Dr. Hamilton believed the trophic changes to be due to disturbance in the lateral and posterior columns of the cord.

Post-mortem examinations of cases have not been numerous. Ord reports that the vessels of the brain were atheromatous, the kidneys granular, the lungs emphysematous, and the heart affected. The prognosis of the disease is bad. The treatment is unsatisfactory. Nitrite of amyl has seemed to do good for a time.

To recapitulate; 1. Myxœdema is a disease of adult life, chiefly in women. It is allied to cretinism and is slowly progressive; it is attended by the gradual and uneven deposit of mucin in the skin itself, by various trophic skin changes, by unilateral lowering of temperature, mental impairment, increased arterial tension, deafness, and ataxic speech defects. 2. It bears a significant relation to frequent pregnancies and the menopause. 3. It probably depends upon a lesion primarily of the bulb, with secondary extension to the postero-lateral columns of the spinal cord and the spinal sympathetic ganglia. 4. Cases with muscular atrophy and deep tissue-changes are rare, and when so found probably indicate degeneration of the multipolar cells in the anterior horns. 5. Renal disease is not the cause of the malady, but the result.

Dr. Ball related the features of a case he had met with, in which the symptoms and appearances did not differ materially from those described by Dr. Hamil-

ton. The œdema, although of the solid kind for the most part, was accompanied by ordinary œdema. His patient was subject to paroxysms, in which there seemed to be an exacerbation of the disease, the whole body being temporarily enlarged, and the patient then feeling herself grow small again.

Dr. Bulkley had seen five of Dr. Ord's cases in London, and now had two patients under his care. It was important to early recognize the disease.

The paper was further discussed by Dr. —, of London. The Academy then adjourned.

SELECTIONS FROM JOURNALS.

ON THE ABUSE OF NARCOTICS. BY HENRY BARNES, M.D., F. R. S. E.

The great abuse of narcotics in all classes of society is an evil which must have forced itself upon the attention of the majority of those who see any great amount of practice; but, in spite of the strong protests which continue to be made, both in the medical and lay journals, little progress is effected in the way of obtaining more stringent legislative measures to check the growing evil. There seems to be a kind of fashion which regulates the particular kind of narcotic which has a run. I do not see so many cases of opium-eating and laudanum-drinking as I did in the earlier years of my practice, but it is within my knowledge that, in recent years, a considerable increase has taken place in the number of victims to the inordinate use of chloral, morphia, and chloroform. The Pharmacy Act of 1868 was intended to prevent the public from obtaining unlimited supplies of poisonous drugs which might be used for unlawful purposes; and the misery, ruin, and crime which track the luckless victim of the narcotic habit, make it incumbent upon us to discuss what efforts should be made to wean him from his besetting vice. According to the provisions of the Act, there are two classes into which poisons may be divided. In the first class are included all those poisons which are not to be sold unless the purchaser be known, or be introduced by some person known to the seller, and an entry be made in the poison-book, indicating: (1) date of sale; (2) name of purchaser; (3) name and quantity of article; (4) purpose for which it is wanted, attested by signature. And the packet or bottle must be labelled with (1) name of article; (2) word "poison"; (3) name and address of seller. This last includes all vegetable alkaloids, arsenic and its preparations, aconite, atropine, cantharides, cyanide of potassium, corrosive sublimate, tartar-emetic, ergot of rye, hydrocyanic acid, savin, strychnia, and vermin-killers, if containing any of the above.

Class II includes poisons which must be labelled with the name of the article, the word "poison", and the name and address of the seller. This class includes essential oil of almonds, belladonna, tincture and all vesicating preparations of cantharides, chloroform, chloral-hydrate and its preparations of corrosive sublimate, preparations of morphia, opium and its preparations, oxalic acid, red precipitate, white precipitate, nuxvomica and its preparations, and vermin-killers containing any of the above. There are special and more stringent regulations relating only to arsenic and its preparations.

Our daily experience in newspaper reading shows that these restrictions on the sale of poisons are quite inoperative in regard to the main object for which they were obtained; and they are still more useless in pre-

venting any one who has developed the narcotic habit from obtaining unlimited quantities of his favorite drug. All the articles in common use by such unfortunates are included in the second class; and anyone with money may obtain as much as he pleases without being known to the seller, provided only that the name of the article, the word "poison", and the address of the seller are given along with the drug. It is only about five years ago that the drug chloral-hydrate was included in this schedule; and this has been done owing to the oft-repeated protests of a former President of this Branch, the respected coroner for the city of Carlisle, Dr. Elliot, who had occasion to hold five inquests, owing to the facilities which existed for the sale of this powerful poison.

I am not aware what the necessity is for having two schedules of poisons under the Act. If certain precautions are needed for the sale of aconite, tartar emetic, and strychnia, surely similar precautions are needed when the sale of chloroform, chloral-hydrate, and morphia, is in question; and the provisions of the Act might be made more stringent with great advantage to the public.

This would act to a certain extent in a beneficial way; but it is not all that is needed. The habit of misusing narcotics is very speedily engendered, and physicians should be very watchful of the purposes to which their prescriptions may be put. It has happened to me more than once, to have my attention called to the frequency with which sleeping draughts containing chloral were being made up for a patient, long after the illness for which the original prescription was given had ended. On one occasion, when calling at the shop of a druggist, I was startled to find that a patient of mine had got a prescription made up much more frequently than was intended. The prescription consisted of equal parts of spirits of chloroform and compound tincture of cardamoms, and was ordered on February 17th. In February, two ounces of this mixture were obtained, of which the dose was to be a teaspoonful; in March, two ounces; in April, six ounces; and in May, between the 2nd and 20th—the latter being the date upon which my attention was called to the matter—the quantity obtained was fifty ounces. I am disposed to urge that prescriptions containing narcotics should not be repeated more than a certain limited number of times without being revised by the physician in attendance on the case.

There is also a danger in allowing patients to have the use of hypodermic syringes, or in recommending them to purchase the same, except, perhaps, in cases of organic disease where the patient lives at an inconvenient distance. I have seen the morphia habit, or morphinism, developed in this way; and an exceedingly dangerous and troublesome vice it is to eradicate. This form of vice seems to prevail very extensively in America, and also on the Continent. In Austria, its most numerous victims are said to belong to the medical profession. Among the most prominent of its symptoms which have attracted attention, I find the following: a disinclination to exertion, loss of appetite, hyperæsthesia, general emaciation, loss of memory, suicidal tendencies, and a general moral deterioration, similar to what is seen in cases of chronic alcoholism. Lying, which is first had recourse to in order to conceal the habit, soon pervades the whole mind; and the morphinist becomes the prolific father of lies upon all subjects, even when the truth would serve as well. The remarkable rapidity with which the habit is sometimes developed is very striking, and the enormous

doses of the drug which may be tolerated are also a point of interest. In a case which has recently been under my observation, these points were very well illustrated; but the preparation used was not any of the ordinary preparations of morphia, but a patent preparation known as Dr. J. Collis Browne's chlorodyne. This drug is very extensively advertised, and has a large sale. It is said to consist of morphia, hydrocyanic acid, chloroform, and probably also Indian hemp and belladonna, or its alkaloid, atropia, with some other ingredients of a less active character, used to disguise its real nature and make it palatable. Now this drug, containing these five poisons, is not even labelled as being poisonous in its nature, is sold by all druggists, and even by grocers and patent medicine vendors. From one of the latter class I recently obtained a specimen; and I find in his list, as an additional recommendation, that he sells it at lower prices than is done by his neighbors, the duly qualified pharmacists.

To show you the large quantities of it which may be obtained and tolerated, I quote the case briefly.

Miss L., aged 24, came to Carlisle on August 15th to act as a nurse to some chronic invalids who were under my care. She had been trained in a large public hospital, was well recommended, and was in reality an efficient and capable nurse. She was always fit for her work on the occasion of my visits, which were usually at intervals of a week; but it was not long before I heard of her being peculiar in her manner, of her dropping asleep at her work, or even at her food, and suspicions became aroused as to her indulging in some narcotic. On September 30th, she was asked whether she was in the habit of taking any narcotic; and she confessed that during her brief residence in Carlisle, she had given herself up to the unlimited enjoyment of a habit which she had contracted during her training. She is of a nervous hysterical temperament, but had enjoyed fairly good health. She tells me her mother is addicted to the use of chloroform, which she uses in large quantities, and frequently gets through a large pint bottle in twenty-four hours. During her childhood, her mother often gave her soothing drugs to make her sleep at night; but she never practised the habit of regularly taking anything until, during her training, some nurse recommended her to take chlorodyne for some trifling ailment. She rapidly yielded herself to the seductive influence of the drug, and facilities for obtaining it in the hospital being good, she soon attracted attention. On being found out, she lost her situation. For seven months she had restrained herself absolutely, chiefly, I believe, for want of means or want of opportunity of gratifying her depraved appetite. But, on her coming to Carlisle, she had obtained possession of £20, and of this sum only a few shillings remained at the time of her confession to me, the greater part of it having been spent in the purchase of her favorite drug. An examination of her box showed fifty-four empty chlorodyne bottles, which had been recently purchased. There was one at 11s., which had contained 7 oz.; there were thirty which had cost 4s. 6d. each, and had contained altogether 67½ oz.; there were fifteen at 2s. 9d., which represented 15 oz., and eight at 1s. 1½d., which represented 2 oz.; so that in six weeks we know that she had got through 91½ oz. She informs me that she had had about half as many bottles more, but had thrown them away; and I am inclined to think that this is true, as I know that during this period she had spent £20, and the price of the bottles found would only amount to £10 16s. 3d. She informs

me that her usual dose was a four-and-sixpenny bottle, which contains two ounces and two drachms, and that the eleven-shilling bottle only lasted little more than twenty-four hours. She had never experienced any difficulty in obtaining as much of the drug as she required; but one druggist had recommended her laudanum, as being much cheaper, and as being likely to answer the same purpose. She had reduced herself by the habit into a very helpless condition—a state of almost absolute physical and mental prostration, and had even harbored thoughts of suicide. She had heard of some retreat for habitual drunkards, where such cases as her own had been received; and, on my recommendation, her friends decided upon placing her in one of those institutions, where she is now slowly recovering from the effects of her six weeks' dissipation.

This case seems to me to point to a fact which is new to me. We know that the system may become habituated to large doses of morphia and chloroform; but here, in addition, we have a patient taking, along with these drugs, large quantities of hydrocyanic acid. May the explanation of this not be that the latter does not occur in the free form, but has combined with the morphia in the form of cyanate of morphia? or the action may be modified by some of the other ingredients contained in this composite drug.

I have looked up the controversy which took place some years ago as to the composition of chlorodyne, and from a perusal of this I find that morphia, chloroform, and hydrocyanic acid have been detected by chemical analysis; and the presence of Indian hemp and belladonna has been inferred from the physiological symptoms occurring in those who have taken considerable doses of the drug. With regard to the presence of the last named drug, I have observed strong confirmation in the present case, as on all occasions when I saw the patient the pupils were widely dilated. Now, looking at the fact that this patent preparation certainly contains three poisonous ingredients, and probably five, four of which are included in the schedule of the Pharmacy Act; looking to the fact that its medicinal dose is stated to be from ten to thirty drops, and that very alarming symptoms have occurred from a dose of forty minims, it is surely an anomaly in the law that the sale of such a powerful poison should be quite unrestricted, and that patients should be able to obtain such enormous quantities as were obtained by the patient whose case I have just narrated. From the facilities which exist for obtaining such-like drugs, there can be little wonder that death from poison is of such common occurrence, as will be fully seen by a reference to the records of the coroner's court.

There are many other patent medicines which are known to contain similar poisons. I allude to the class of soothing syrups, cordials, carminatives, and cough-tinctures, and essences so extensively advertised; and it is fully time that the Legislature should be asked to interfere for the protection of the public. I am glad to find that the Chairman of the Parliamentary Bills Committee of our Association has frequently brought this matter before the attention of his colleagues, and I trust that this Branch will be induced by what I have said to take such action as will strengthen their hands in the efforts they are about to make during the coming session of Parliament.—*Brit. Med. Jour.*

TRACHELORAPHY.—By EDW. JOHN TILT, M. D.

In a preceding paper, I discussed some startling assertions, that came from the other side of the Atlantic. Dr. Emmet wants us to believe that, however liable periuterine cellular tissue is to inflammation, the womb itself is only liable to inflammation during puerperality. We are also asked to believe that what has been previously called ulceration of the os uteri was nothing but the everted edge of a more or less lacerated cervical mouth, and that the way to cure it was to divide the cervix up to the os internum, and then to stitch it up. We are asked by some American surgeons to perform the same operation, even if the rent have been long and well healed, for uterine cicatricial tissue is reported to be the seed-plot of epithelioma. I congratulate Dr. Emmet on not having seen acute inflammation of the womb and acute internal metritis in young unmarried women, and I stated his theory of the common run of uterine disease to be inadmissible, because it does not explain the frequent cases that arise in virgins, and in married women who have never conceived. It is admitted that uterine disease is the same in all women; and, as it arises in virgins and childless women, independently of laceration, in may do the same in women who have borne children. In stating this logical conclusion, I do not deny the influence of laceration in the production of uterine disease, for I have been teaching its importance for the last twenty years in every succeeding edition of my works. The proposal to treat uterine ulceration, due to a slight cervical fissure, by slitting up the cervix up to the os internum, should be scouted; for such cases can be easily cured by nitric acid and nitrate of silver, along with judicious medical treatment, that American gynecologists seem to despise. To propose a serious and expensive operation for these cases, even when the slight laceration has been thoroughly well healed, because epithelioma has sometimes sprung from cicatricial tissue, seems to me very bad practice.

Tracheloraphy is a valuable operation; it is therefore desirable to settle the cases to which it would best apply. Dr. Emmet does not attempt to define the limit of his operation, otherwise than by recommending it "when the womb is larger and complicated by neuralgia;" by which, I suppose, he means a voluminous cervix leading to distressing uterine symptoms. Dr. Playfair, who considers tracheloraphy "the greatest improvement ever introduced into practice," reserves it for bad cases that he cannot otherwise cure; which raises the question what other treatment Dr. Playfair had previously tried in such cases. For, in 1869, he wrote some elaborate papers to extol the virtues of carbolic acid as an application to the womb for the cure of endocervicitis, or uterine catarrh; and he was then so well satisfied with his result, that he concluded by stating that "he had practically come to limit himself to the use of that alone." It was to be expected that a more extensive practice would convince him of the futility of attempting to cure chronic uterine disease by a solution of carbolic acid in glycerine and water; but to rightly estimate the value of his recommendation of tracheloraphy in uterine disease, it is necessary to know what other treatment he tried besides carbolic acid, before resorting to a serious operation. This question is most apposite, for, in the only case related in his paper, read before the Obstetrical Society of London, the only topical agent; said to have been employed was carbolic acid, with the exception of nitric acid to check metrorrhagia. Until Dr. Playfair answers this question, I shall remain under the

impression that some of the twenty cases in which he operated might have been cured by the plan sketched in my first paper, and given in full in my *Handbook of Uterine Therapeutics*. Having thus given it as the result of long experience that, when in cases of endocervicitis the mucous membrane alone is affected, it can be cured by nitrate of silver, carbolic acid, or the stronger mineral acids, whereas potassa fusa or potassæ fusæ cum calce were required when the submucous tissues are diseased, I will proceed to state the kind of cases to which I think tracheloraphy should be restricted.

1. The use of the forceps by unskilled hands occasionally leads to five or six extensive lacerations, which, on healing, give the cervix a stellate appearance, well shown in Dr. Emmet's work. Sometimes, the converging fissures separate ridges of uterine tissue that hide the os uteri. I have seen three cases of this description in the last thirty years. There were no uterine symptoms in one case, but they were distressing in the other two; and I advised the application of potassa fusa cum cretâ. I heard from the medical adviser that the remedy had greatly relieved one patient. The state of the other lady was also greatly improved, but I had to advise a second application of the caustic ten years after the first. In such cases, the shape of the cervix is so damaged, and there is so much superfluous tissue, that I should now certainly recommend the reconstruction of the cervix upon its original plan.

2. The application of the forceps is sometimes followed by extensive bilateral laceration of the cervix up the os interum; and, whenever this is as extensive as represented in one of Dr. Emmet's woodcuts, I think it should be treated by his operation; but I have seldom seen such cases, and not once since attention has been directed to laceration of the cervix.

3. In alluding to the noxious properties ascribed to excessive cicatricial tissue by American gynecologists, I mentioned the case of a young married lady who had never conceived, and in whom it was necessary to tunnel through a very dense cervix to make way for the menstrual flow. I have met with several such cases; and, whether the cervix be of normal size or voluminous, I think it would be better to divide the cervix up to the os interum. This thorough draining of blood and serum from long diseased uterine tissues is a great element of success, even when there is no cicatricial tissue to remove.

4. To make a good cure of a large cacoplastic cervix with endocervicitis, extensive ulceration, and complicated uterine symptoms, a year is not too much for the plan I have recommended as the best and safest for the cure of the worst cases of non-malignant uterine disease; I mean a year of medical supervision, with occasional active surgical measures. Now, it sometimes occurs, when bad uterine cases are sent home from India, that their worst symptoms vanish, if the constitution rally on returning to a temperate climate. These patients enjoy themselves, and only consult us when about to return to India, sometimes even after having taken their passage. In such cases, a large cacoplastic cervix will most likely be found, and tropical influences will soon bring back a return of endocervicitis, with aggravated uterine symptoms; therefore, rather than let a patient return to India in that state, I would sanction tracheloraphy, if the patient cannot give time for a better plan of treatment.

It will thus be seen that I consider the cases requiring tracheloraphy to be rare, and that I do not think it justifiable for the repair of a slight cervical fissure of

recent occurrence or of old standing. When tracheloraphy has been advised by one practitioner, it will be wise to take the opinion of another, for I have already heard of a lady, who was told by a distinguished gynecologist that her case was serious, and required an operation, for performing which his fee would be sixty guineas. On going the next day to another distinguished practitioner, she was told that there was only a small fissure at the mouth of the womb, and that she could be easily cured by simpler treatment.—*Brit. Med. Jour.*

MEDICAL NOTES AND NEWS.

Practicing Without Diplomas.—On the complaint of Dr. David Webster, president of the County Medical Society, four doctors were arrested recently, and arraigned before Justice Ford, at Jefferson Market Police Court, for practising medicine without fulfilling the requirements of the law in respect to diplomas and registration. They were Dr. John F. A. Claunnutzer, of No. 29 Bleecker street, who was charged with practicing under the name of John C. Adams; George H. Schwab, No. 59 Bond street, no diploma; William H. Fuller, No. 74 Varick street for practicing under a bogus diploma obtained in Philadelphia, and Francis A. Ruhunburg, No. 80 Christopher street, no diploma. Justice Ford held them for trial in \$300 bail each.

Petrified Corpses.—Every corpse that is taken to the Paris morgue is now quickly converted into a block almost as hard as stone. This result is obtained by Carre's chemical refrigerator, which is capable of reducing the temperature of the conservatory, where each body is laid out on something closely resembling a camp bedstead in stone, to 15° below zero centigrade. At the back of this room is a row of stove-like compartments in which the corpses are boxed up and frozen hard before being exposed to public view. As an illustration of the intense cold thus artificially secured, a Paris journalist, in describing a recent visit to the morgue, says that in opening one of the compartments the attendant took the precaution to wear a glove, lest "his hand should be burnt by contact with the cold iron." The corpse which was taken out of its receptacle had been there for nine hours. The doctor who accompanied the visitor struck the dead man on the breast with a stick, and the sound was just as if he had struck a stone.

Egyptian Treatment of Syphilis.—In the course of an article on "Medical Notes of Travel in Egypt" by Dr. Josiah Williams, in the *British Medical Journal*, occurs the following: "The native treatment of syphilis in young girls is very primitive and very barbarous. Close to the town (Sonakin) in the Red Sea, is a little island, called originally Sana Gin, and from which the town takes its name. The girl is taken across to this island by six women; she is then laid naked on her back: on each arm and leg sits a woman, another on her chest. The operator, another woman, who is provided with a sharp sea shell, scrapes away in the vagina until she is satisfied that all diseased parts are removed, and then, utterly regardless of the shrieks of the girl, gets a handful of sand from the sea, and rubs that in. The disease is then supposed to be cured by this rather rough operation.—*Canada Medical and Surgical Journal.*

Caffein in Heart Disease.—The use of caffein has not become general in this country as yet. In England it has attracted some attention as a diuretic, and it has been used to some extent as a nerve tonic, Dr. Shapter having especially commended it in the treatment of nervous diseases dependent upon the abuse of alcohol.

Professor Lépine, in a recent paper in the *Lyon Medical* urges the use of caffein in the treatment of heart disease, in the same class of cases in which digitalis is usually found valuable. He thinks that caffein possesses distinct advantages over digitalis, which he considers in detail.

He has been using caffein in these cases for four years and has administered it to more than sixty patients. He maintains that the dose, to be effective in action upon the heart, must be considerably larger than that which has ever been generally administered heretofore. He gives from 60 centigrams (9.25 grains) to 1 gm. 50 (33 grains), and sometimes 2 grams (30 grains), or even 2 gms. 50 (30 grains). Such doses as are directed in the books he finds utterly inefficacious.

He found that this drug is equally effective with digitalis in retarding the rate of cardiac action and in increasing its force. In comparing the relative merits of the two drugs, he asserts that caffein acts much more rapidly than digitalis, which fact, though it may be of little importance in a chronic disease, may be of real importance where asystolia occurs as an acute condition. Secondly, he says that caffein is much better tolerated than digitalis, and if taken in divided doses during the day very seldom causes any symptoms of intolerance at all, such as are not at all infrequent in the administration of digitalis. This he attributes to the facility with which caffein is eliminated. Of course, where the kidneys fail to eliminate the drug it would be retained in the system, and would occasion disturbance, but he claims that the danger from this source is far less than that from the use of digitalis. Finally, he has found that by the majority of patients the caffein is preferred to the digitalis. He has repeatedly found this to be so in cases where he has used both drugs alternately upon the same patient.

On the other hand, there is a certain proportion of patients (he has found this true in about one out of twenty) in whom caffein produces insomnia and other nervous symptoms. While these cases are rare, they do occur, and this condition is an absolute contra-indication to the use of this drug.

The only other inconvenience in the use of caffein is the expense of the drug, which places it beyond the reach of patients in straitened circumstances.

M. Lépine does not claim that caffein will cure all cases of asystolia, but does assert that it has all the merits of digitalis, and some advantages over that drug. He promises to give reports more in detail of his own observations, and of cases that have been reported to him by some of his colleagues.—*St. Louis Courier of Medicine*.

Two Cases of the Successful Resection of Intestine.—(Under the care of Dr. Jouliard, of Geneva.)—The first case reported was that of a woman æt. 63, who had had a hernia which had become strangulated and left a preternatural anus; the second that of a man with left inguinal hernia that had become strangulated. At the operation in the latter case the intestine was found to be gangrenous and perforated in numerous spots; the testicle was also found to be gangrenous. 25 ctm. of intestine were removed, to-

gether with the testicle, and an artificial anus was established. After the parts had recovered a healthy tone, and not till then, an attempt was made to unite the divided ends of the intestine, an attempt that was followed by union by first intention.

He distinguishes between primary and secondary enterotomy. The former designation he applies to resection performed on account of gangrene of intestine, and the latter to similar operation for artificial anus.

He considers the latter much more easy of performance, as well as safer to the patient. The operator, in the latter case, does his work with an empty and dry intestine to work upon, whilst in the former case the bowel may be full of fæces constantly forcing their way down and impeding the operation. In the latter case, moreover, the gangrene has done its work, and it is perfectly certain that it will not spread beyond the sutures, and the patient is freed from the double risk of strangulation and operation at the same time.

For these reasons Professor Jouliard thinks it a safer course, in cases of hernia with gangrene of intestine, to first make an artificial anus, and afterwards, when tone and strength have been recovered, to resect and restore the continuity of the gut. In further proof of the correctness of his views, he adduces 25 cases of resection for artificial anus with but 8 deaths, whilst of 44 cases (besides unpublished ones) of primary intestinal resection, 23 were fatal.—*Med. Press.*

Transplantation of Muscle in Human Beings.

Before the Imperial German Congress of Surgery, Herr Helfrich read a paper on this subject (*Medical Press and Circular*) based on a case in which the whole of the biceps of a woman had been removed, with the exception of a strip the thickness of a lead pencil, and replaced by a piece of muscle from a dog. Complete healing took place, and after some months' use of electricity, the power of movement, lost previously to the operation, was restored. Herr Gluck (Berlin) reported that his experiments in transplantation of muscle had always given positive results.

Local Etherization in Strangulated Hernia.

Dr. W. Finkelstein, of Jassy, describes his method of reducing strangulated hernias thus: "I lay the patient on his back, and make him draw up his knees. In inguinal hernia I support the scrotum on a pad or pillow, and pour one or two tablespoonfuls of ether over the integuments of the sac; I then lay over it a cloth folded three or four times. This I repeat every fifteen minutes. After the third or fourth repetition, the coils of the intestine become mobile, and sometimes slip back of themselves into the abdomen. If they do not do so I attempt to reduce them gently; and in fifty-four cases out of fifty eight I have succeeded. I find the treatment more successful the less time is previously spent in taxis: so I apply the ether as soon as possible after the strangulation. It is easy to see why. When the bowel has been nipped for some time, it becomes paralyzed and loses its power to contract and to conduct peristaltic movements. Thus your chance becomes less hopeful or is lost. I had no instance of simply omental hernia in these fifty-eight cases. I should think in such a case etherisation would be useless. In cases where the hernial coverings were much thickened it would probably be less effective." To lessen the burning pain produced by the ether, a mixture of 100 parts of sulphuric ether with 20 of oleum hyoscyami is used. The ether must be poured on, not dropped.—(*Berl. klin. Woch.* 20, 1882).

Paget's Disease of the Nipple.—Prof. McCall Anderson is of opinion that while in exceptional cases of simple eczema of the breast may be the exciting cause of, and be followed by, cancer, Paget's disease of the nipple is from the outset of a malignant nature. He compares it to the "psoriasis" of the tongue which precedes epithelioma. He gives the following table as an aid in differential diagnosis.

Paget's Disease of the Nipple. A. Scott of the Nipple and Areola.

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 1. Occurs especially in women who have passed the grand climacteric. | 1. Occurs especially in women earlier in life, and particularly during lactation, or in persons laboring under scabies. |
| 2. Affected surface, in typical cases, of brilliant red color, raw and granular after removal of crust. | 2. Surface not so red and raw looking, and not granular, but often punctated. |
| 3. When grasped between the thumb and fore finger, superficial induration often felt, as if a penny were laid on a soft elastic surface and grasped through a piece of cloth. (<i>Thin</i> .) | 3. Soft, and no induration. |
| 4. Edge of eruption abrupt and sharply cut, and often elevated. | 4. Edge not so abrupt, and not elevated. |
| 5. Very obstinate, and only yields to extirpation or other treatment applicable to epithelioma generally. | 5. Although sometimes obstinate, yields to treatment applicable to eczema. |

—*Glasgow Med. Jour.*, Oct. 1882.

Treatment of Placenta Prævia.—Dr. Hofmeier, Assistant Physician at the Gynecological Department of the University Klinik, Berlin, met with forty-six cases of placenta prævia in a little over one year. His experience has led him to reject the expectant plan of treatment, and we will not withhold our congratulations on his arriving at such a happy decision. Thirty-seven out of forty-six cases were treated actively from the moment operative treatment was practicable. He did not wait till the cervix was sufficiently dilated. The bi-manual method of turning was employed thirty times; in three of the cases a foot was already down; three times internal version was performed; and in one forceps were used. It was observed in every case that the hæmorrhage ceased whenever traction was employed on the foetus. He considers that the principle of earliest possible intervention should not be departed from, even when the cervix is contracted and the external os tolerably small. In these cases the finger should be thrust through, regardless of placenta, and a foot drawn down. When the placenta is centrally situated, or whenever the hæmorrhage is copious, the danger to the mother is so great that danger to the child should not be brought into comparison with it. When once a foot is down, however, there is no longer any need for haste. On the contrary, too much speed may now bring about the very danger it has been the attendant's main object to escape from. Thus rapid delivery now—too rapid delivery—might, and would, cause laceration of the cervix, and this, in the bruised and wounded condition of the part would undoubtedly be the cause of serious, harassing, and, perhaps fatal hæmorrhage. For these reasons, then, extraction, after a foot is once down, should be slow. Hofmeier is in the habit of injecting subcutaneously 0.4 grmm. of ergotine, and after delivery syringing out the uterus with a 5 per cent. carbolic solution. The results obtained were brilliant, and were just what might be expected when early and

rational treatment is adopted. One death only occurred in the thirty-seven cases treated in the above manner, and in the fatal case death took place on the seventeenth day from phlegmon and phlebitis; she had, moreover, been treated by tampons for twenty-four hours before labor. These results compare well with those usually met with in placenta prævia, viz., a mortality of from 30 to 40 per cent. Of the thirty-seven children, seventeen were already dead when delivery was commenced. Of the remainder, six died during delivery—three of them were premature children, and three died in consequence of the perforation of the placenta. Perhaps Dr. Hofmeier is hardly fair to himself. The danger to the child from deprivation of oxygen is in placenta prævia so great that it is more than probable that a larger proportion of infants would have died had any other method of treatment been followed out.—*Med. Press.*

Shortening of Round Ligaments for Cure of some Displacements of the Uterus.—An important paper was read on the above subject on the 23d ult., before the Liverpool Medical Institution, by Dr. William Alexander. Considering the great number of cases of prolapsus of the uterus and retroversion that are practically incurable, Dr. Alexander sought for some other method of treatment that had at least the one merit that it had not already proved its uselessness. After many operations and investigations on the dead body, he decided finally to try the effect of cutting down on the inguinal ring, seizing the round ligament, drawing out the "slack," and then, after ascertaining the exact redression of the uterus, fixing the ligament thus tightened in its new situation. The results obtained were very encouraging, and in some earlier instances have, after a lapse of six or eight months, lost none of their encouraging character. His first paper on the subject was published in the *Medical Times and Gazette* of the present year. The method certainly shows a fertility of resource that is deserving of success. In the present stage, it is too early to say that the operation has proved anything; but bearing in mind the impossibility of retroversion or prolapsus occurring simultaneously with anteversion, and the apparently undoubted power that is hereby given us of producing anteversion artificially, and that the latter affection is much less serious and unbearable than either of the former—bearing all this in mind, we may say that the new operation appears likely to enable us to choose the lesser of the two evils in a class of distressing cases in which hitherto we have had no choice at all. The idea is not altogether new, but was very nearly practiced by Koehle, of Strasbourg, in 1869, when he attempted to attach the broad ligament to the abdominal wall in a case of retroversion.—*Med. Press.*

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MILK LEG IN A MALE.

A CLINICAL LECTURE DELIVERED AT THE COLLEGE
OF PHYSICIANS AND SURGEONS,

BY

PROF. ALONZO CLARK.

Patient is a man about fifty years of age and a carpenter by trade. He was very healthy up to fifteen or twenty years ago, when he had an acute attack of inflammatory rheumatism. Since he recovered from that attack he has had no more trouble until a year ago last March, when he had another attack of rheumatism in the left knee, which became swollen and painful, and he was laid up a part of the ensuing summer because of this. He gradually grew better until last winter, when he became very bad again, and the whole left leg swelled up. The pain passed off in the summer, but it left the knee very weak and lame, and the leg swollen. The right leg he says nothing about. This reminds me of an incident in the practice of the late Dr. Mitchell, who was remarkable as a physiologist and a professor in this college, and also one of the physicians to the New York Hospital. He was a man who always had a reason for every thing which he saw or heard. So one day a doctor, who was a friend of his, came to him and told him that he had just seen a child who had been born the preceding night, and it was as black as a negro on one side of its body, and he asked the doctor how he would account for such a remarkable fact. So the doctor gave a number of very probable reasons for the phenomenon and he discussed very learnedly about pigmentum nigrum and other pathological conditions which might have caused it, and after he had thus very clearly explained it to his own satisfaction, his friend added, "yes, doctor, but

the other side of the child's body was black too." So here we had better look after the other leg of this man, though he only speaks of one.

Now, as he exposes both legs you see that there is a remarkable difference in their size, for the left one is greatly swollen from the top of the thigh down to the foot. On measuring the circumference of each leg at the calf I find that the left one is seventeen inches, while the right is only fourteen. This difference is not as great as it appears to be upon looking at them.

Now the question arises, "What is the cause of this swelling of the left leg and thigh?" The most probable cause is œdema, and if it is that here the leg will pit on pressure. It does pit; so there is œdema. The next question then is, "How was this œdema produced?" and the answer is at hand. There is but one thing that is likely to produce an œdema of only one leg, and that is, pressure on one of the peripheral vessels which carry the blood from the lower extremities back to the heart. The groin is the commonest seat of this pressure and obstruction to the return current of blood. But first we must observe the extent of the œdema to determine whether the point of obstruction is above or below the bifurcation of the common iliac. If upon examining the gluteal region I find the œdema also there, then I must conclude that the obstruction is in the pelvis, and above the bifurcation into the external and internal iliac veins. I do not find any œdema in the gluteal region, and hence the obstruction is in one of the veins leading to the external iliac. This is precisely the condition which is described as milk leg, and which you will hear more about from another department, and that is almost always produced by a thrombosis of a vein in the groin. We will now have him lie on his back while I examine carefully the inguinal region for any sign of an enlarged and indurated vein. Now I have caught something which seems nearly as large as my little finger and it appears to lie internal to the artery. As there is no swelling in the gluteal region I think then that we must ascribe this œdema of the leg to an obstruction and swelling of the femoral vein, but the cause of this thrombosis we do not know. There is no way therapeutically of clearing these vessels of such an obstruction, but nature has a mode of her own for dispersing the occluding clot. The fibrinous plug in the vessel remains unchanged for an indefinite time, and then it begins to soften first in its centre just as happens in the case of tubercles. If you cut open the vein you will find it filled with a clot, and if you divide this, and it is the right stage of the disease, you will find the centre softened and yellowish but containing no pus. It is filled rather with a fluid resembling serum holders of the debris of the softening and degenerating clot. This process of softening extends from within outward, and it goes on until all the clot has been liquified, and the refuse, or the products of

the liquefaction goes off into the general circulation and does not seem to do any harm. You will almost invariably find in these cases that there was great pain in the calf of the leg accompanying the formation of a clot in the vein, but this man does not complain of any at the seat of the obstruction or in the calf. Again I have seen many men suffering in this condition where blisters had been applied on the calf in the belief that there was inflammation there.

In the treatment of this complaint the only medicine that I have any confidence in is the sulphate of soda. That, you know, is said to be the salt which keeps the fibrin in the blood in solution, and I do not advise it with any hopes that it will hasten the removal of the existing clots, but in order that it may lessen the liability of any new ones forming.

A test tube containing a specimen of the patients urine which had just been examined for sugar was now brought in, and it showed the characteristic orange red precipitate.

This is the patients urine, which has been tested for sugar, and you observe that it has the proper color of the copper salt which has been separated from the copper solution by the presence of sugar. This is Fehling's test, and it consists in a salt of potassium and of copper mixed in such a manner that they will not act on each other except when sugar is added to the solution, and then the original copper salt is broken up and a red sub-oxide of copper is formed which gives this reddish yellow color that you see here.

When questioned this man says that he now passes rather less water than he used to, though he never passed a very large quantity that he remembers. But he says that five or six years ago he was very thirsty for a time, and he drank a good deal of water and lemonade, and at that time a doctor whom he consulted said that he thought his kidneys were affected. He then stopped drinking coffee and he improved rapidly, and so he has not drank any coffee since. Last fall he says that he was very thirsty again, and besides water he would drink a couple of quarts of lemonade every day. This seemed to relieve his thirst more than water alone. He did not notice any change in the amount of urine he passed at that time.

You should always be careful in the look-out for diabetes, for it is remarkable that men sometimes entirely overlook its most marked symptoms. Some years ago I was called to see a merchant who had suddenly become comatose, and he had previously seemed to be suffering from nothing, except it had been noticed that he had been making a good deal of water, and he drank a good deal for the past two years; but it had been thought very natural for him to pass a great quantity simply because he drank a good deal, and so nothing had been supposed to be wrong. His wife had noticed that for two years past the chamber vessel, which held about a gallon, was very full every morning, but not until he fainted had she thought that this was of any account. These people generally suppose that the drinking of much water is the reason that they pass much, and this seems to them very natural, but the opposite is really the truth, and they are obliged to drink more water because so much is taken out of the system by the increased flow of urine. Again, you will not generally be able to trust the patient's report of the amount of water he makes in a day, and to determine this you will find it necessary to instruct him to save all that he passes between twelve o'clock on one day and the same hour on the next day, and then to measure all that he has made during the twenty-four hours. This man can do that

easily and report the result, and I will venture to guess that he will find that he makes more than one quart a day which is about the average quantity, though there is much doubt yet as to the existence of true diabetes here. His bowels are natural, he says, and his fæces are hard and not in large quantity, and he sweats quite easily. Now this sugar may not be a permanent constituent of the urine, and it may be found to-day and not to-morrow, and if this is so and he does not pass very much water or drink a large amount of fluids, while he sweats easily and his fæces are not hard, then we may throw diabetes mellitus out of the question.

Now I don't know whether, simply from the first showing of this case and the finding of sugar in the urine once, it is advisable to recommend the beginning of treatment for diabetes. But I think that further examination had better be made first, and then if it is found to be a case of diabetes he may be put upon treatment which will probably relieve him. I say this because he is getting along in life, and the aged seem to be more easily cured of this disease than the young. I once tested the truth of this fact in two cases, both of which were equally bad as regarded the amount of water drank and passed and the sugar in the urine. I put both on the same treatment, and one, a girl of 14 or 15, died, and the other, a woman of 45 or 46, got well, and as a penalty for her recovery she grew fat, and became twice as large as she had formerly been.

The treatment for diabetes is in part dietetic, and all foods containing starch or sugar must be excluded. There are two other things which should be tried. One is the administration of the carbonate of soda in pretty free doses, keeping watch of the urine, and not letting it become alkaline to test paper; the other is the application of a blister or some other powerful irritant, or, if you prefer it, dry cups, at a point as high up in the back of the neck as you can. I have now and then seen cases of diabetes cured by this method of treatment.

As to the temporary appearance of sugar in the urine without any other symptoms of diabetes, it is quite common for it to appear, and then suddenly disappear, in very nervous persons. I have seen a hysterical woman whose urine was examined in the morning and found to contain sugar, but at evening the sugar had disappeared and albumen was present in its place, and then the next morning sugar was found again. So in nervous affections it is quite remarkable how sugar will appear and disappear in this peculiar way.

We will examine this man further before we limit him to gluten cakes, and a diet devoid of starchy elements and sugar. The other matter, the œdema of the leg, we will have to leave to itself, so far as removing it is concerned.

SELECTIONS FROM JOURNALS.

POSSIBLE CONTAGION OF PHTHISIS. By E. G. JANEWAY, M. D., New York.

As the possible origin of tuberculosis and phthisis by contagion has become the subject of experiment and study on the part of the members of the medical profession, and of increasing importance to the public, I have thought that the following possible instances possessed sufficient value to warrant their publication.

The first is one of exceptional interest, as it shows that dogs in contact with a man suffering from phthisis

become affected with a pulmonary complaint ending in death. Moreover, it is a confirmation of those experiments made upon dogs to elucidate this difficult problem. They were made to inhale an atmosphere containing the sputum of tuberculous patients distributed by a steam atomizer (See *Virchow's Archiv*, vol. 74, p. 393, not vol. 48, as given in Clapp's book.)

The patient, a young man twenty-three years of age, had lost his mother by consumption. Two years before the onset of his fatal illness, he had suffered for four months from what he considered a cold, which left him without a trace. I first saw him in Sept. 1879, complaining of a cold, which had developed five months previously. The disease was, however, a spotted tubercular trouble of a considerable portion of the upper lobe of the left lung, and to a less extent of the right lung. The symptoms indicated a graver disturbance than the physical signs considered alone would have justified. On a subsequent visit he brought a pet dog with him, which excited my interest by the cough which troubled it from time to time. On inquiry he narrated the following: This was the third dog that he had owned since his sickness. The two predecessors had died after becoming affected with a cough which very closely resembled his own, and that during the paroxysms they at times, as he himself, vomited. All of these animals had been well at the commencement of his proprietorship in them. It was his habit to take the dog to bed with him, and to sleep with it nestling in his arms, its face and snout being turned towards him. In this position it of necessity inhaled his breath, and the atmosphere evolved during his coughing spells, which, at times, were frequent during the night. The first of the dogs was a black-and-tan terrier; the next a King Charles spaniel; and the third a Scotch terrier, if my memory serves me. It has always been a source of regret, that he was unwilling to part with his last dog in the interest of scientific observation a solution of this vexed problem. The young man died March, 1880, but this last animal survived him, though troubled with a cough and having lost flesh and strength.

I have been tempted to repeat the experiment thus performed by this patient, but have not deemed it wise to do so in my hospital service, and in private practice I have not met the right patient. Some of the readers may find the means for the repetition before long. I would suggest that care be taken to select a vigorous animal, and to give it sufficient out-door exercise to maintain its health. If possible, I should advise sacrificing it if sickness should occur, instead of permitting it a natural death.

The following clinical cases have some interest also:

Nearly ten years ago I saw a young married woman who was affected with a slow pneumonic infiltration of one lung. The disease began in the upper part of the lower lobe, and gradually spread until the lung became consolidated at the end of seven weeks. During this whole time the only sputum was that ordinarily characterizing pneumonia. Then the process remained nearly stationary for a year. At the expiration of this time she became much fatigued in consequence of a long journey, and in three weeks rapid ulceration and breaking down of the lung terminated in death. Her father was ill with pulmonary phthisis in the same house for time previous to her sickness. Her husband, a physician, acquired a cough, as he supposed, from exposure to cold in making the arrangements for her funeral. But this was but the inception of a fatal phthisis of the more ordinary variety.

Another group comprises a mother, daughter and son.

I saw the mother and daughter but once, in consultation with the attending physician, Dr. M. Fleming. The family had no inherited tendency to phthisis. The girl had been affected with hysterical paralysis and other manifestations of this protean disease. A physician who saw her had advised her going to St. Luke's Hospital. While there she was treated in a general ward, in which, according to her account, phthisical patients had their beds. At the time of going she was stout and plump, but shortly began to lose flesh. She remained until December, and then returned home. Soon after she began to have a cough. At the time of my visit, in the middle of May, 1880, she had a large cavity, with thin walls, in the upper lobe of the right lung. Her mother at this time, aged fifty, had spots of tubercular disease in the right upper lobe, some of these being in a state of incipient softening. In her case she had been taken with a cough some time in December. During the autumn she had been considerably prostrated in strength, in consequence of nursing a daughter through typhoid fever, contracted in the Catskill Mountains. Later a son, who at the time of my visit was well, also contracted the disease, and within a few months of one another they succumbed to the malady.

Some of the value of this case is destroyed by a doubt which attaches to the priority of the disease in the mother and daughter. In May the physical signs showed far more advanced trouble in the daughter, but the information about its time of inception of the cough in the two is indefinite. The daughter, however, ran down rapidly before leaving hospital, and before cough was a notable event. The case of the son presents a greater probability of contagion.

Still another recent observation is of interest.

R. S., who died Feb. 23, 1882, of phthisis after a two years' illness, was during the last three months confined to his room. After his death the room was occupied by his brother-in-law and his wife. On May 2, 1882, I saw this gentleman in consultation, he having acute phthisis of the left lung, with a good deal of pneumonic infiltration and rapid ulcerative disturbance. The disease began, according to his account, about five weeks after his brother-in-law's death.

I would add to these the following groups, seen within the last three months.

A young man, engaged to a girl in whose family there was no phthisical taint, became consumptive and died. She was much with him during his illness, and shortly before his death became affected with a cough, which later terminated in death. Her sister, who was much with her during her illness, soon became affected with a cough, which proved chronic, for it had lasted six years at the time of her visit to me during an exacerbation. This was due to a new extension of the disease to the upper part of the left lung, it having been previously confined to the right, as I learned from friends' account of previous medical examinations.

The next group comprises five persons.

The first, a young man sixteen years of age, died of phthisis after several months' illness, four years ago. A sister, aged twenty-two years, who had been much with her brother, after the lapse of a year showed evidences of the disease, and died two years ago. The mother then became ill, but there was an apparent interval between the daughter's death and the commencement of her sickness of some months. Yet, as her daughter says, she had a wheezing in her chest before her sister died, for which she used poultices; it is not improbable that the disease was present already.

She died August 5, 1882. The first that I saw of the family was when I was called to examine one of the three surviving daughters, eighteen years of age. She had had repeated hæmorrhages from the lungs for three weeks, and on examination showed evidences of phthisis at the apex of the lung. Whilst writing this account still another sister has called on me to ask what her sister had better do, and, as the result of a request on my part that I might examine her lungs, I find that she has decided trouble at the right apex, though ignorant of it. These two sisters were much with their mother while ill. There were no hereditary tendency to phthisis on either side of this family.

In addition to these, I have lately examined a young woman who became ill with her phthisis shortly before her mother's death from this disease. Recently, at Bellevue Hospital, a woman ill with consumption had just become affected at the time of her husband's death from this malady. A gentleman a few days since complained of his misfortune in losing the services of a valued clerk, owing to his having fallen a victim to phthisis. On inquiry he said that the man had been closely attentive to his wife, who had recently died after a two years' illness.

The reader can find a number of striking cases collected in Dr. De Musgrave Clay's little work, published in Paris in 1879, or a smaller series, mainly from this source, in the work by Clapp, of Boston.

I add these cases to those which have been published by others, hoping that they may draw attention to this matter, which is one of great importance. I know that many people can be exposed for long periods of time without injury. But the question is, does phthisis spread by the reception of tubercular poison (bacillus?) by those favorably disposed to it, who would otherwise have escaped? In the wards which I visit at Bellevue Hospital are subordinates and attendants who have been there for years, notwithstanding that numerous phthisical patients have lived and died there. This, however, proves nothing more than that those persons have not taken the disease. As an illustration of the want of weight which should be accorded to these negative facts I will use the following illustration:

Some soldiers go through a campaign without injury, whilst others are killed. One might say that bullets, etc., will not kill, because these soldiers escape. Moreover, the disease is slow in its progress, and it is only after a considerable time has elapsed that one can trace the connection; and when several members of a family have died in succession, this is explained on the basis of an hereditary taint. Every physician must have noticed the strong predisposition which some individuals exhibit to diseases known to be contagious. So much so that they at times fall victims, whilst the cause of the poison escapes. I saw this exemplified in the late outbreak of typhus in this city. The physicians under the Board of Health who examined the cases, the physicians who had charge of the cases, the ambulance drivers who removed them, escaped. Cases were for a time in Bellevue, Charity, Roosevelt, Mt. Sinai, St. Vincent's, the German, and other hospitals, yet only three physicians in this city and Brooklyn contracted the disease; one each at Bellevue, the Homœopathic, and at Flatbush hospitals. These physicians were not as much exposed as others.

In one instance a nurse, who had charge of several cases in one family, where the disease had been contracted by two of the children standing near an ambulance, which removed a person sick with typhus, without having the disease herself, conveyed it to a man who occupied a room belonging to the family with

which she boarded. She slept during the day on a lounge, on which this man would lie when he came home tired from his work. An attendant in the Smallpox Hospital, contracted the disease, though she had not been in contact with a patient, or the clothing of a patient. She simply came in contact with others who had attended patients sick with typhus, though these did not sicken with the disease. I knew of but one case occurring in the better-to-do class of people, and that was in the person of a merchant whose store is on Broadway. He said that he had seen no one sick with the disease, allowed no peddlers or tramps in his store, always rode in the elevated cars to his home, which was in a part of the city where the disease did not prevail. He contracted the disease by a minimum of exposure at an unknown time, and in an unknown manner. The nurse who took care of him and the physicians who visited him, did not contract the disease, though unprotected. I have chosen typhus fever as an illustration because of its admitted contagiousness, and of its usual requirement of rather prolonged exposure, to show in a clear light the necessity of a third factor beyond the individual and the poison, which, for the lack of a better name, I call predisposition, or, better still, a suitable condition of the system. It may be that with phthisis to a greater extent than with typhus, a prolonged exposure acts only by allowing the poison of the disease to take root, because at some time during this prolonged exposure, it meets with favorable conditions for its growth. Had I not made careful inquiry, I should have remained ignorant of the majority of the facts here presented. I presume that the hurry incident to practice prevents many physicians from becoming cognizant of similar instances. These cases and others recorded in the literature of the subject have impressed me sufficiently to lead me to give some words of caution upon the continuous use of the same room, and to prohibit in the main the use of the same bed. Also to insist upon those waiting upon phthisical patients having plenty of out-door air and exercise. As regards the phthisis being conveyed to dogs, I believe that amongst the people there must be a superstition, that if the disease can be transmitted to an animal then the person having it may escape. At least I have been asked on several occasions questions which seemed to point in that direction.—*Archives of Medicine.*

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THE
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EDITED BY

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DISPLACEMENTS OF THE UTERUS.

A LECTURE DELIVERED AT BELLEVUE MEDICAL COLLEGE.

BY

PROF. WM. T. LUSK, M.D.

Gentlemen:—In our last lecture we considered the etiology, the pathology, and the symptoms produced by uterine displacement. In treatment we distinguish two main classes. First, where the primary condition is a relaxed and flabby state of the uterus and in which there are no secondary changes, cases in which the state of the uterine tissues and of the uterine supports is the cause of displacement. Second, where, as the result of displacement, secondary changes have been produced. I may mention, however, still another class, where the displacement takes place suddenly, from a fall or concussion.

Rokitansky observed that in most uterine displacements met with in post-mortem examinations atrophy of the tissues of the uterus was marked at the point of flexion, and concluded that the flexion was the result of this condition. But most clinical observers believe this atrophy to be due to the flexion, and is a secondary rather than a primary lesion. Very frequently in autopsies peritoneal adhesions are found between the uterus and the pelvic viscera. Virchow regarded the contraction of these bands as the active cause of retro-displacements. This is possibly the case in exceptional instances, but I do not think it is very common.

Usually when these bands of adhesion are found, it is probable that the adhesive form of peritonitis supervened subsequent to the displacement. Now you must bear in mind these various forms of displacement in adopting a plan of treatment. The first thing you need to acquire by practice is the art of replacing a retroflexed uterus. The old way taught by Simpson consisted in introducing the sound and then with curve reversed into the uterus replacing the organ by directing the point to the front. The Simpson's sound commonly sold in the shops is not a little changed from the original model. The Simpson sound was of German silver, the instrument of the shop is of copper. In the Simpson's original sound a bulbous enlargement two and a half inches from the point, marked the normal length of the uterus. The instrument makers in this country have for some unknown reason substituted for this bulbous enlargement a flattened and notched bead. This destroys flexibility of the sound and interferes with the attempt to curve it so that it may correspond with the direction of the replaced uterus. Indeed I have seen it break at the notch. And there is a tendency after a few months' use for the extremity to become twisted like a cork screw. When you speak to the instrument makers of these defects they will say that they find no difficulty in selling them in their present shape, and so as long as people continue to buy them they are content, just as certain manufacturers of tomato catsup for a half century have persisted in putting perforated corks into the mouths of the bottles, which make it impossible to pour out the contents without smearing the outside surface, in spite of the annoyance the device causes to consumers.

In using the sound to replace a retroverted or a retroflexed uterus, it should first be bent to the direction of the canal, and then introduced, under the guidance of the finger, to the os externum, and into the uterine cavity. By causing the instrument to revolve slowly the uterus is brought forward into its natural position. Sims says that we must never turn the sound in the uterine cavity, for as the distal end then describes a radius of $2\frac{1}{2}$ inches, it is liable to injure the intra-uterine tissues. This is true if the rotation be improperly made at the handle but as ordinarily performed, viz. by sweeping the handle in a wide circle so that the end of the instrument is made to rotate upon its axis, it is difficult to see what harm can result from its employment as a redressor. After turning the sound in the uterine cavity, the handle should be depressed to carry the uterus forward into its proper position. Though I have never seen any harm come from this method of replacement, yet as it is reported to be not devoid of danger, and as there are better methods at our disposal I rarely use this one at the present time.

Here is a uterine repositor devised by Sims, which is very ingenious. At a point about two inches from

the end it is furnished with a point fixed, on a pivot, to a ball or disk. The extremity can be set by turning it at any desired angle, and can then be passed into the uterine cavity. If the spring is withdrawn and the instrument depressed, pushing the mouth of the womb downward and backward into the posterior position, the uterine-stem revolves forward and carries the womb with it into the normal position. The objection to this repositer is, that it is rather hard to introduce and does not work so well in its action as in demonstrating the class.

Another method of replacing the uterus consists in the patient lying on the back, with her knees bent, the hands and feet resting on the floor, and the pubis and pressing steadily downwards until the hand can be introduced with the stem into the vagina. The hand, with the fingers curled, the thumb on the inside of the thigh, is then pushed forward, the middle finger and thumb, the upper hand, serve as the handle, and directs it forward while the cervix is pushed simultaneously backward. By this conjoined action of the hands the uterus may be raised into its normal position. This method, though it is not applicable to all the retroflexes on Grävis's plan, is not a very successful plan, falling short of the foregoing. Various contrivances, fully the abdominal press, should be used, and in some cases the manual process, per se, will do. I prefer to resist your efforts by contracting the abdominal muscles. Another way of replacing the uterus consists in raising the cervix with the finger, and drawing it downward, and lifting the fundus with a sponge, pressing it upward into the vagina along its posterior wall, and at the same time, with a second sponge placed in front, pushing the cervix backward towards the sacrum; thus the uterus is made to rotate like a wheel upon its axis. This is not always so easy a procedure as might be supposed from the description, for the weight and pressure of the intestines resting upon the anterior surface of the displaced fundus, must be encountered before the uterus can be pushed into its proper place.

The plan I use in most cases is, I think, by far the best. It consists in placing the patient in the knee-chest position. Let her first kneel upon the edge of the table and then bend forward until the chest rests upon the table, thighs perpendicular, with the arms drooping over the edge and with the head turned so that the cheek rests on the pillow. While in this position the weight of the intestines falls from the uterus by the force of gravity. It is remarkable how easily a retroverted uterus can then be replaced, when the fundus is lifted and pushed upwards by the finger in the vagina. As soon as the organ is raised sufficiently and the weight of the intestines is removed from the retroflexed organ the uterus falls forward to its proper position. In many cases where the uterus seems to be fixed in its abnormal position so firmly that replacement seems impossible, in many cases where the uterus is supposed to be held down by inflammatory adhesions, it will be found that replacement becomes easy by this method after all others have failed. In practicing this manœuvre it is important to remember that no effective pressure upward on the fundus can be made until the patient has exerted a counteracting force by contracting the abdominal muscles. Remember, in replacing a retroverted uterus, that in the first place the patient's position is important; next, not to be in too great a hurry; and finally, to persevere with confidence in the eventual success of the manœuvre; and with these points firmly fixed in your mind you are certain to succeed in most cases. If you are not successful in the first attempt, tell your patient to go home and to assume the knee-chest position

herself for five minutes every night and morning, and at the same time to separate the labia so as to allow air to fill the vagina. Sometimes you will find, when the patient returns after three or four days, that the uterus is already in its proper place; and when this is not the case, the difficulty previously experienced, of raising the uterus forwards into position, will be found to have disappeared. I prefer this method to all others, although it is open to the objection of being a disagreeable position for a patient to assume. It possesses, however, the great advantage, that as the uterus falls into position almost without assistance, no irritation or injury to the parts is caused by rough handling, and hence the usual precaution of directing the patient to keep quiet for a few days following the operation can be dispensed with.

In the treatment of retroflexions it is well to bear in mind the different forms in mind. In one case the uterus is tilted from a fall of the fundus, and in some cases it will merely return to its normal position. These cases are comparatively rare. In some the inflammation has caused results from which recovery is a condition of the uterine tissues and position. In some cases the uterus is fixed in its position into the chest. The nutrition should be increased by good food and pure air. Good results are often obtained by gymnastics among the mountains or at the seashore, where the patient can be in abundance of pure air. At the same time they should daily immerse their feet in solutions of cool or tepid water. The vagina should be treated as a reaction takes place, and must be sent to the pelvic organs. Their nutrition should be improved, the cool water acting as a stimulus, which tends to relieve the atony of the uterine tissues. As a rule not much is accomplished at first by the use of pessaries in cases of relaxed uterine tissue. The result is apt to bend over the instrument.

If with a patient who cannot tolerate pessaries or where pessaries fail to give needed support, you have in abundance of time to spend upon the case you can generally do much good by packing the vagina daily with pledgets of cotton soaked in glycerine. Boganman and Taliaferro and others recommended this method for all their cases. The uterus should first be returned to its proper position, and then the cotton should be packed in the vagina in front of the cervix, so as to retain the uterus in place. After such daily treatment, in the course of five or six weeks it is remarkable what an improvement will have taken place. The great objection to this plan is that but comparatively few patients are willing to come to a physician's office daily for a sufficient time to reap any great improvement.

In cases where in childless women cervical catarrh causes distension of the cervix, and secondary dilatation of the uterus is the cause of displacement the treatment should be inaugurated by dilatation of the os externum. Then introducing the uterine sound to replace the organ often acts as a stimulus to uterine retraction. Sometimes after stretching the cervical canal with the dilator good results are obtained by the injection of a few drops of glycerine into the uterine cavity, withdrawing the pessary with the syringe after leaving it in contact with the uterine mucous membrane for a few moments, the injection serving to excite the uterus to contract so as to close its abnormally dilated cavity. In cases where the uterus is itself congested, inflamed and very sensitive, where the uterine supports are relaxed, and where the weight of the uterus is increased, the first thing to be done is to diminish the excessive tenderness by restoring the uterus to its normal position, and then relieving the

congestion by the use of hot water ; vaginal injections of hot water will do more for the pain and tenderness than any other single remedy. When most of the sensitiveness has disappeared, the next thing required is, to retain the uterus in place, and for this purpose some form of pessary will be necessary.

I have here different varieties of pessaries to show you. This one is the old ring pessary of Dr. Meigs. It consists of a watch spring covered with rubber. In use it stretches upward the cul-de-sac of the vagina, the uterus settles down in front of the ring, and lies somewhat obliquely with the fundus inclined backward, but is prevented by the pessary from again becoming retroflexed. So soon as the uterus is straightened in this way the circulation becomes restored to the normal state, and the secondary changes in the vaginal membrane resulting from the displacement are often entirely removed. The Meigs' ring needs, however, careful watching as it is apt to cut deeply into the vaginal tissues. Less harmful in practice are the ring pessaries of Dr. Peaslee, consisting of light whalebone covered by a thick rubber coating, which are both soft and elastic. Few women are so sensitive that they can not wear them and they possess a real utility in sustaining the fundus until the congestion which has existed in the posterior uterine wall has subsided. They are also very useful in displacement where there exists no posterior vaginal cul-de-sac. They then act by stretching the whole of the vagina and thus by supporting and steadying the uterus, they give a certain amount of relief until the vagina has become sufficiently distended to permit the presence of pessaries which act upon the posterior uterine wall.

The pessaries I now show you are for permanent use, they are all modifications of Hodge's. When introduced into the vagina and placed in position the lower portion rests against the anterior vaginal wall—urethro-vaginal septum, the instrument has an S the shaped curve, the upper end occupying the posterior vaginal cul-de-sac. The Hodge pessary acts as a lever. The anterior or lower portion resting against the anterior vaginal wall behind the pubes, while the upper convex portion rests as stated against the posterior vaginal wall, and well up behind the uterus, so that whenever the abdominal pressure tends to press the uterus backwards, the same force acting on the lower end of the pessary tends to push the upper portion against the uterus and thus to drive the body forward. The rectangular Hodge pessaries were once in general use but now have been superseded by modified forms introduced by Dr. Albert Smith of Philadelphia. The main change consists in narrowing the pessary toward the lower end, so as to adapt its shape to that of the vagina.

Dr. Simpson used to have gutta-percha pessaries made by his office assistants for his pauper patients, of whom he treated a great number gratuitously. This one I brought from his office nearly twenty years ago and you see how close a resemblance it has to that of Smith.

Soft pessaries of the Albert Smith form made of whalebone spring surrounded by rubber like Peaslee's are often very serviceable in young girls, or where the vagina is very sensitive, in such cases after a time the parts often become more tolerant and permit the use of hard rubber pessaries. The advantage of hard pessaries is that they do not shrivel up when soaked by the discharges, nor smell as badly as the rubber ones are apt to do when left for some time in position. Dr. Thomas's bulb pessary has a rounded bar at fundal end which passes up behind the uterus and fills the

posterior cul-de-sac of the vagina, where a pessary is to be worn for a long period of time no other form in my experience is so likely to be tolerated by the patient. Besides it possesses the advantage of more effectually preventing the recurrence of displacement than the other models.

Some practitioners prefer to shape their own pessaries as needed, employing for the purpose rings of copper wire covered with rubber, adapting each pessary to the special case before them. But the bulk of gynecologists are but indifferent mechanics, and by such, with a large assortment of the manufactured pessaries, the art of selecting the proper instrument is easily acquired.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, DEC. 13TH, 1882.

Dr. G. M. Peabody presided. The minutes of the preceding meeting were read and approved.

Dr. Peabody, in behalf of a candidate, presented a specimen of sub-mucous and sub-peritoneal

"FIBRO-MYOMA OF UTERUS AND CYSTIC TUMOR OF OVARY."

Dr. Chamberlain presented a specimen of

"OVARIAN DERMOID CYST."

The patient was 34 years old, married, and had had two children. Was well up to the time of the birth of second child. Then began to suffer from constant pain in the back and excessive nervousness. On examination a tumor the size of a turkey egg was found in the left ovarian region, which was movable and tender on pressure. The tumor was removed, and was found to be filled with hair, containing no bone or teeth and but little fluid. The interesting feature of the case was the fact that there had been no interference with menstruation, which function had been regularly and normally performed.

Dr. H. Marion-Sims presented a specimen of

"DERMOID CYST"

which had been removed 19 days ago. The patient was 52 years old, and had been married sixteen years. She had menstruated regularly till married, when she became pregnant but miscarried at the seventh month, the child being dead in utero. She developed peritonitis at this time, and this continued in subacute form for two years. Five years ago she had her menopause. Since then she complained of pain in side, and on examination a tumor was found in the ovarian region, which grew rapidly, and it was decided to remove it.

This Dr. Sims had done, assisted by Dr. Wylie. The tumor had numerous adhesions, and on being aspirated discharged three quarts of milky fluid. The tumor weighed nine pounds, was of the color and consistency of oleo-margarine, and contained a mass of silky golden hair, and a piece of skin with a curl attached. Though the attempt had been made to enucleate the sac, it was so firmly attached that it was decided to stitch the edges of the sac to the wound, which was accordingly done. The patient rallied well, her temperature never going beyond 102½, and now, on the nineteenth day after operation, was doing well in every respect. Microscopic examination showed the cyst to

contain an unusual number of sebaceous glands, but no sweat glands. It was homogeneous and translucent.

Dr. Wylie remarked that this was a good illustration of what might be done when the sac of a tumor was adherent. In this case a drainage tube was inserted, the first being taken out on the fifth day.

Dr. Van Giesen, also presented a specimen of

"DERMOID CYST."

Diagnosis was not made till after death.

The patient, a German, 53 years old, married, was admitted to the hospital October 9th, 1882, complaining of nausea without vomiting, and of pain in the right iliac fossa. In this region a tumor was found excessively tender on pressure, the pain being of a lancinating character. Morphia was given, but pain continued and began to be accompanied by vomiting, the ejected matter containing no blood. All nourishment and medicine was finally rejected, and the patient died from exhaustion Nov. 22d, 1882.

Post-mortem.—The cyst presented was found in the broad ligament, not in the ovary or fallopian tube as is usual, and was attached to the pelvic wall. The cyst contained bony tissue, hair, fat, and cholesterolin. The stomach was the seat of carcinoma, though no pain was referred to this region during life. The mesenteric glands were enlarged and there was secondary deposit in the liver.

Dr. Van Giesen presented a second specimen,

"A PHARYNX AND PORTION OF TRACHEA THE SEAT OF DIPHTHERITIC DEPOSIT."

The specimen and history of the case illustrated the difficulty in diagnosing between croup and diphtheria. The patient, a boy $6\frac{1}{2}$ years old, was troubled for some time with a croupy cough. I was called to see him, and found on careful examination a small patch of diphtheritic membrane on each side of the pharynx, which might easily have escaped observation. Dyspnoea was not at all marked at this time. For about a week there was no apparent change in his condition, the membrane disappearing on one side. On the 7th day he was seized with extreme dyspnoea; temperature went up to 101, pulse 160, respirations 60. Tracheotomy was done and a large amount of pus and bronchial secretion evacuated. The dyspnoea was relieved, but the patient died, though no symptoms of toxæmia were developed. The throat in this case at first showed no membrane, while laryngeal stenosis was almost complete. In response to questions Dr. Van Giesen said that the boy had lived thirty-six hours after operation; his urine had not been examined. Dr. Van Giesen inquired of Dr. J. Lewis Smith, if he had seen cases of this kind in which there was no evidence of membrane above the epiglottis. Dr. Smith replied that he had, but that such cases were exceptional.

Dr. Garrish asked what per cent. of this class of cases in which tracheotomy was done recovered? Dr. Smith thought this would vary with the character of the epidemic, about one in five or six recovered. The prevailing sentiment was in favor of an early resort to tracheotomy.

Dr. Peabody, in this connection, remembered a hospital Christmas festival in Vienna at which seventeen children wearing tracheotomy tubes were present.

Dr. White asked if secondary trouble of the kidneys was a common accompaniment of diphtheria. Dr. Smith thought that it was, in severe cases.

Dr. Carpenter asked if it was known what propor-

tion of cases of diphtheria, with albumen in the urine, developed chronic Bright's disease.

Dr. Shradly exhibited a specimen of

"SPINDLE-CELLED, OSTEO-SARCOMA"

of the knee. The patient was 22 years old, and had been well up to a year ago, when he had injured his right knee so severely as to be laid up three weeks. He seemed to recover, however, and suffered no inconvenience till last August, when the pain returned, and a small swelling appeared on the inside of the knee, just within the condyle. He deferred treatment, and the swelling increased in size till the middle of last October, when he entered my service in the Presbyterian Hospital. I found a diffused, globular swelling over the internal condyle, elastic, firm and homogeneous, and deeply attached; there were no enlarged veins, and no evidence of lymphatic involvement. I diagnosed osteo-sarcoma and advised amputation. In three weeks the tumor increased in size and became very painful. My diagnosis was confirmed by consultation, and operation was done.

Dr. Porter pronounced it spindle-celled sarcoma. There was very little muscular atrophy. The gross appearances were those of periosteal sarcoma. The prognosis of this variety of sarcoma was bad.

Dr. Ferguson presented a specimen showing the

"METHOD OF PREPARING ANEURISM FOR EXHIBITION."

Also two specimens showing

"PERSISTENT FORAMEN OVALE."

Also a fourth preparation illustrating

"MULTIPLE STRICTURE OF THE URETHRA."

The penis and bladder were exhibited. The patient, a native of the United States, æt. 40, single, a laborer, was admitted to New York Hospital Nov. 24th, 1881. He was much emaciated, and wanting in intelligence, so that a clear history could not be obtained extending further back than two weeks. He suffered from dribbling of urine with loss of projectile force. Twenty-four hours before admission he had complete retention. The bladder was aspirated and ten ounces of bloody urine drawn. The finest instruments could not be passed through the urethra.

Strange to say he began to pass urine normally and from this time to death the urethra permitted of the urine being drawn by catheter.

At autopsy the bladder contained 18 ozs. of bloody urine, the bladder was hypertrophied and there were 2 close strictures of the urethra one at $2\frac{1}{2}$ inches, the other at the bulbo-membranous junction. Two false passages in the urethra were also demonstrable.

Dr. Wylie presented a specimen of

"CYSTIC FIBROMA OF OVARY"

The specimen was a rare one. The patient was 24 years old and a domestic by occupation. The uterus was normal and had no attachment to the growth. operation was done on Oct. 17th. The tumor was tapped and about a gallon of dark fluid drawn off. It had numerous adhesions. These were torn loose, the pedicle cut and tied with silk ligature and a drainage tube inserted. The wound was left open two hours. Action of the bowels was feared, so the patient was not fed for 48 hours. In 10 days, she was sent to the general ward.

The tumor was sent to Dr. Welch for microscopic examination and Dr. Wylie submitted in detail the re-

sult of this examination. The case illustrated that it was important in case of adherent tumors to operate early while the adhesions were fresh.

Dr. Lee thought the point made as to early operation should be emphasized.

Dr. J. L. Smith presented a specimen showing the lesions of

"PSEUDO-MEMBRANOUS LARYNGITIS"

which occurred in the course of scarlet fever. The patient a child 6 years old was taken Nov. 21st with sore throat. Fauces red, tonsils swollen, eyes injected. Temperature 102 to 103½ on the next day an efflorescence was developed which was generally distributed over the body but appeared most marked in patches. On the 23rd the eruption was well out, the child was delirious and the pseudo membrane over the larynx was observed. Intense dyspnoea was developed by the 6th day and the child died. At autopsy the lesions of pseudo membranous laryngitis were found.

Dr. Beverly Robinson presented two specimens, one of

"VALVULAR DISEASE OF THE HEART WITH ATROPHIED KIDNEYS;"

the second,

"CYSTIC DEGENERATION OF KIDNEY AND DEGENERATION OF ANTERIOR CORONARY ARTERY."

The Society then went into executive session.

450TH REGULAR MEETING OF THE MEDICAL AND SURGICAL SOCIETY OF BALTIMORE.

Called to order by Dr. O. J. Coskery, President. Minutes of last meeting read and approved.

Dr. Cuddy read an article from a current number of the *Medical News*, contributed by Prof. Bemis, on the

"DISTINCTION BETWEEN THE TYPHOID STATE OR CONDITION FOLLOWING WASTING DISEASES"

and typhoid fever as seen in complication with malaria, sustaining the argument adduced by himself (Dr. Cuddy) in a paper read before this Society a few weeks ago, on the

"COEXISTENCE OF TWO DISEASES AT ONE AND THE SAME TIME,"

and their analogy in so far as a relationship between cause and effect.

Dr. Rohe believes that two diseases may exist at the same time, and related a case of undoubted small pox with erysipelas. Dr. Reid thinks that if two diseases be present, one will be held in abeyance until the stronger has asserted itself. Drs. Erich, Reynolds, Chambers, and Coskery agree with Dr. Reid, and cited cases of vaccinia held in abeyance until desquamation from measles or scarlet fever.

Dr. Coskery referred to Dr. Brower, of the Medical College of Chicago, who had discovered the bacillus of tetanus in a boy and horse during the virulence of the disease; but also found this same micro-organism in both the mother and sister of this boy, as also in the boy after his recovery. Had seen enough of chickahominy fever to become convinced of the synonymy with typho-malaria.

Dr. Caldwell said that a very sore arm would be looked for in vaccination of a syphilitic subject.

Dr. A. C. Pole showed a bottle containing (441) four hundred and forty-one lumbricoid worms, expelled during five weeks of active treatment, from child aged seven years. Had used calomel with only slight effect. Santonin followed by strangury. But the best results he derived from chenopodium.

Dr. Monmonier showed a specimen of

"OSSIFIED THYROID CARTILAGE"

from man aged about fifty-five years.

Dr. Scarf, having exhausted every means at his command, asked the members of the Society for the best treatment in a case as follows:

The patient, a girl, who will be nine years old next February, was brought to him three weeks ago by her mother, with a history of catalepsy some three or four years ago. For the last one and one-half (1½) years this girl has displayed a desire, gradually increasing in intensity, to attempt to force man or woman, black or white, to gratify her desire of cunda lip (sucking genitals). During an attack of this kind she has broken two teeth upon a back of a chair. The doctor himself having seen her attempt to open the coachman's pants.

Dr. Reid suggested that this case might be one of early cultivation of taste, similar to one occurring in his own practice, where a man instructed his niece.

Dr. Coskery considers it under the old term of moral insanity; Dr. Chambers, cerebral defect or alteration.

Dr. Parker said that Dr. Gundy, of Springfield Asylum, uses large doses of tr. ferri chlor for masturbators.

Dr. Erich thinks that the case under consideration might be due to an enlarged ovary, and cited a case of the kind cured by kali iod, grs. x, doses t. i. d. Also spoke of a boy, aged six years, who had been instructed by the nurse, and cured by the rod.

Dr. Caldwell should expect to find local abnormalities on vaginal examination.

Professor O. J. Coskery, then reported the following:

"TEN CASES OF SECONDARY HÆMORRHAGE."

CASE I.—A private belonging to a New York regiment was shot in the upper lip, just below the right *ala nasi*, the ball coming out on the right side of the neck between the *trapezius* and *sterno-mastoid* muscles. Frequent hæmorrhages, of different degrees, but generally small, took place through the mouth. On consultation, it was decided to tie the internal carotid artery, that being the vessel injured, in the mind of the gentleman who was going to operate. The operation was very skillfully done, but the patient died on the table. A post-mortem revealed a cleanly-cut wound of the *external* carotid, just outside of the right tonsil.

CASE II.—A member of an Ohio regiment had his thigh amputated in the middle-third. Oozing continued pretty steadily until some four days after the operation, when it became so profuse as to call for interference. The flaps were opened up, and surfaces exposed to the air, when all bleeding ceased. The wound was allowed to glaze, flaps again brought together, and hæmorrhage never recurred.

CASE III.—A phagedenic sloughing of wound of palm of hand, produced by gun-shot. The application of per-sulphate of iron was unsuccessful, and a graduated compress of charpie forced deeply into the wound was followed by complete recovery.

CASE IV.—An amputation of the shoulder joint where the ligature came away from the axillary artery

on the tenth day, and secondary hæmorrhage occurred on the eighth day thereafter, or eighteen days after the operation. The patient bled to the extent of half a pint, and the bleeding was then controlled by pressure upon subclavian on upper border of first rib. This pressure was continued for half an hour, and the bleeding never returned, the patient completely recovered.

CASE V.—A young man received so severe a crush of the left arm and wrist as to necessitate amputation of the fore arm. This was done after the application of Esmarch's bandage. During the recovery from chloroform, bleeding came on; the flaps were opened up, and an artery which had not bled, nor been seen during the operation, and which lay between the *flexores sublimis* and *profundus* muscles, was tied. The flaps were again brought together, and the patient did perfectly well.

CASE VI.—A young colored man from whom I removed a fibro-articular tumor, situated on the right side of the neck, and which weighed 3 lb. 10 oz. Nearly three hours after completion of operation hæmorrhage came on, and was only arrested by the application of tannic acid ligatures. The patient got up, nearly well, twenty-one days after the operation.

CASE VII.—For compound dislocation of right astragalus inwards, amputation of middle third of leg was done. The ligatures held badly, three attempts upon the anterior tibial, and four upon the posterior tibial, being made before the strings stopped cutting through. A small bleeding occurred within twenty-four hours, a larger one inside of twelve hours more, and another within twelve hours more. Having found out by this time that my patient was a subject of hæmophilia, in consideration of the brittleness of the artery in the site of the wound, and of the condition of the patient (sthenic traumatic delirium), the treatment was beset with difficulties. The bleeding was clearly from the *posterior tibial artery*. Half a drachm of powdered *sub-sulphate of iron* was stuffed up some distance behind the tibia, a graduated compress applied, the flaps not brought together, but a tight bandage put on over the leg and compress. The patient never bled again, all other ugly symptoms ceased, and he is now going about on an artificial foot, nearly two years after the accident.

CASE VIII.—A young man had an ununited fracture of the lower third of left leg. Resection of both bones was done. Everything seemed to be going on well, when, falling again, and getting the ends of the fragments in bad position, he lost heart, and would have nothing further done. When I saw him first, three years after the original injury, the condition was as follows: The sole of the foot looked towards the right leg, and the lower third of the left leg was firmly united to the upper portion at a right angle. The foot was of course useless. Amputation was done just above the deformity, but, like the foregoing case, several applications of the ligatures were made before they held. On the second day thereafter some oozing was noticed, and on the third day a copious hæmorrhage took place. The flaps were opened up, a mass of soft tissue, in which could be seen the bleeding point, was dipped for with the tenaculum, and tied, and the patient got well without further bleeding.

CASE IX.—A medical gentleman of this city, aged 43 while out on the western plains four years ago, first noticed a small sore situated just below the lobe of the ear. This sore soon developed all the typical appearances of epithelioma of the skin, and when I first saw him, in the early part of last September, there was a large ulcerated surface upon the right side of the neck,

extending from above the level of the concha (the ear itself had almost disappeared), to near the clavicle, two inches wide in its widest part, and fully three-quarters of an inch deep. Two weeks before admission into hospital a profuse bleeding had occurred. Within a week, while making a slight effort, another bleeding took place, which was easily controlled by pressure with the finger. Hæmorrhage recurred at intervals, every time easily stopped by the finger and graduated compress, until death took place from exhaustion. Ligation of the common carotid was not performed for obvious reasons.

CASE X.—A young man 17 years of age, last April was thrown from a horse, cut in Indian Territory, receiving a compound comminuted fracture of the right tibia, bone. Union took place with great firmity, and he came to closely resemble mild formity, and usefulness. Case No. 8. Amputation was done: same difficulty was experienced in holding the interosseous arteries to the ligature, and slight oozing took place. On the fifth day hæmorrhage followed, and was arrested by pressure to the extent of one finger, which was continued by pressure upon the femoral artery, continued for nearly fifteen minutes. Bleeding then ceased, and the boy's leg was healed.

Of these nine cases, Nos. 5 and 6, made the case, as it were, of consecutive hæmorrhage, and not of secondary hæmorrhage, but I have thought well to introduce them. While all were under my immediate care, in the first one only were any operative procedures carried out by any other than myself. Two cases died—one from bleeding from the external carotid artery, the other from the internal carotid. In one case, No. 2, simple exposure of the flaps to the air was sufficient. In three cases, 3, 7 and 9, compression at the bleeding point was resorted to, in one, assisted by powdered sub-sulphate of iron. In two, 4 and 10, pressure between the heart and point of hæmorrhage was adopted. In three, 5, 6 and 8, opening the flaps and tying in the wound was successful. In one case only, ligation of what was supposed to be the bleeding vessel, the internal carotid artery, was done in its continuity—unsuccessful.

Dr. Reid considers Dr. Coskery's paper an extremely interesting one to the practical physician, as illustrating the many methods of arresting both primary and secondary hæmorrhages. Of special interest is Case No. 7, where bleeding from a large vessel as the tibial artery was arrested by means of the persulphate of iron and the graduated compress.

Dr. Caldwell, during hospital service, had frequently been obliged to arrest hæmorrhage from a large vessel by means of ice on account of the phagadenic sloughing of hospital gangrene.

Dr. Erich spoke of a case of extirpation of a mammary fibroid tumor in a hæmophilia subject, when the capillary arterial oozing could only be arrested by firm coaptation of the bleeding surface. Fearing bad results from pent-up discharges, an examination was made two days later, when hæmorrhage recurred, erysipelas set in; the temperature veering from $102\frac{1}{2}^{\circ}$ to 107° , with no regular diurnal variation, nor markedly yielding to twenty gr. doses of Qui. every four and six hours. Several days ago the temperature was $105\frac{1}{2}^{\circ}$ at 9 o'clock A. M., and $100\frac{1}{2}^{\circ}$ at 1 o'clock P. M., with pulse 78. During all this time the erysipelatous blush would fade at some point and reappear at another. The patient is now doing well on carbolic acid, aconite, and glycerine, per directions of Dr. Lynch, who is inclined to consider the case as one of suppræmia.

Dr. Chambers thinks cases Nos. 5 and 6 of interest, as showing the probability of consecutive hæmorrhage after the normal pulse is re-established from the cardiac depression of chloroform. Should not suppose that half-hour pressure on the subclavian would arrest secondary hæmorrhage from the axillary.

Dr. Coskery closed the discussion by saying that the method pursued in case No. 7 was on account of the sloughened condition of the parts, an attempt having been made to ligate the vessel with surrounding tissue. Two days after the dressing was removed and discharge let out. One week thereafter everything was removed; but it was a year before the wound had healed perfectly. Thinks that half-hours pressure on the subclavian allowed of the formation of a new clot behind the partly absorbed old clot in Case No. 4.

No report of Executive Committee.

Dr. Coskery handed in the name of Dr. Lewis C. Horne, cor. Mulberry and Chatsworth streets, for membership.

Dr. Caldwell opens the next discussion on Some points in Vaccination, on Dec. 13th. Dec. 20th, Dr. C. F. Barr, on Lithotomy, with cases. Dec. 27th, Dr. Rennolds, on ———. Jan. 3, 1883, Dr. C. H. Coskery, on Urinary Examinations, with exhibition of Slides of Deposits.

SELECTIONS FROM JOURNALS.

THERAPEUTIC EFFECTS OF HYOSCYAMINE.

By THOMAS BROWNE, M.D., Staff-Surgeon, R.N.

Hyoscyamine has been in use for more than two years, and its effects have been the subject of careful observation on the part of Dr. Duncan Hilston and myself during that time. At his suggestion I have drawn up the following account of its use, dose, and mode of administration. The views set forth are, therefore, the outcome of our combined observation, and of notes made from day to day. The report will summarize, as shortly as possible, the therapeutic experience of this alkaloid which has been gained, point out the dangers and difficulties met with in its use, as well as the good effects which have seemed to follow from its administration. A few typical cases will be selected to illustrate its suitability and action in certain excited conditions of insane patients.

The dose and mode of administration of such a powerful alkaloid first demanded most careful consideration. Numerous notices of the use of hyoscyamine have appeared, from time to time, in the current medical literature; but the dose given or suggested has varied in the most startling way, from one-hundredth to three-fourths of a grain, or even a grain; while important and equal results have been supposed to follow each of these extreme doses in the hands of different prescribers. Then, again, no solution of a recognized or accepted standard strength had been decided on. Every writer tried to find for himself what was most convenient.

The form of the alkaloid used has been, invariably, Merck's crystalline hyoscyamine. In the earlier instances it was used in a solution of one grain in two hundred, administered by the mouth, in gradually increasing doses, beginning with one-hundredth of a grain. No observable effect was produced until one-twentieth of a grain was given at a time, and no very marked effect followed such a dose. It was therefore

determined to adopt a solution of more convenient strength, and one more in harmony with the common pharmacopœial alkaloids—namely, four grains to the ounce. The following formula for its preparation was brought into use, and has been found to meet every requirement as to strength, but lacks stability: Hyoscyamine (Merck's crystalline), four grains; glycerine, distilled water, of each half an ounce; carbolic acid, two minims; dissolve without heat. Dose, four to eight minims, given hypodermically.

It is very important to make the solution without heat, as heat renders the alkaloid nearly inert. Hyoscyamine is a most unstable alkaloid, and soon decomposes; so that the strength of any solution yet devised cannot be depended on for more than a month after its preparation. With this solution some satisfactory results were obtained; but, before giving one or two instances of this, it may be well to place on record the dangerous experience gained in cases where large doses were given by the mouth. The effects of the hyoscyamine, when so administered, varied much, both as to the time before it appeared, and also to its intensity and duration. This uncertainty of action was found to depend on the state of the digestion. If the alkaloid were given shortly after a meal, the effect was slight and transitory. Not recognizing this, at first, the dose had been gradually increased till half a grain was reached. As patients seemed to bear large doses well, an attempt was now made to prepare a special solution, for hypodermic use, of equal strength with the pharmacopœial hypodermic solution of morphia—namely, five grains to the drachm. A solution of this strength could only be made by the aid of heat; and, as this rendered the alkaloid nearly inert, the attempt was not repeated, especially as further experience showed such a solution to be unnecessary.

CASE I.—An useful lesson was taught by the case of William S., aged 36, a bandsman, who had been an inmate of the asylum for the last eight years, suffering from chronic mania, with occasional outbursts of violence. On March 9th, 1881, he was very violent and destructive, and refused his breakfast. At 8 A.M., he was given one-fourth of a grain of hyoscyamine by the mouth. By midday his pupils were widely dilated, and he had become quiet. This quiet gradually deepened, though he did not sleep; and by 6 P.M. he was almost powerless, unable to stand without assistance, hardly able to move his hands or to speak. His breathing was unaffected; but his pulse had fallen from its usual frequency of 75 to 50, and was, in addition, very weak; while the temperature in the axilla was only 96.2°, his ordinary range being 97.6° to 98.4°. His extremities were cold and clammy. His throat, so far as could be made out, was moist; at least, he could swallow with ease. This state of affairs was serious, and a cause of grave anxiety for a time. He was placed in bed, and hot-water bags applied to his feet, and an ounce of brandy with hot water and sugar was given. The extreme effects of the hyoscyamine gradually passed off, and by 10 P.M. his pulse and temperature had again become natural. He slept all night, and awoke in his usual state, except that his pupils remained dilated for forty-eight hours, and during that time he was disinclined for exertion. He has not been violent since, though his chronic mania continues.

In this case the dose of hyoscyamine was, beyond doubt, too powerful, and was followed by dangerous symptoms of collapse, from which, fortunately, the patient recovered; but the experience gained acted as a grave warning, and called attention sharply to the

risk incurred in using such large doses of this powerful alkaloid. As larger doses had been given with impunity, it was assumed that the unusually energetic action of the drug in this case depended on the state of the stomach, as regards digestion, when the medicine entered it. The stomach was empty, as the man had refused his breakfast. This experience, and another similar one, where the symptoms were nearly as alarming, decided the point in favor of smaller doses, given by the hypodermic method.

CASE II. serves to illustrate some points in the use of this drug, and may be taken as a type of patient in whom the gain was marked and immediate. C. C., aged 40, stoker, was admitted on November 4th, 1881, for melancholia. From gloomy and silent depression he gradually passed into a state of noisy and destructive mania, shouting incoherently, throwing himself off his bed, and dashing himself about, till he was much bruised, in spite of constant care on the part of the attendants. His restlessness was incessant, and he passed several days in succession without sleep. The use of hyoscyamine was begun in this case by the hypodermic injection of four minims (one-thirtieth of a grain) of the solution mentioned above. This was continued daily for several days, without any marked effect except that of moderately dilating the pupils. The drug was then omitted for twenty-four hours, at the end of which time his pupils had contracted to their usual size. As such a dose was not sufficient to control or moderate the restless violence of this patient, it was increased to eight minims (one-fifteenth of a grain), given hypodermically at 6 P.M. In fifteen minutes his pupils began to dilate, and, becoming quieter, he lay down in bed. Just before this, he had been jumping about the ward, resenting and resisting all persuasion to remain quiet or lie down. At 10 P.M. he was sound asleep, his pupils widely dilated. He could, however, be easily roused, but went to sleep again on being left alone, and slept for seven hours, and when he awoke his pupils had begun to contract again. He remained during that day quieter and more easily managed than he had been for a long time. The effect of the drug passed off in about twenty-four hours. We had now got the measure of this patient's power of resistance to the drug, and were thus able to regulate the dose in accordance with his seeming requirements. Often, from a restless, noisy, and destructive condition, he passed, while under the influence of the alkaloid, to a quiet and tractable state, easily managed by day, and obtaining several hours' sleep by night. Indeed, the soothing influence of the drug sometimes lasted for days; but at other times the nervous commotion seemed to get the better of the drug in about twelve hours, in which case an injection of eight minims (one-fifteenth of a grain) was given, night and morning, with the effect of procuring quiet and comfort both to himself and those about him. His excitement came on in periods, and during their continuance quiet and rest were secured by the use of hyoscyamine, without apparent injury to the patient. The drug was omitted whenever the excitement was only moderate; sometimes he would go for days without it, and the dose was occasionally reduced to four minims, when that dose seemed sufficient to mitigate his violence. In this case, the effect of the alkaloid could be depended on and foretold almost with precision, if the drug were given by the skin; while, if administered by the mouth, there was an uncertainty both as to period of onset, duration, and degree of effect. It had, however, no curative power beyond the calming and soothing influence, which n

doubt exerted a conservative effect on the patient's strength. As the excitement passed off, calmed and soothed by the drug, sleep seemed naturally to follow; he was disinclined for further effort, and, as in a child tired out with its own boisterous play, mind and body sank to rest.

CASE III.—C. S., aged 48, pensioner, suffering from general paralysis of the insane, was in that troublesome condition of unceasing motor activity often seen in these distressing cases, where they cannot keep still. He was most difficult to manage, full of delusions, yelling to have his head cut off, attacking or making darts at the other patients, pushing about and upsetting the furniture, tearing his clothes to shreds, jumping up the walls to reach the pictures, destroying everything on which he could lay hands, feet, or teeth; a perfect demon of destruction and unrest. Yet, on standing beside him, gently and firmly pressing him into a seat and remonstrating with him on his conduct, he would be recalled to his saner self for a moment, and, looking up, would seem to recognise for an instant the realities around him, and bursting into tears, describe only too well his own helpless condition in the piteous cry, "I cannot, cannot help it." In a second, he would be off again, and so from day to day. He was calmed and controlled by hyoscyamine; and it is noted that, in twenty minutes after the injection of eight minims (one-fifteenth of a grain), from the state above described, his pupils had become dilated, and he allowed himself to be dressed and remained quiet, not asleep, able to take his own food, and, on being placed on the closet-chair, passed urine. It will thus be seen that he was not rendered helpless by the drug, since he was able to feed himself and passed urine on invitation to do so. The effect of the hyoscyamine on the pupils had nearly passed off in twenty-four hours, but he remained quieter and more easily manageable for two days. So far as could be made out, no dryness of the tongue or throat followed such a dose. Often, one-thirtieth or one-fifteenth of a grain was sufficient to calm, control, and soothe this patient when he was otherwise nearly beyond the control either of himself or others. In this case, and in some similar cases, such a dose has been repeated every day, or every second day, for a fortnight, without any observable ill effects, but with great apparent gain to the patients who were, previously to its use, being rapidly exhausted by their restlessness and unceasing exertions.

CASE IV.—J. G., aged 34, is an example of its administration in acute mania. This patient was admitted from the Royal Naval Hospital at Plymouth, on May 4th, 1882. Eight men were required to remove him from Plymouth Hospital to the railway station. On admission at Yarmouth, he talked incessantly, raved and stormed in the foulest language. He was full of delusions without system or coherence. "He was a king, a duke, etc. God directed him to fight with people, with every one." And he instantly proceeded to obey the order, attacking every one about him. He was at once given eight minims (one-fifteenth of a grain) of the hyoscyamine solution by the skin at 9 P.M., and in twenty minutes he was quiet, and, with a little pressure, undressed, went to bed, and slept soundly all night. Next morning, May 5th, he was much quieter, and was able to walk in the square with an attendant, but he again became violent, and had eight minims at 11 A.M.; after which he remained quiet till 8 P.M., walking in the square, and quietly talking of his delusions. As he now became violent again the dose of eight minims was repeated, and he fell asleep in half an hour, sleeping till 2.30 A.M., May

6th, when he started up in terror of being murdered, and attacked those about him. He was partially quieted, and reassured by the presence of the medical officer, who repeated the dose of hyoscyamine at 3 A. M.; this was followed by sleep till 7 A. M. At 11 the alkaloid was given in a like dose, as he had again become violent. He was then taken into the open air, where he gradually became quiet, and walked up and down with an attendant. He had thus thirty-two minims, or a little over a quarter of a grain of hyoscyamine in twenty-four hours, viz., from 11 A. M. on 5th May till 11 A. M. on May 6th, with the result of calming and controlling his actions and ideas, for the latter even seemed to be moderated by the drug. He took his food well during this time, and did not appear to suffer from dryness of the throat. It was now determined to omit all medicine and try to manage him without drugs, and carefully note the result. No medicine was therefore given during the remainder of the 6th, 7th, 8th, and part of May 9th, and he was allowed to wander about the exercise-ground with every appearance of restraint removed. His violence was, however, often extreme and his language foul, abominable, and blasphemous beyond description; he only slept for a few minutes at a time, while a look of terror and haggard anxiety deepened on his face. On May 9th, at 10 P. M., a hypodermic injection of ten minims of the hyoscyamine solution was given. In half an hour he was asleep; he slept well all night, and awoke with a refreshed look he had not shown for days. As the hyoscyamine appeared to act so beneficially, it was continued from time to time, as his sleeplessness or violence required to be overcome. The dose was increased to fourteen minims on one occasion, when his violence was greater than usual. He had been dashing himself about and screaming for hours, but on this occasion the drug failed of its usual effect, for he still made feeble efforts to shout at or strike those about him though fully under the influence of the drug, as shown by his widely dilated pupils and staggering gait. On this occasion, too, his tongue and throat were dry; but whether this was caused by the hyoscyamine or by his continuous screaming, it is not possible to decide. Each probably had its share. He was still under his delusions, but in a dull, sleepy kind of way. He would start up occasionally as if irresistibly impelled by his mania, yet sinking down instantly, incapable of carrying out the intended action, or, it may be, the idea had vanished ere grasped. Hyoscyamine was finally omitted on May 18th, as he gradually became more manageable, his mania assumed a less pugnacious type, and he slept better at night.

Since hyoscyamine has been brought into use in this hospital, frequent efforts have been made to note accurately the effects of the alkaloid on the pulse and temperature. No trustworthy observations could, however, be made on patients in the state of those just related. But, from clinical observations here, some other practical lessons may be drawn.

1. The observations show the uncertainty of the action of hyoscyamine when given by the mouth, and the danger of large doses.

2. They also show the marked superiority of the hypodermic method, and the confidence with which, in some cases, its effects could be calculated on, and the dose increased or diminished in accordance with the violence of the patient.

3. In hyoscyamine, we have a drug which is often capable of controlling the violence of a furious maniac, and, it may be, checking the torrent of rushing ideas on which he is borne along, soothing without putting

him to sleep, and, in these respects, differing from morphia or chloral. In noisy and destructive general paralytics, such as indicated in Case III, the quiet air of comfort and repose following a moderate dose was such a contrast with the previous condition, as to strongly impress every one with the feeling that, by the introduction of hyoscyamine, another valuable aid had been secured in the care and treatment of such cases.

4. No curative action can be claimed for the drug. Even in acute mania it did nothing more than moderate or check, for a time, the violence of action, and, perhaps, render less vivid and overwhelming the terrifying whirlwind of delusion of the frantic patient.

Previously to procuring a supply of hyoscyamine, the ordinary tincture of hyoscyamus was given in large doses, sometimes as much as one ounce at a time, without much effect, except that of dilating the pupils; but it had no controlling power in cases which afterwards yielded to the more powerful alkaloid.—*Brit. Med. Jour.*

A SIMPLE AND SUCCESSFUL MEANS OF TREATING WRITER'S CRAMP.

A new method of treating this most troublesome of disorders is detailed by Professor von Nussbaum in the *Arztliches Intelligenzblatt*, No. 39, 1882. Occurring only when the affected muscles are called into action, the cramp is unmistakably due to spastic contraction of a certain set of muscles whilst their antagonists remain in a state of abnormal feebleness. Such a condition is not of necessity acquired by over-use of the muscles, but in many cases is clearly congenital and inherited. For its relief various mechanical contrivances have been unsuccessfully employed, and tenotomy, myotomy, and nerve-stretching have been performed with no better results.

Long-continued tonic treatment, with almost complete rest to the affected hand, electricity, and certain gymnastic exercises, have been of some service. A well-known writing master in Frankfort has succeeded in carrying out a series of manipulations upon the affected limbs, which have been followed by really successful cures; but, although his practice has been well investigated by various surgeons, others have been unable to obtain such good results, which must therefore be attributed to individual skill. A method, therefore, which although made public, cannot be imparted to others in such a manner as to be successful in their hands, remains a dead letter as far as its scientific value is concerned.

"On closer investigation it became more and more evident to me that, be the cause of the affection what it might, the normal antagonism of the muscles was pathologically altered, a spastic contraction of the flexors and adductors being always associated with weakness of the extensors and abductors. It occurred to me that, if one could construct such a penholder as could be manipulated by the extensors and abductors instead of by the flexors and adductors, the cramp could not possibly occur, and thus the act of writing would prove the best means of curing a writer's cramp.

Acting upon this idea, Professor von Nussbaum constructed a kind of "bracelet" of gutta-percha, of an irregularly oval shape and about three inches and a half in diameter, just wide enough to admit all the fingers. Thrusting the thumb and first three fingers into this bracelet, he found that strong extension of the enclosed fingers and abduction of the thumb were necessary to keep it fixed in its place. To the upper

surface of the bracelet a penholder was attached by a screw, and adjusted so that the point of the pen should lie in a convenient position for writing when the hand was laid flat upon the table.

The more powerfully the movements of extension and abduction are employed, the more firmly will the bracelet be held, and, as a consequence, the better will be the writing. The form of the bracelet admits of variation, the object being to give employment as fully as possible to those muscles which, in the writer's cramp, remain weak and inactive, and thus to restore a normal antagonism between the two sets of muscles.

In order to fully test the value of his invention, Professor Nussbaum obtained a large number of cases by means of advertisement of a "grace cure" in local newspapers. Selecting cases of undoubted writer's cramp, he found that improvement in the writing power took place at once, and he consequently supplied each of his patients with a suitable bracelet for the purpose of practicing in private.

On the second day he received a four-sided letter from a patient who had not written so much for many years, and who, with an ordinary penholder, was unable to write his own name legibly. All the patients agreed in stating that no cramp whatever supervened whilst using the bracelet, but very many described the occurrence of an extremely agreeable sensation in the hand after a few moments, and especially in those places which had before been the seat of the chief discomfort.

The continued use of the bracelet for many weeks is recommended; and, although it may be of itself sufficient to cure the disorder, it is nevertheless probable that the use of electricity, massage of the hand and arms, etc., at the same time, would hasten the successful issue. — *Lond. Med. Record.*

OBERST ON LACERATION OF THE URETHRA.

Dr. Max Oberst, of Halle, in a published lecture on the "Treatment of Laceration of the Urethra in the Male" (Volkmann's *Sammlung Klinischer Vorträge*, No. 210), states that this injury, if properly treated, and if a free outlet be provided for the urine and effusion from the internal wound need seldom excite serious apprehension; but, on the other hand, if not judiciously dealt with, it will, in many instances threaten the life of the patient, and impair the future functional capacity of the injured organ. Laceration of the urethra involving the membranous or bulbous portions of the urethra, or, less frequently, its vesical extremity, is usually caused either by direct violence applied to the perinæum, or by a displaced portion of a fractured pelvis. The wound may involve only a portion of the circumference of the urethra, or the canal may be torn through, and its continuity completely destroyed. In opposition to Gosselin, who holds that the laceration complicating fracture of the pelvis is usually incomplete, Dr. Oberst asserts that, in cases of this kind, the urethra is always completely divided. It is also held by Dr. Oberst that, in cases of incomplete laceration of the urethra, the small transverse wound is situated in the inferior (posterior) wall of the canal, and not, as has been stated by Poncet and Ollier, on the upper (anterior) wall.

In decided cases of partial laceration of the urethra, and in cases, also, where there may be a suspicion of the occurrence of such injury, it is decidedly indicated,

Dr. Oberst states, to pass a large catheter into the bladder and to allow this instrument to remain for some days. As the wound is almost always situated in the lower (posterior) wall of the urethra, the surgeon, in introducing the catheter, should keep its point as much as possible against the upper wall. By the early introduction of a catheter, urinary infiltration and its results may be effectually prevented. Suppuration, it is true, usually occurs at the seat of injury, in consequence of contusion, and probably by the destruction of some portion of tissue through the severity of the injury. Abscesses thus formed have not, it is stated, any serious import, and, as a rule, heal speedily after they have been incised. Dr. Oberst suggests that, in consideration of the almost constant occurrence of such abscesses after partial laceration, it might be advisable always to open the recent swelling of effusion in the perinæum, and to dissect the seat of injury. The subsequent rupture of the structure in cases of partial laceration can be prevented only by the prevention in the repeated use of the catheter.

Complete laceration, Dr. Oberst states, is more frequently met with than the former and less extensive injury. When presented in connection with pelvic injury, this fracture is usually of the variety known as the annular, or double vertical fracture, the solution of continuity involving the transverse part of the canal. In front, the transverse part of the transverse arch is fractured—the horizontal ramus of the ischium on one hand, and its descending ramus, or the ascending ramus of the ischium, on the other; and behind, either the sacro-spiral syndesmosis is separated, or there is a longitudinal fracture involving the posterior part of the ilium or the lateral part of the sacrum. In the production of an annular fracture of the pelvis, very considerable violence is always exerted. The action of a heavy falling body, a fall from a great height, or a crush between the buffers of two railway carriages, are the usual causes of such injury. The force in cases of this fracture, in Dr. Oberst's opinion, acts not in a direction from before backwards, as is stated in many text-books, but in such a way as to compress the pelvis laterally. The primary object of the treatment of complete division of the urethra is to establish a free discharge for the urine. The surgeon has also to bear in mind the necessity of preventing septic infection, and must ultimately endeavor to restore the normal course of the urethral canal. Prolonged attempts to pass a catheter into the bladder should be avoided, as with every attempt more hæmorrhage is apt to be set up, and there is increased risk of infective germs being carried into the wound by the instrument. The catheter should be used only for confirming the diagnosis, and to assist the surgeon, if it be necessary to resort to an operation. Suprapubic puncture of the bladder, which has been advocated by many French surgeons, can be regarded only as a palliative course of treatment, as it does not remove the necessity of further operative treatment for the restoration of the course of the urethral canal. Moreover, it affords no protection against infection of the deep-seated wound in the perinæum, and the operation is not free from danger. In the surgical practice of Halle, a free incision is made into the perineum under antiseptic precautions, the wound is carefully disinfected by a solution of carbolic acid, a full-sized silver catheter is passed into the bladder from the perinæum and through the proximal fragment of the urethra, and the wound is then drained and tightly plugged and

covered by antiseptic dressings. To the free protruding extremity of the catheter a long elastic tube is fixed, through which urine may flow away. Dr. Oberst states that he has never experienced any difficulty in finding the end of the proximal urethral fragment. This end may be recognized in the large perineal wound as a small protrusion resembling a firm blood-clot, or a small bleeding protrusion. In case of difficulty, this extremity may be made out on pressing over the bladder, so as to force some urine into the wound. Dr. Oberst states that the subsequent course of a case thus treated is usually very favorable, even when there has been extensive laceration of the soft parts and considerable displacement into the large wound of fragments of the pelvic bones. There is seldom any suppuration, and the patient usually recovers without incurring any serious dangers. The silver catheter should be replaced after an interval of two or three days by a Nélaton's soft catheter passed along the whole course of the urethra. After a further interval of from six to ten days, this may be removed, and a metallic catheter or sound be subsequently introduced every day during five or six weeks. In order to prevent stricture, the patient after recovery should himself continue the use of the catheter at increasing intervals for at least twelve months. The prolonged retention of a large catheter during the early stages of the treatment of urethral laceration is very liable to cause vesical catarrh; but this usually soon ceases after the removal of the instrument, and does not become severe if precaution be taken to use a catheter that is quite clean, and if a weak solution of salicylic acid be carefully injected into the bladder, and this agent be also given internally in small doses. For complete laceration of the urethra near the neck of the bladder, a similar plan of treatment is recommended. In cases of this kind, however, it is often found impossible to make out the proximal opening of the divided canal, and it then becomes necessary to have recourse to further means for establishing a free discharge for urine, and of facilitating subsequent attempts to restore the urethral canal. The proceeding advocated by Dr. Oberst is that of posterior catheterism, which consists in suprapubic puncture of the bladder, and in passing a catheter into the urethra from the vesical orifice. A case is reported in which Volkmann, who was the first surgeon to apply this treatment, thus dealt successfully with a complete laceration of the urethra of two days' standing.—*Lond. Med. Rev.*

COLIC IN CHILDREN.

The *Medical Times and Gazette* says: In a clinical lecture delivered by Hofrath Prof. Widerhofer, and reported in the *Allg. Wein. Med. Zeitung*, No. 22, we find the following observations:

By the term colic we understand an intestinal neurosis originating in irritation of a chemical or mechanical kind, of the sensory nerves of the mucous membrane of the intestinal canal. The causes of this irritation arise either in a changed condition of the mucous membrane or in the nature of the contents of the canal. There may also occur purely nervous colic, wherein neither irritating ingesta nor a pathological state of the canal is present, excitement of the central organs being propagated to the nerves of the canal. In infants who are at the breast it is indigestible milk, and especially when this is too rich in fatty matters, that causes the colic; and when children during the

first six months are fed with amylaceous food, before a sufficiency of saliva is secreted, colic is also produced. This occurs, too, when indigestible matters are swallowed, such as sand, small pebbles, etc.; and we have good opportunities of observing the operation of this cause in idiots, who often swallow such objects in great numbers. And here we have to meet the question, whether during the period of lactation the mental emotions of the nurse may not induce colic in the infant. It is beyond doubt that frequent mental emotions may induce colic with convulsions, which may be explained by the changes that are induced in the secretion of the milk. In the group of colics induced by irritation caused by the contents of the canal, must be included that caused by constipation, by worms, and by the presence of foreign bodies. Of the morbid conditions of the mucous membrane which give rise to colic, enteritis folliculosa may be especially mentioned, and then scrofulous and catarrhal ulcers, the worst forms being observed in intussusception. Pure nervous colic appears in diseases of the spinal cord, and it may appear in hysterical form, which is not so very rare, and also as intermittent colic, with a regular rhythm as in intermittent fever. We may also include metallic colic, which certainly occurs far more frequently in children than it is diagnosed, as might be expected from the frequency with which toys are made of or contain lead. As regards diagnosis, the purely windy colic produced by the collection of gases, which distend the canal and irritate the sensory nerves, comes on with attacks of pain and with distension of the abdomen, ending with the expulsion of flatus. These attacks are paroxysmal, and are frequently accompanied by clonic convulsions, which may last for some minutes, and even for an hour or more. After the cessation of the paroxysm the child is either itself again, or may remain dull and feeble. In the intervals of the attacks there are no essential cerebral symptoms perceptible. The prognosis depends upon the nature of the cause, but it has been questioned whether a colic of itself alone may not prove fatal. Through the long duration of the accompanying convulsions, through the shock and the exhaustion of the nervous system, death may follow, and at the post-mortem no anatomical cause of the fatal termination can be shown. Hysterical attacks of colic especially concern very excitable children, usually nervous girls, and are characterized by violent pains, a drawn-in abdomen, slight convulsions, and obstinate constipation. In the treatment of colic we must first endeavor to remove the cause. In suckling infants, colic is especially apt to occur when the nurse's milk exhibits a large proportion of fat, and in such a case the nurse should be changed. In flatulent colic, oleum chamomillæ or fœniculi may be given, with a drop of tincture of opium, as an oleo-saccharate. In metallic and in hysterical colic, belladonna is the best means; and in intermittent colic should be treated by quinine.—*Med. & Surg. Rep.*

FORMULÆ.

The following formulæ are selected from the non-official formulary of the Dutch Society for the advancement of pharmacy (*New Remedies*, Sept. 1882.)

Trochisci Iodoformi: Troches of Iodoform.—Iodoform, 50 grammes; sugar, in powder, 1,000 grammes; oil of peppermint, 1.5 grammes; tragacanth, powdered, 2.5 grammes; glycerine, 10 grammes; water,

q. s. Mix the first four ingredients with glycerine, and enough water to form a mass, and divide this into 1,000 troches. Each troche contains 0.05 grammes, or nearly three-fourths of a grain of iodoform.

Trochisci Cetrariæ: Troches of Iceland Moss.—Iceland moss sugar; orange-flower water, of each a gprinkling. Make troches, weighing 1 gramme (15½ grains) each. Dry them, and keep them in a stoppered bottle.

Unguentum Leniens: Cold Cream.—Olive-oil, 360 parts; white wax, 36 parts; spermaceti, 60 parts; rose water, 120 parts; tincture of benzoin, 24 parts; oil of rose, 1 part. Melt the first three ingredients together on a water-bath, allow the mixture to become nearly cold, then add to it, under constant stirring, the other three ingredients.

Unguentum Argenti Nitratis Compositum: Compound Nitrate of Silver Ointment.—Nitrate of silver, 1 part; oxide of zinc, 3 parts; balsam of Peru, 3 parts; lard, unsalted, 24 parts. Dissolve the nitrate of silver in a few drops of distilled water, and mix the solution with 12 parts of suet. Then, having mixed the oxide of zinc with the remainder of the suet, incorporate it with the first prepared mixture, and, finally, add the balsam of Peru.

Unguentum Ophthalmicum Compositum: (St. Yves' Compound Eye-Salve.)—Red oxide of mercury, 15 parts; oxide of zinc, 6 parts; camphor, 5 parts; oil of almonds, 10 parts; lard, 140 parts; yellow wax, 24 parts. Mix the oxides and the camphor intimately with the oil of almonds, then incorporate with the lard and wax previously melted together, and allowed to cool.

Vinum Amarum Alkalisatum: Alkaline Bitter Wine. (Elixir Aurantiorum Compositum.)—Tincture of orange-peel, (1 of orange-peel and 6 alcohol), 2 parts; carbonate of potassium, 1 part; sherry wine, 46 parts; extract of gentian, extract of centaury, lesser, extract of wormwood, extract of carduus benedictus, of each 1 part. Dissolve the carbonate of potassium in the sherry wine; add the extracts, and let the mixture stand for one day, occasionally agitating. Finally, add the tincture of orange-peel.

Vinum Amarum cum Spiritu: Bitter Wine with Alcohol.—Gentian, finely cut, 4 parts; red bark (Indian or Javanese), in coarse powder, 8 parts; orange-peel, deprived of the white layer, and finely cut, 1 part; canella, in coarse powder, 1 part; alcohol, 30 parts; sherry wine, 200 parts. Macerate the solids with the alcohol for twenty-four hours, then add the sherry, macerate for four days, strain, express, and filter.

Vinum Camphoratum: Camphor Wine.—Camphor in powder, 1 part; acacia, in powder, 1 part; white wine, 44 parts; stronger alcohol, 4 parts. Mix them. It forms a white turbid liquid.

Vinum Cinchona: Wine of Cinchona (Laroche's Cinchona Wine.)—Red bark (Javanese or Indian) containing, at least, 6 per cent. of alkaloids, and powdered, 1 part; stronger alcohol, 4 parts; sherry wine, 20 parts; sugar, 16 parts; water, q. s. Macerate the red bark with 20 parts of water, for half an hour, then strain, transfer the residue to a displacement apparatus, and pour upon it the sherry wine. Allow the percolate to pass slowly, and, when the wine has disappeared from the surface, follow it by a mixture of 4 parts of stronger alcohol, and 6 parts of water. Finally, percolate with water until the volume of the whole liquid amounts to 50 parts. Let this stand for a few weeks until it has completely settled, then dissolve it in the sugar, and filter.

Vinum Cinchona Ferratum: Wine of Cinchona and Iron. (Laroche's Ferrated Wine of Iron.)—Pyrophosphate of iron, soluble, 2 parts; citric acid, 1 part; water, 3 parts; wine of cinchona, 200 parts. Dissolve the pyrophosphate of iron and the citric acid in the water, add the wine of cinchona, and filter, if necessary.

MEDICAL NOTES AND NEWS.

National Decay.—The visit paid by Mr. Herbert Spencer to America will, if the warnings uttered by the synthetic philosopher are taken to heart, result in untold benefit to the people directly addressed. In an after-dinner speech delivered on the day before his departure for England, Mr. Spencer indicated the weakness of the American nation, and that peculiarity of its constitution which will, unless assiduously repressed, ultimately tend to its enfeeblement and effacement. He alluded to the passion for work exhibited by all Americans, which, in some cases, leads to the death of individuals under the pressure to which they voluntarily submit. The hair with them is gray ten years before this is the case in England, and relaxation is regarded as a physical impossibility. The result is to impair the physique of the nation, and the evil becomes increasingly serious with each generation. As Mr. Spencer very properly insisted, a man's constitution should be regarded as an entailed estate, and employed with the same precautions and references to future necessities. An excess of labor is irrational, and as useless as the hoarded treasures of the miser, and there is much wisdom in the advice given to his entertainers by Mr. Spencer, who bade them accept and preach abroad the gospel of relaxation, without the influence of which he hinted it was impossible for the great American people to aid in the development of the great future in store for the nation. It is, of course, pleasant to know that our native philosopher is putting his talents to such good use, but we should be equally well pleased if, on his return, he will exhibit at least as much concern in the welfare and advancement of our own country as he has shown on behalf of our Transatlantic cousins. They sometimes complain of the officiousness shown by Englishmen in attempting to reform or improve them. Occasionally, it must be admitted, they have cause for doing so.—*Med. Press.*

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DEATH OF GAMBETTA.

Until we shall receive an official or authoritative report from his medical attendants, of the nature of the injury received by Gambetta, and of the course of his subsequent illness, with a full account of the autopsy, we shall be unable to give our readers anything but the most imperfect sketch of his case, which must be regarded as interesting and famous in a social, political and medical point of view. Thus far very little has reached us beyond what came from newspaper correspondents, and from other persons who were gathering news from discharged servants, eavesdroppers, etc.

From these sources we infer that Gambetta was wounded in the hand by a pistol shot, on the _____, 1882. Whether this was an accidental wound inflicted by himself, or whether it was inflicted by his mistress, Madam _____, is of no consequence in a surgical point of view. It was at once announced by his surgeon that the accident was not serious, and that he would be well in a few days. After the lapse of a few days, however, reports came that the wound was bleeding and that the surgeon had trouble in restraining the hæmorrhage. Considering the nature of the wound—gunshot—and the complicated arterial circulation of the palm of the hand, this occurrence of a secondary hæmorrhage excited no surprise in the minds of surgeons; but some anxiety was felt for the future, when the report came three or four days later that the bleeding had been controlled by *pressure*; thus indicating that the surgeon had not been able to find

the bleeding vessel and apply a ligature. Following this there were rumors that the distinguished patient was not doing well. The wound had healed but there were symptoms of constitutional disturbance—septicæmic and pyæmic infection were spoken of; and finally it was whispered that a perityphlitic (secondary) abscess had formed, and that the surgeons were only waiting for the proper time to open it. It was then declared that the abdominal inflammation had assumed an erysipelatous character. The following day he died, the abscess having opened spontaneously, internally.

Of the autopsy we only hear that the surgeons say that the perityphlitis had nothing to do with the wound in his hand! That it was the result of an old lesion in the vicinity of the cæcum, aggravated or precipitated by his habits of living and the confinement made necessary by this injury to his hand.

This is positively all we know about Gambetta's case; and all we may expect to know until the doctors have made their report.

Meanwhile we deem it wholly impertinent to express any opinion as to the actual cause of death or as to the soundness of the treatment. In all cases those who were present and in charge of the patient—other things being equal—are the best judges of the significance of symptoms, and of the proper course of treatment; but they certainly are the best judges, when, as in this case, the public has really no knowledge at all of the fact. We cannot, therefore, withhold an expression of censure for the conduct of a distinguished German teacher, who is reported to have said in a public lecture delivered by him in Berlin, that the treatment was bad, and the surgeons were responsible for the fatal result. If surgeons outside of the sick-room see fit to criticise the treatment, they certainly owe it to all parties concerned, that they wait until they have become possessed of all the facts. Those who do differently, may in general be classed with those offensive birds who delight to foul their own nests.

THE PAY OF THE PRESIDENT'S SURGEONS.

The "medical attendants" of the late President have at last been paid, or rather we should say that they have not been paid, the money appropriated by Congress as a partial remuneration for the arduous services rendered during that terrible eighty days siege. The Board of Audit, composed of Wm. Lawrence, W. W. Upton, and Jas. Gilfillan have not only seen fit to withhold a large portion of the amount appropriated for the medical attendants, but it has gone even further, and has added insult to injury, by classing as "medical attendants," not only those who were actually members of the Medical Council, but also Mrs. Edson, the Homœopathic physician who acted as nurse, Dr.

Boynton, Mr. Garfield's relative, who made himself useful as a watcher at the bedside of the patient, the colored steward, etc.

The services rendered included one or two grave surgical operations demanding consummate skill and surgical experience; daily or twice daily careful surgical dressings and explorations which could only be made safely and properly by skillful and experienced men; and these services were not for one moment relaxed for 81 days, during a season of almost unexampled heat and oppressiveness. Not a man of the medical attendants but felt the effects of these influences, and some have received injuries from which they probably never will recover.

Never in the history of the world, probably, were physicians entrusted with the life of a sovereign or chief magistrate, treated in this way—paid for their services after eighteen months, and then a sum only a trifle larger than that paid to a female nurse for services during a part of this time. For whatever were Mrs. Edson's qualifications as a Homœopathic physician, there was no pretense that she ever acted in any other capacity than that of nurse, and she was discharged when the patient was removed to Elberon, while the services of Drs. Agnew, Hamilton and Bliss were retained to the end.

The medical gentlemen had no means of knowing who would be regarded as "medical attendants," but one thing at least they had just reason to suppose, namely, that the money which had been appropriated would be paid to them. When they delayed to send in their bills, in response to a general circular, the chairman of the Board of Audit wrote polite notes calling their attention to the circular, and reminding them that when they sent in their bills a complete release of all claims must accompany the same. Naturally the doctors might be supposed to be a little curious to know what they were to receive before they signed the release, but no such information was given.

The Chairman of the Board, if interrogated as to what he held in his outstretched hand, is supposed to have smiled pleasantly and to have replied:—Gentlemen, do you think we are not men of the strictest sense of honor, and that we will not give you every cent placed in our hands? Really! Gentlemen, you do us injustice! Please sign the release, and we will show you what the chairman has in his hand.

The result has shown that the Board was practicing an old and familiar confidence game.

If such an indignity had been put upon Mr. Evarts or Mr. O'Connor, the members of the bar would have openly and severely resented it, from California to Maine; and if the members of the profession of Medicine do not resent this studied insult it will show that they are totally lacking in that *esprit du corps* which distinguishes our sister profession. If medical men remain silent under these circumstances, they must not hereafter complain when they are subjected to similar insults.

We are not likely to know, and we shall not inquire, what motives or principles of equity actuated the gentlemen who made the award; but we do not believe that the people of this republic will justify their action, and we are at least certain that the medical profession will not. From medical men alone can we expect an open declaration of dissatisfaction and dissent.

LECTURES.

TWO CASES OF DYSPEPSIA.

A CLINICAL LECTURE DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS.

BY

PROF. FRANCIS DELAFIELD, M. D.

CASE I.—The patient, a man 42 years of age, complains chiefly of obstinate constipation, which has troubled him most since last September. Before that he had been doing hard work for eight or nine months, but in September he took up a lighter occupation and went to work in a peach orchard, where he ate a good many peaches, and then the constipation which had caused only slight inconvenience before became much worse. Now he has a movement not oftener than once in three days and he has to take laxative pills to produce these discharges. Besides this he also complains of a sense of fulness in the head at times, after eating, and of dizziness, and occasional temporary loss of memory, and also of a feeling of heat, and sometimes colicky pains in the bowels, with considerable intestinal distension. On going up stairs he frequently has noticed a palpitation of the heart. At the time when he began to work in the peach orchard he says a slight rash broke out all over his body.

Gentlemen:—The history which you have just heard this man give is one of a very ordinary condition, and it is the sort of condition you will find in a great many persons, and especially in those of about this man's age and appearance. He tells us that he was well enough, except for a slight constipation, till last September, and then he went to work in a peach orchard where he ate all the fruit he wanted. Though his bowels had been moderately loose before that, yet since then they have been constipated, and this difficulty has been accompanied by other symptoms, that is, a peculiar feeling about the head which he describes as a feeling of fulness, or a dizziness, or a loss of memory. The dizziness does not seem at any time to have been extreme, and he has never fallen because of it, though he says that he nearly falls sometimes and has to catch hold of something to save himself. These then are the rational symptoms which he gives:—Habitual slight constipation for a long while, and a very marked constipation since last September, and since then also a further development of certain cerebral symptoms described as dizziness, fulness in the head, and a loss of memory.

The physical signs tell me, that his heart is a little enlarged, though not much, and there is a distinct murmur heard with the first sound, tolerably loud at the apex, and not transmitted to the left with any degree of distinctness, and it is entirely lost in the line of the axilla. Now I look at his abdomen and I see, that the man is fairly nourished and not much emaciated, though the abdomen is not as full as you will find it in many men, and the contours in this region are regular enough. I can feel that the liver hardly comes down to the free border of the ribs, and therefore not quite as far as it ought to, but by percussion I get the upper border of liver dulness in about the right position for it, that is, between the fourth and fifth ribs. So the liver is just a little small for a man of his size. The spleen gives about its natural area of dulness. There is some slight distension of the large intestine and I get a little gurgling from a part of the colon where I hardly ought to get it, that is in the des-

cending colon as well as in the caput coli, and this we associate with the idea of distension of the large intestine.

The physical examination then shows us, a slight hypertrophy of the heart with a mitral regurgitation, a liver slightly diminished in size, and a spleen natural and the abdomen rather full, and the large intestine somewhat larger than natural, and the fecal matter within it mixed with more fluid than there should be.

Now if we put together the history and the results of the physical examination we can first dismiss the condition of the heart from our consideration as having no bearing on the general disorder, for the trouble there is only very slight and unimportant. Then the question arises, what is the connection, if any, between the constipation and the cerebral symptoms in this case. I will say that there is a direct connection, and the cerebral symptoms I believe are on account of the constipation, and if we can get rid of the constipation the cerebral symptoms will probably cease at the same time. Now the cerebral symptoms of which he complains are such as you may get with a variety of disturbances of the digestive tract, that is, with some disturbance either of the stomach, the liver, or the intestines, and to treat the patient intelligently it is only necessary for you to try as far as you can to determine which part of the alimentary tract it is which gives rise to these cerebral symptoms. In this man I think the true condition of things is tolerably certain, and that the cerebral symptoms depend directly upon his constipation, meaning here by constipation some disorder in the function of the large intestine, for the stomach and small intestine are apparently performing their functions well enough. The trouble is, I believe, almost entirely confined to the function of the large intestine, and the particular function that is interfered with is that one which is concerned in the expulsion of fecal matters from the body. The fecal matters are formed as is natural in the large intestine, but it does not succeed in expelling them as it should.

This brings us now in the first place to the question of treatment, and the indication is, to remedy the constipation. But the constipation can be remedied in many different ways, and the method chosen will vary in different classes of cases. Now if any one of you in your practice was brought in contact with such a case as this, what would you do to relieve it? Small doses of aloes is suggested. Yes, that would be reasonable enough, giving it with the object in view of acting on the large intestines, for aloes is supposed to act specially on this part of the alimentary tract, and it acts by increasing the peristaltic action of the intestine. We will suppose this to be of use therefore for that particular purpose in this case, but is there any other drug that you would suggest? Extract of nux vomica you say, or what amounts to the same thing, small doses of strychnia, given to act especially on the muscular coats of the large intestine. Very good. But would it not be better to make a mixture of the two drugs we have selected so as to get the action of both at once? I think that that would be a good way to treat a case like this. If we decide upon a combination of these drugs, then comes the question as to the size of the dose and the frequency of its administration. Now if you are going to put the patient on aloes and strychnine you can do so in two ways. One is to make him take a moderate size dose such as $\frac{1}{10}$ grain of strychnia and 1 grain of aloes every night, or else let him have a smaller amount, say $\frac{1}{10}$ grain of strychnia and $\frac{1}{4}$ grain of aloes three times a day. You will find sometimes one of these ways the best, and sometimes

the other. But although in many cases like this one these drugs are intended to be used as has been suggested, yet in this man they are not the remedies which I would be disposed to pick out. These drugs are of very great service in a large class of cases, and especially in the constipation of older people than this man and of a somewhat different general condition. But for this man I doubt if they would do as well as to treat him in some other way. I doubt indeed if he needs a medicine of very great power, and I think that a very moderate dose will be sufficient to remedy his constipation. At all events I would be disposed to try him first on something like this:

R. Ext. Belladonnæ.....gr. $\frac{1}{10}$
 Pulv. Ipecac.....gr. $\frac{1}{4}$
 Ext. Colocynth. co.....gr. 1
 M. Ft. Pil. No. I.

Sig: Take one pill every night at bed time.

That you see is not at all a strong dose and yet I imagine that it will be sufficient to give him a movement the next day every time he takes it. After having started such a case on these pills then the question comes up as to when you can leave them off again, and that is the hardest part of the treatment of these cases. The patient does not want to take pills for the rest of his life. So how can you get rid of the medicine after you have got his bowels fairly working? In the first place let me tell you not to be in too much of a hurry to do this, but continue the drugs until you have got the bowels fairly into the habit of working regularly. There is a great deal in the force of habit in regulating the working of the bowels, so it is often advantageous to let them have a regular time for moving every day, and for several months. Then I would not suddenly give up the medicine altogether, but diminish the quantity by one-third or one-half the usual dose each day. So when it seems about time to begin to leave off the medicine I often tell the patient to cut the pills which he is taking in two and so divide the dose each day. You will find thus that it will take less and less medicine to move the bowels daily, and very often you will at last get down to no medicine at all and yet they will move regularly. At the same time you should give some attention to the patients diet, and see if his stomach will bear fruits, oatmeal, and porridges of different kinds, and all such foods as will aid in keeping his bowels open.

CASE II.—The next patient is a powerfully built young man, 28 years of age, and a bar-tender by occupation. For the past year he has complained of a very disagreeable burning sensation, like a ball of fire, which he locates in the epigastrium. This pain comes and goes, being present for a few days and then disappearing for a day or two, when it returns again. He says that he has lost about thirty pounds of flesh, though he appears very well nourished at present. He also does not sleep well at night, but he sometimes will wake up an hour or so after going to bed and then he will lie awake until morning. This sleeplessness has troubled him only for the past three or four weeks. Besides he feels nervous and restless all the time. His appetite is pretty good, but he vomited once a few days ago. He is constipated and will sometimes go two or three days without a movement of his bowels. At times he has unpleasant feelings about the head and he feels feverish. He has had no pain about his chest, though sometimes he is a little bothered by palpitation of the heart. In all respects he feels worse now than he did a year ago. Though he is a bar-keeper yet he says that he has not been in the habit of drinking

much except Seltzer water. He has smoked since he was seventeen or eighteen years of age, and was accustomed to consume seven or eight cigars a day; but he thought it did him harm, so for the past year he has given up the use of tobacco. He gave up his work a month ago, and now he is doing nothing.

Physical examination shows that the heart is beating with fair force but considerably too fast, and there is no murmur. His pulse is now 120, probably accelerated by reason of his surroundings. This shows an unnaturally irritable condition of the heart. Otherwise his physical condition is to all appearance perfect.

Gentlemen:—You notice that the history which this man gives us is one not altogether in accordance with his appearance. As you look at him you see the man seems to be as stout and well nourished as most of us, and his muscles have considerable consistence, and yet he tells us that he feels weak, and I accept his statement, for he undoubtedly does. In the first place, then, there is a notable discrepancy between this man's feelings and his actual physical condition, for he does not seem to be capable of using his muscular power, though he has an abundance of it. His feeling weak, then, is one thing to be considered. Another thing that troubles him is the irregular action of his heart. This has not annoyed him much, but it is one of the facts to be noted in his case, that his heart is irritable, easily excited, and too rapid. A third difficulty of which he complains is an inability to sleep well at night, and to be considered with this and as a part of the same condition is an unnatural nervousness and restlessness in the day time. The pain in the stomach of which he has spoken is also of some consequence, but not of so much as the other things we have noted. These are the four most important symptoms and the principal ones in his case, namely, weakness, an irritable heart, sleeplessness and nervousness, and pain in the stomach, and these have lasted for about one year.

Now, if a man should come to you with this history and say that he had been a bar-keeper, and that he had been smoking a great deal, your first impulse would undoubtedly be to conclude that his troubles are all due to his mode of life, and you would tell him that if he stopped this his symptoms would get better. But you notice that this is not the case here, for he has given up these habits of living and yet his symptoms have not improved, but are rather the worse. And you will find this the case often. You would probably be right in ascribing his difficulties chiefly to his irregular habits, and I have no doubt that his mode of life accounts for his symptoms here; but you will find in a great many of these cases that although you are right in determining the cause of the trouble yet when you have taken away the cause the patient does not get better right away, as you predicted that he would, but on the contrary he gets worse perhaps. This is what will make trouble for you in the treatment of these cases. If you tell these patients that they will improve as soon as they change their mode of life, and then they get worse instead, they will naturally think that you know nothing about their case, and they will not call upon you for further treatment.

The practical point then is, what can we do in this case? The man is doing nothing at present in the way of work, and he says that he spends a good deal of his time in the house, and he walks out but little. Now a man of his build ought to be out of doors a good deal, and his muscles need exercise. So I should

advise him to get into some active business again very quickly. He might return to his former occupation as a bar-keeper, for there is nothing against this so long as it is his legitimate business; but yet some out of door employment would, I think, be still better.

I think it would be a good plan if he would go to some place further West, where he could carry on his chosen occupation if he pleased, and could, at the same time, have more out-door exercise than he is likely to get here. So the first thing for him to do in the way of treatment is to get a business of some kind. Then he must continue to give up his tobacco. He also wants to be relieved as quickly as possible of his painful symptoms in the stomach, and of his sleeplessness and the irregularity of the heart. The question is, what can we do to relieve these symptoms? He says he has been taking iron, and quinine, and Seltzer water; but I should say that iron and quinine were not indicated in his case, and I think he would be better off without the use of either. The soda would be better given in combination with other drugs all in one dose. The combination I would advise in his case is this:

R. Sodii Bicarbonatis..... 3j.
Cerrii Oxalatis..... 3j.
Inf. Quassiae..... 3vj.

M. Sig.: One tablespoonful before each meal.

Then the question is, how to make him sleep at night? I would try, in the first place, hyoscyamin in the form of a concentrated tincture of hyoscyamin, such as is prepared by Keith & Co. of this city. The dose varies from ten to thirty or forty drops. So I would tell him to take twenty drops of the concentrated tincture in water just before going to bed. If I found this did not make him sleep I would increase the dose to thirty drops, and then to forty if necessary. If that did not answer I would not give up the drug yet, but I would combine it with the fluid extract of convallaria, which I would give to diminish the frequency of the heart's action, for his heart beats too rapidly on going to bed, and this, probably, has something to do with his wakefulness. I would begin with a moderate dose of hyoscyamus, and give twenty drops of the concentrated tincture with twenty drops of the fluid extract of convallaria together for a few nights, and if this did no good then I would give up the hyoscyamus altogether. Next I would try the effect of administering one of the bromides, and I would give either the bromide of sodium, or potassium, or ammonium, together with chloral hydrate on retiring at night, in doses of thirty grains of the bromide with twenty grains of chloral hydrate. This combination might answer the purpose or it might not, for it sometimes puts the patient to sleep very soon, and sometimes it will not have any effect during the night, but it acts the next day and makes him sleep, and then, as a result, the next night he is still more sleepless than before. But it sometimes acts very favorably, so I would try it here. If this, too, should fail, then I would try opium, and it is a very good thing to relieve sleeplessness in such cases as this. But you should always bear in mind the danger of forming the opium habit, and if you guard against that you will find it an exceedingly good and useful agent. The best preparation for inducing sleep is not morphia, I think, but some of the crude forms of opium, like the deodorized tincture prepared by Squibb, and McMunn's elixir of opium and codeia. These three are the best preparations of opium for procuring sleep, and if you do not succeed by first using hyoscyamus,

and bromide and chloral, you are justified in resorting to opium. These, then, are the things which I would advise this young man to do: First get an occupation, take plenty of out-door exercise, and keep from using tobacco; then take some simple bitters, such as infusion of quassia, for his stomach, and bicarbonate of soda, with oxalate of cerium, for his nausea; and lastly, for inducing sleep first try hyoscyamus, and then, if necessary, bromide and chloral, and opium. If he pursues this course of treatment I think he will soon find that his disagreeable symptoms have diminished greatly or been entirely relieved.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, DEC. 21, 1882.

The President, Dr. Fordyce Barker, presided. The minutes of the preceding meeting were read and approved.

Drs. Austin Flint and T. Gaillard Thomas announced that they wished their names withdrawn as candidates for the Presidency.

Dr. Austin Flint presented to the Academy the bust of the late Prof. White, of Buffalo. He alluded to the rare social and humanitarian characteristics of Prof. White, his scientific attainments, etc.

Dr. T. G. Thomas also paid a glowing tribute to the memory of Dr. White, gracefully and eloquently alluding to his efforts in behalf of the furtherance of medical education, and his generosity and uniform kindness of manner. He thought it peculiarly appropriate that the bust of Dr. White, who had been so intimately associated with the operation of ovariectomy, should occupy a corner in the Academy corresponding to that of Spencer Wells.

The scientific paper for the evening, entitled

"A CONTRIBUTION TO THE SUBJECT OF REMOVAL OF THE UTERINE APPENDAGES (TAIT'S OPERATION) FOR RECURRENT PELVIC INFLAMMATIONS: WITH PATHOLOGICAL SPECIMENS,"

was read by its author, Dr. T. Gaillard Thomas. The paper was based primarily on a description of Tait's operation and the range of cases in which it was applicable, a resumé of what was claimed for it by Mr. Tait, with brief statistics of the immediate results obtained, and, secondly, on an analysis of four cases of the author's own, with a statement of the immediate results and a presentation of the pathological specimens.

Dr. Thomas stated that his object in reading the paper was to hold up the hands of an original and brilliant operator. It was too soon to draw any deductions from the cases operated upon, and he would merely give an account of the nature of the cases in which operation was done and state the immediate results.

While everywhere much study and investigation had been given to the diseases of the uterus, until comparatively recent times but little light had been thrown upon the diseases of the uterine appendages and their treatment.

He wished to state for the benefit of those who were not familiar with Tait's operation, that it had no connection whatever with ovariectomy which was performed for the removal of large ovarian tumors by the

growth of which life was imperilled, but on the contrary, in Tait's operation the conditions, though seriously affecting the health of the patient, did not threaten her life.

Tait claimed for it, when properly performed, subsequent immunity from the distressing symptoms of recurrent pelvic inflammation, and that the danger to life entailed by it, as was shown by his cases, was not greater than in operations of lesser magnitude.

The removal of the uterine appendages was first performed by a German Surgeon, five days later by Tait and one month later by Battey.

(The following is a brief abstract of the cases presented by Dr. Thomas).

CASE I.—M. R. W., 30 years of age. Menstruated first at 14. She was the mother of one child eight months' old. Had no trouble until time of weaning her child when she had cellulitis with bloody discharge from the vagina. The menstrual flow was scanty and accompanied with severe pain. At time of consultation suffered from severe pain in both ovarian regions. I supposed the case one of endometrical fungous growths but failed on careful examination to find these; I tried also an ante-version pessary but this gave no relief. I then detected enlargement of the ovaries and became more and more convinced that this was a case in which Tait's operation should be done. The operation was done as all mine have been done under the strictest antiseptic precautions, except that the spray was not used. On the 13th day after operation the patient was sitting up in bed. The ovaries were enlarged and the fallopian tubes in a condition of dropsy as is shown in the specimen.

CASE II.—Mrs. W., æt. 25, married three years. One child eighteen months old. Nine months after confinement at the time lactation ceased she developed severe pelvic inflammation and has never been well since. She suffers from pelvic pain, leucorrhœa, exquisite tenderness over ovarian region and also a laceration of the cervix. I decided upon an exploration incision to determine whether Tait's or Battey's operation was the more advisable. I decided upon the former. There had been severe inflammation, the parts being bound down by firm adhesions. The tubes were distended with pus and the ovaries distinctly enlarged as seen in the specimen exhibited.

CASE III.—Miss F., æt. 22. Menstruated at 14. Suffered from dysmenorrhœa. Pain being confined to menstrual periods. Her condition at these times was such as to lead herself and friends to accept any chance of relief offered by the operation. The ovaries were enlarged, tender and somewhat prolapsed. I removed both ovaries and tubes. Dropsy of the tubes existed. The specimens in this case were inadvertently thrown away by one of the nurses.

CASE IV.—Miss N., æt. 27, gave the following history: Menstruated at 14, with severe pain. Confined to bed the greater part of the time. Her condition was most wretched. Before and after the menstrual epochs she suffered from attacks of severe pelvic peritonitis. T. 104½. P. 150. Close observation led to the conclusion that this belonged to the class of cases in which Tait's operation was advisable. She was emaciated and pallid, and looked like a patient in the third stage of pulmonary consumption. Immediate operation was determined upon, as giving the patient the best chance for recovery, it being calculated that she could not live but a short time longer in her present condition. The operation was tedious and difficult. In 24 hours she developed pelvic peritonitis and died on the sixth day after operation.

Tait's immediate results had been most satisfactory. Out of 75 cases he had only lost 6, and of the last 35 only 1. Battey reports 3 cases lost out of 15. In Dr. Thomas' own operations he had lost 4 out of 21 cases.

He would refrain from drawing any deductions from his cases, as they were too recent to justify this.

A second paper entitled,

"GASTRO-ELYTROTOMY (THOMAS' OPERATION), COMPARED WITH OOPHORO-HYSTERECTOTOMY, (PORRO'S OPERATION),"

was read by its author, Henry J. Garrigues M.D. The academy then adjourned.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, DEC. 27, 1882.

Dr. G. M. Peabody presided. The minutes of the preceding meeting were read and approved. The report of the Committee on Microscopy was presented by Dr. Birdsall. The report was accepted and approved. Dr. Van Giesen presented a specimen of

"CARCINOMA OF THE MESENTERY AND OMENTUM."

with secondary deposits. The liver, kidneys, spleen, pancreas, stomach, intestines, and right lung were exhibited. Dr. Van Giesen had seen the patient in consultation twice. He was much emaciated and suffering from extreme dyspnea. This was relieved somewhat by amyl nitrite, but patient died Dec. 19th. The post mortem was held Dec. 21st. The man's business was to work with the circular saw, and while doing this he was obliged to press his chest against the material on which he was working. He had been an invalid for three years, and had been compelled to remain at home during the last year. He had œdema of the right arm and left leg. The history points to malignant disease of the abdominal organs. At autopsy the omentum was filled with a carcinomatous growth and secondary deposits in the stomach and pancreas. The liver was atrophied, the kidneys healthy. Five pints of clear, serous effusion was found in the right pleural cavity and the lung was adherent to the chest wall. The bronchial tubes were thickened. The feature of the case which led Dr. Van Giesen to diagnose cancer of omentum and mesentery was the œdema which existed without heart disease. Ascites was not marked.

Dr. Liautard presented a specimen of

"FIBRO MYOMA,"

removed from the uterus of a sea-lion. The specimen was unique. The animal showed the lesions of double pneumonia and on the left horn of the uterus was a large tumor.

Dr. Liautard also presented a specimen of

"SUBCUTANEOUS TUMOR"

removed from a horse. Three weeks ago a gentleman had brought to him a saddle horse presenting elongated tumors in the region of the muscles of the shoulder. The tumors were readily isolated and removed by enucleation. They were found to be filled with sebaceous matter and pus.

Dr. Janeway presented a specimen of

"CANCER OF THE RECTUM"

with secondary deposits in the peritoneum. The peritoneum, intestines, and rectum were exhibited. The patient was only 28 years of age and gave a history of dysentery commencing last June and continuing up to present time. On cross-questioning however it was ascertained that he had suffered for two years previous to dysentery from constipation. He was markedly emaciated, abdomen distended and tympanitic, passages of lead pencil shape. Four inches from the anus the rectum was tightly strictured. At the umbilicus was a tumor of the deeper tissues 2 inches in diameter and 1 inch in thickness. He died suddenly from heart failure. Post mortem the lesions of chronic peritonitis were found and four inches above the anus a malignant growth forming the first part of the stricture. There was a fistulous connection between the small intestine and rectum. The ileum was filled with fecal masses as firm as stones and of a deep yellow color. The mucous membrane of the intestines was markedly thickened, but there was no deep ulceration, as might have been expected, but only the lesions of intestinal catarrh. The point of interest in the case and the one Dr. Janeway wished to emphasize was that very often cases of stricture of the rectum were supposed to be those of chronic dysentery.

Dr. Bozeman remarked that he had a case now under observation in which the malignant mass occupies the anterior wall of the rectum and was associated with hæmorrhoids. The disease was in this case of recent origin. The patient was 70 years old.

Dr. Peabody presented a brain, removed from the head of a healthy man aged 30, showing lesions of

"CHRONIC HYDROCEPHALUS."

The patient had died from injuries received by being crushed between two railway cars. The only organ of pathological interest was the brain. On its removal from the skull a gush of fluid came from beneath it, leaving a depression where its usual convexity was found. The ventricles were enormously distended by fluid. The man was a laborer and had always earned his living as such. The Society then went into executive session.

SELECTIONS FROM JOURNALS.

ROSSBACH ON COUGH AND EXPECTORATION.

In the first of the articles mentioned below, Dr. M. J. Rossbach, after commenting on the feebleness of our knowledge of the secretion of mucus along the respiratory tract, and of the effects of the various remedies on abnormal states of secretion from mucous membranes, relates his experiments on the exposed trachea, chiefly made on cats. Normally, there is a thin layer of mucus on the mucous membrane, which does not disappear when a great deal of ordinary air passes over it. When this mucus is dried up by blotting paper, it re-forms in from half a minute to two minutes, but never in such quantities as to flow off or appear in drops. Rossbach concludes from this that the mucous glands of the bronchial mucous membrane do not constantly secrete, but only when (through the evaporation of the mucous layer) the external stimulant is able to affect the mucous membrane. It is probable that the mucus is not all passed out at once; the mucin is first secreted, and then comes a flow of watery alkaline fluid, which holds the mucin in solution. Continuous stimulation (by constant drying, by dust-

ing the mucous membrane with some powder) always produces fresh quantities of secretion. The excretion was alkaline; it contained mucin, but no formed elements, nor anything corresponding to ptyalin. It is pointed out that the respiratory tract must be kept continually moist, and must be protected from inflammation, so that just the necessary amount of fluid shall be secreted, and no more. Foreign substances (dust, pathogenic organisms) must be carefully excluded. The secretion is quite independent of, or only very slightly dependent on, sensory nervous stimulation; at all events, the flow goes on quite as well when all external nervous influences are withdrawn. On the other hand, both laryngeal nerves contain vaso-motor fibres, and there is a certain relationship between secretion and vascular fullness.

The experiments on the effect of cold on the tracheal mucous membrane are interesting. The bodies of animals were first subjected to a hot poultice, and then suddenly an ice-bag was substituted. Half a minute after the application of the ice-bag, the whole of the respiratory mucous membrane, including the larynx, became quite white, owing to vascular spasm. After one or two minutes, the spasm gradually relaxed, and in its greatest degree the color was a deep blue-red. Such a quantity of watery secretion occurred, that it flowed off. On taking off ice and replacing the poultice, the blue-red soon gave way to a more red color. A fresh application of ice recalled the vascular spasm; but this time it was more tardy and less marked. These phenomena are regarded as of reflex mechanism. Rossbach found that the action of alkalies (after their entrance into the blood) was to diminish and finally to dry up the secretion from the tracheal mucous membrane (contrary to the usual doctrine). The same effect is believed to hold good for men using alkaline waters.

In the direct application of alkalies (as by inhalation) Rossbach observed no effect. Weak solutions of potash or acetic acid, applied directly to the mucous membrane, caused strong hyperæmia and increased secretion. Astringents (tannin, alumen, nitrate of silver to 4 per cent.) brought about an opacity of epithelium, with total cessation of secretion. Observations on the mucous membrane and its vessels were not possible in this cloudy state of epithelium. Air passed through oil of turpentine and on to the mucous membrane gradually determined an absence of secretion, but this gave way when the blast of air and turpentine was stopped. A watery solution of the oil of turpentine increased the secretion, whilst the vessels became constricted; therefore, this medicament is of great practical value, for, whilst diminishing hyperæmia, it increases the fluidity of the sputa; and, besides, it has an antiseptic influence on decomposing mucus.

Apomorphia, emetin (ipêcacuanha), and pilocarpin increase the secretion. These three agents are expectorants *par excellence*. Practically, Rossbach believes that apomorphia is the best, as producing least nausea and anorexia. The strongest (pilocarpin), owing to its action on the salivary and sweat-glands, as well as its effect on the heart, is not recommended. Rossbach has not had sufficient experience of emetin, although the action of ipêcacuanha is well known. Atropin and its related alkaloids are just the antitheses of the above. The narcotic influence of atropin was found to be very uncertain.

Under the use of morphia, it was observed once that there was a considerable decrease in the secretion (to about one-fifth of the normal amount), as well as great diminution in coughing. A complete cessation of se-

cretion was not produced by morphia. Experiment on animals and in practice were made on the joint action of morphia and apomorphia with favorable results.

1. Hydrochlorate of apomorphia may be used as an expectorant; the best prescription is: *R.* Hydrochlorate of apomorphia, 3 to 5 centigrammes (about 0.45 to 0.75 gr.); dilute hydrochloric acid, 5 cubic centimetres; distilled water, 150 cubic centimetres. Keep in a black glass bottle. The dose is one tablespoonful every two hours.

2. The combination of apomorphia and morphia lessens the frequency of cough and increases the fluidity of the sputa: *R.* Hydrochlorate of morphia, hydrochlorate of apomorphia, of each 3 centigrammes; dilute hydrochloric acid, half a gramme; distilled water, 150 grammes. One tablespoonful is given every two or four hours.

3. Morphia and atropin must be made up separately, as follows: Hydrochlorate of morphia, 2 to 5 centigrammes; distilled water, 120 grammes; red syrup, 30 grammes. The dose is one tablespoonful every two to four hours. *R.* Sulphate of atropia, half a milligramme (about 1-150 grain); liquorice powder and juice enough to make twenty pills. One, two, or three pills are to be taken every night. These pills of atropin are best given in the evening from six to ten o'clock, at intervals of two hours, simultaneously with one or two spoonful of the morphia solution; only the morphia to be given during the day should the cough indicate it. This joint action is recommended in catarrh, emphysema, and phthisis with abundant sputa (when, in the last, this does not come from cavities).—*London Med. Rec.*

BRUNTON ON MAKING POULTICES.

Dr. Lauder Brunton, in the *Practitioner*, Oct. 1882, p. 279, describes how to make a poultice. He points out that in inflammation, heat and cold, though acting in apparently opposite ways, bring about the one result of diminishing pain; the former dilating the capillaries and so diminishing the painful throbbing by affording a ready outlet for the blood into the veins; the latter lessening the impact of the blood, by diminishing the quantity sent to the inflamed part. In applying a poultice to an inflamed part, it is best done in the ordinary manner, directly to the skin; but in cases of inflammation of internal organs, or where spasm is present without inflammation, the poultice should be applied as hot as possible, while the skin must be protected from scalding. With these two objects in view it is best to enclose the poultice in a flannel-bag measuring about twelve inches by eight; by doing this, the poultice may be applied to the skin boiling hot without burning; the heat gradually increases as the flannel becomes wet, and lasts for a much longer time. One poultice so applied often effects that which a succession of poultices made in the ordinary way fails to do.

ABSTRACTS OF CLINICAL LECTURES. Delivered in the Queen's Hospital, Birmingham. By JAMES SAWYER, M. D., Lond., M.R.C. P., Senior Physician to the Hospital.

SOME POINTS IN THE TREATMENT OF ACUTE RHEUMATISM.

Since the approximate perfection of surgical anæsthesia, the healing art has won no greater triumph than in the employment of the alkaline salicylates in pyrexial

rheumatism. I say in pyrexial rheumatism, because I have not found the salicylates of any use in rheumatism with a normal bodily temperature. I think I know the fallacies which beset any therapeutic inference; and I make allowance for the special sources of error which adhere to therapeutic inferences respecting pyrexial rheumatism, and especially to such rheumatism in hospital patients; but, with a hospital experience reaching back some years, and with several years experience as a house-physician in a large hospital, long before salicylates were thought of, I feel sure that the alkaline salicylates, and especially the salicylate of soda, have the power, in a larger degree than any other drug or combination of remedial measures whatsoever, of greatly abridging the course, and markedly mitigating the pain, of the simple forms of rheumatic fever. In making this affirmation, I compare the results of salicylates with four distinct and well-known therapeutic plans for dealing with rheumatic fever—namely, by free administration of bicarbonate of potash, by perchlorine of iron, by blisters, and by rest in bed and nursing care, without drugs. The routine dosage I adopt in rheumatic fever is, to give fifteen grains of salicylate of soda, dissolved in one ounce of water, every three hours. As the patient's temperature falls, and the articular pains diminish, the frequency of the dose of salicylate may be lessened; but the remedy should be given, at least thrice daily, for at least a week after the temperature has remained normal and pains have gone. If you omit the drug too soon after defervescence and the removal of pain, the patient is very likely to suffer from a relapse. Relapses are frequent when the salicylate is given up too soon.

I have not observed that the salicylates have either prophylactic or remedial value in the cardiac complications of rheumatic fever. If such complications—endocarditis, myocarditis, or pericarditis, singly or variously combined—occur, they usually become manifest in the first week of pyrexia. For the ordinary endocarditis of rheumatic fever, I do not know that any drug is of direct service, excepting, perhaps, a little aconite, if the pulse be of disproportionate frequency. But I am strongly of opinion, that the future of a patient, who has had acute endocarditis—and by his future, I mean the length of his life and the degree of his suffering from the remoter and almost inevitable effects of endocarditis—is very largely influenced by the way in which he has spent his convalescence from the illness with which such endocarditis at its onset was associated. Prolonged rest, rest in bed for several weeks, or even months, does infinite good after an attack of endocarditis. Such rest nurses the damaged heart; it keeps cardiac action and pulse-rate down, and so promotes the removal of inflammatory products from affected cardiac valves and orifices. The passage of such products into organized connective tissue is a deadly process, irremediably puckering valves and narrowing orifices, and inevitably leading, often very soon, to the fatal mechanical consequences of obstructed blood-flow through the heart. All practitioners, who have had opportunity of comparing hospital practice among the poor with private practice among patients of comfortable circumstances, must have noticed the striking relative tolerance of cardiac lesions by the well-to-do. Such tolerance depends on no single cause; but I believe it has a great part of its explanation in the consideration I have pointed out. The rich are longer in resuming their occupations, after a serious illness, than are the poor. For pericarditis, I have faith in fly-blisters. I advise you to apply, in the case of an adult patient, a blister (six inches square)

over the heart, directly pericarditis is declared. I prefer the old-fashioned *emplastrum cantharidis*; its slow action, extending over a dozen hours or more, is an advantage. In every case of acute rheumatism, take care not to clothe the patients bed too heavily; but bed him in blankets without sheets, and freely swathe all tender parts with absorbent cotton-wool.

LARGE DOSES OF ARSENIC IN CHOREA.

This little girl, ten years old, about to be discharged, owes her recovery from chorea to the administration of arsenic. We had to give the remedy freely before the disorder gave way. The case was one of subacute general chorea, of moderate severity, occurring in a weakly, nervous girl. We began with five minims of Fowler's solution of arsenious acid, thrice daily, in an ounce of water. In three days the dose was increased to ten minims; in three days more, to fifteen; in three days more, to twenty; and so on until she was taking thirty-five minims of the solution thrice daily. When this last dose was reached, the choreic movements, which before had been gradually subsiding, entirely ceased; and a little vomiting warned us that we had reached the first and most usual physiological action of our remedy. We then withdrew the drug for two days; after that time we gave it again, in fifteen-minim doses, for a few days more, when we gave it up altogether, and the child remained well. You have seen me treat many cases of chorea in this way with similar success. The dose of liquor arsenicalis in chorea, as laid down in text-books, is too small. Chorea is often an obstinate affection. The more chronic cases frequently pass from doctor to doctor, and go through long courses of medicaments, without benefit. Arsenic, freely and properly given, rarely fails. If a case of chorea come to you, and you learn that arsenic has been given and has failed, give it again in large doses. You may cautiously increase the dose of liquor arsenicalis, far beyond the limits of the text-books, with the best results in chorea; in this way, you may usually cure cases which smaller doses of the remedy would not affect.

TREATMENT OF ECZEMA.

Do not neglect to learn the treatment of diseases of the skin, and especially of eczema—by far the commonest of such affections; and of which you can always find many examples in our out-patient work. By attention to a few well-established details of practice, eczema can generally be cured, and always greatly ameliorated. I want to impress upon you two points of practical moment. Eczema is often brought out and kept up by local irritation, and it is always an expression of a diathesis. We can often best treat eczema by not regarding it as a disorder of the skin. In failure to recognize, and treat successfully, the general constitutional condition with which the affection of the skin is associated, and which is its foundation, lies a frequent cause of failure to cure eczema. Eczema is mostly a local expression of one of several diatheses—the strumous, the gouty, and the nervous. Some local irritation usually determines and frequently keeps up an eczema, and is its ultimate cause; but the proneness to the local malady, its penultimate cause, the reason why the local irritation results in eczema and not in something else, is to be found in some general constitutional abnormality. In a case of eczema, before you prescribe drugs, always search for, and, finding, remove, causes of local irritation—such as dirt, lice, scratching, rubbing, the wearing of flannel next the skin, or exposure of the affected part to the

irritating action of heat, cold, water, urine, discharges, bad soap, or any mechanical or chemical irritants, such as are met with in various occupations.—*Brit. Med. Jour.*

TREATMENT OF INFANTILE PARALYSIS.

By WM. H. BARLOW, M. D.

There is a good deal of truth in the remarks of Dr. R. J. Lee, in his paper on the treatment of "Infantile Paralysis," in the *Journal*, of the 22nd instant, and I am inclined to agree with many of his conclusions; but I wish, in the first place, to protest against the continued use of a term which our advanced knowledge of diseases of the spinal cord has shown to be insufficient, and therefore inaccurate. The disease in question is not confined to infants, nor can we at present say that any age is exempt from its attacks. I have elsewhere suggested a name, which would distinguish the disease by its most prominent and characteristic symptom, and which yet would not imply any restriction of age; that name is "regressive paralysis," and it has been accepted and approved by many of my brethren, both English and foreign, as a convenient and correct designation.

The application of artificial heat has been a recognized and valuable treatment of paralyzed limbs for longer than I care to trace backwards, and was perhaps never more strongly urged than by Sir James Paget, in a lecture delivered by him at St. Bartholomew's Hospital in 1864; and very fully and ably by Dr. Roth in his work on *Paralysis in Infancy and Youth*, in 1869.

I have always recognized the great value of the various means, whether by dry heat, as from a fire or from bags of sand, or salt, or flour, heated and applied, and that heat afterwards retained by wraps of wool or silk; of moist heat by warm and stimulating baths of brine, etc., of frictions with stimulating liniments, of shampooing, of massage, of percussion, and other modes of exciting and maintaining the temperature and capillary circulation of the limb; and I am not at all inclined to object to Dr. Lee's remarks upon the value of such means. But, at the same time, I cannot agree with him that we can safely omit electricity in the treatment of these cases. I have too often seen muscles, apparently irretrievably lost, regain their functions under the careful use of one or the other form of current, judiciously and carefully applied, to ever allow a patient under my care to lose the possibility of recovery, which I believe this means of treatment holds out. In my monograph on Regressive Paralysis is recorded, among many others, a case (No. 17 in the table appended) which has now been under my own eye more than ten years; and, though the attack was very extensive, involving the muscles of the neck and face, as well as an upper and lower limb, and this at the early age of five months, yet he is now able to run and jump, and join in all the pastimes of playfellows of his own age, with only the slightest halt perceptible, due to a shortening of barely one-eighth of an inch, the only muscle atrophied being the extensor longus digitorum of the right leg. This result, I am certain, is due to the careful and persevering use of electricity; in the first instance, the continuous current, and, as the muscles recovered their normal reaction, the induced, and the cause of the failure to save the extensor longus, I believe to have been its deep position between the tibialis anticus and peroneus, preventing the current from reaching the muscular fibres and stimulating them to contraction. By what means but this can a palsied

muscle be made to contract regularly and frequently, so as to retain its normal structure and function? Under the application of heat, the bulk of the limb might perhaps be preserved, but the muscular structure will waste, and be replaced by fat; nothing but constant and regular use will keep the highly organized muscle healthy. Therefore, I would warn all who may have the treatment of these cases not to neglect this great and irreplaceable means, at the period when alone it is of use; that time is the early period of the disease—the earlier, the more valuable—and after the lapse of two years, it is, in my experience, of comparatively little effect.

Next in value to this, nay, perhaps it should stand on the same level, or, were it not that it is impossible to apply the impulse of the will to a palsied muscle, even higher, are the voluntary efforts of the patient to move the limb, thus bringing into use each muscle as it recovers its normal functions; and next to these come passive movements and regulated gymnastic exercises, such as can be provided by apparatus, or by the Swedish exercises.

The greatest difficulty lies with the bones, where the circulation and nutrition are for the most part beyond our reach; and here it is, I am inclined to think, that artificial heat is most useful. But beyond all these, and throughout life, after an attack of this kind, it is necessary to guard carefully against sudden changes of temperature; these patients are peculiarly sensitive to cold, and to changes in the electrical conditions of the atmosphere; and in many, I have known these changes to induce temporary incontinence of urine. They are also peculiarly liable to boils and chilblains; for these, warm woolen or silken clothing next the skin, with the usual hygienic precautions, are very necessary and very valuable, with the other modes of promoting capillary circulation which I have already mentioned; but I must postpone any further remarks to a future occasion.—*Brit. Med. Jour.*

THE CURATIVE EFFECT OF CHLORAL IN TWO CASES OF ALBUMINURIA. By THOMAS WILSON, M.R.C.S., Eng.

When Liebreich introduced chloral, he claimed for it a prominent position amongst the drugs known as hypnotics—a position which the experience of medical men has more than confirmed. Its inventor only regarded it as a sleep-producer. Little did he think of the various uses to which it might be applied. Like all new drugs, however, chloral has been used in various combinations for the most varied affections. No one, I think, has as yet drawn the attention of the profession to the almost marvellous effect of chloral in causing albumen to disappear from the urine, and with it the presence of an existing oedema. I am aware that no absolute results can be based upon the success which has followed the treatment of one or two cases of albuminuria; but the facts are so strong, and the results of treatment so striking, that these must be my excuse for bringing them under the notice of the profession.

Mrs. R., a delicate-looking woman, aged 40 years, was delivered of her eighth child in February last. Her children had come rather quickly; on the last occasion, it was the second child within the year. During the time she was carrying her last baby there was no oedema of the legs, and nothing occurred of any importance during the period of gestation. Her last labor finished well; but, somehow or other, she never

regained her strength. She suffered from night-sweats. The end of March found her suffering from cough and severe attacks of asthma. Medicine proved of little service, for dropsy set in, and the urine became albuminous. On April 13th, Dr. William Murray saw her, in consultation with me. In the early part of May, Dr. Oliver saw her with me, and at this time her condition was as follows. Both legs were very œdematous. Breathing was short and difficult; it amounted to orthopnoea, for patient could not occupy the recumbent position. The lips were markedly cyanosed, and the pulse extremely weak. There was frequent cough, but the lungs exhibited nothing very abnormal; the urine was albuminous, but no cardiac murmur was detected. From the weakened sounds of the heart, cyanosis, and difficulty of breathing, in the absence of any marked pulmonary lesion, I was led to diagnose a dilated heart, passive congestion of kidney and dropsy. For some time past, the patient had been taking chloral rather freely, and, to diminish it, Dr. Oliver suggested, from its tonic action, as well as its hypnotic, the use of hope. Externally and internally their employment was unsuccessful. I again resorted to the use of chloral, but only at bed-time. Fortunately, a most reliable nurse had been obtained, and, as it had been frequently noticed that the urine passed a few hours after taking chloral was lighter in color, and contained less albumen, I got her to keep specimens of urine passed at various periods of the day, for comparison. That there might be no mistake, this work was undertaken for some days by the husband, who sat up night after night with his wife. The experiments were carefully conducted, and admirably carried through. From the regularity with which it was noticed that the urine passed after taking chloral was clearer, of lower specific gravity, and contained less albumen than that passed at other times, it was decided to test the effect of chloral by withholding its administration altogether. Until now, the patient had been improving; the albumen had greatly diminished, the œdema was disappearing, and the patient was able to be moved to the couch; but no sooner was the chloral stopped than the symptoms returned. Every medicine was now stopped, with the exception of the chloral, as it was quite apparent to Dr. Oliver and myself that this was the only remedy likely to prove of service. Daily I made a comparative examination of the urine passed at various periods, and I always noticed that the urine which was passed after taking chloral contained a diminishing quantity of albumen. Dr. Oliver at this time made an independent examination of the urine, of which the following is a brief statement: Specimens passed after taking chloral were of average specific gravity 1016, acid, with no albumen; specimens passed at other periods contained albumen, and granular and hyaline tube-casts.

A continuation of the chloral treatment resulted in complete disappearance of albumen from the urine, and with it disappearance of the other symptoms I have mentioned. In the middle of the month of July she had so far recovered that she was able to be removed to the sea-side. At the present time she is better than she has been for many months past, and, with the exception of amenorrhœa, she is quite well. No explanation is offered as to how the chloral was followed by such beneficial results. Suffice it to say that, under its use, a lady so prostrate that she could not stand, with a dilated heart, albuminuria, and marked œdema of feet and legs—indications of a grave constitutional state—has simply been rescued from death. The

chloral did not produce apparent diuresis of diaphoresis.

In another case—a lady 68 years of age, the subject of albuminuria and dropsy—I gave chloral, and had the satisfaction of seeing this line of treatment as successful as in the case which I have reported.—*Brit. Med. Jour.*

THREE SUCCESSFUL CASES OF SPONGE GRAFTING; WITH REMARKS. BY T. SANCTUARY, M. D.

CASE I.—In the January of 1881, a boy aged 11, tied a piece of cotton three or four times round his penis, two inches from the abdominal wall. Great swelling followed, completely obscuring the cotton. He was treated by a surgeon with cold water compresses, and the swelling was much reduced; but during this time the cotton became completely embedded in the tissues, and finally cut through the urethra. In June, the urine, which for some time had been passing in diminished and irregular flow, found its way through two small apertures in the upper surface of the penis, and gradually the distal part of the urethra (*i. e.*, the part beyond the cotton) became almost impermeable so that, when I first saw him, November 24th, 1881 hardly any urine was coming the natural way. At this date a piece of cotton was projecting from one side of the old cicatrix which it had formed as it cut its way through; and there was a deep fissure on the upper half of the penis, extending down nearly to the urethra, and at right angles to it. As I could pass no instrument of any kind into the bladder, I determined to operate, and on the following day (November 25th) chloroform was administered, and I cut through the upper cicatrix into the urethra, which appeared gristly, tortuous and closed; and instead of being a pliable tube, was composed for an inch and a half of a semi-cartilaginous cord. Having dissected through this, I passed a No. 6 catheter from before backwards, till it came out at the incision. Then came the difficulty of getting it into the bladder, for there was still a stricture, or rather a mass of hard, cartilage-like substance, where the urethra had been, behind my incision. I therefore cut into the urethra from below, behind this mass, and passed a catheter forward until it came out at the first incision. Then, having divided this part of the stricture, a No. 6 gum elastic catheter was passed into the bladder, and tied there. Lastly, I pared the edges of the upper fissure in the usual way, united them with silk sutures, and covered the wounds with dressings steeped in an alkaline solution of cresote. On the 26th, the boy's temperature was 100.6° Fahr., and on the 27th, 99.6° Fahr.; on the 28th it was 98.6° Fahr.; and there was no subsequent rise. On the 29th, I found that he had removed the dressings, and allowed some urine to trickle over the wounds; and in spite of the greatest care, the incision on the under surface, which was granulating nicely before this, began to slough over a surface rather larger than a sixpence. I then determined to see whether I could obtain healing without loss of superficies, by means of sponge; so, having applied a solution of zinc chloride on the 29th, I arranged flat pieces of fine Turkey sponge on December and, cut in irregular shapes, and nearly a line in thickness, so as to exactly fill up the wound, and fit under the edges of it wherever these projected. The sponge was covered by gutta percha, this by lint, and the whole kept firmly in place by a strip of India rubber plaster round the penis. In four days the sponge

adhered, and bled when pricked, and by December 28th the wound was whole and the sponge entirely absorbed. The catheter was taken out on December 9th and the urine passed the natural way in a good full stream, the boy remarking that he made water now as well as ever he did. The upper wound healed without any sponge. I advised the boy to come to me and have a catheter passed occasionally, as it was probable, under the circumstances, that stricture would otherwise eventually result, but I have not seen him since January 18, 1882, when he was perfectly well. There was then a very slight depression where the sponge had been inserted, and the cicatrix was sensible, though not acutely, to the prick of a needle. He would not allow me to pass a catheter, though I was anxious to do so, to ascertain the state of the urethra.

CASE II.—This was not so interesting in its previous history as Case I. A workman had one side of the terminal phalanx of his left forefinger shaved off by a plane, a clean cut surface being left. When all bleeding had ceased, I applied to the surface a single piece of sponge in the same way as in Case I; and the finger was sound by the end of three weeks. The only difference in the two cases was that, whereas in the former there was a very slight and doubtful odor of putrefaction on the day after application, in this there was a distinctly putrefactive odor for a week after the sponge had been applied, and adhesion took place on the third day instead of the fourth. In both cases the sponges were saturated with clear, watery discharges on the second day.

CASE III.—On April 14th, 1882, a girl crushed the end of her middle finger in a turnip-machine. There was extensive destruction of skin, and I had to remove part of the terminal phalanx. The wound was dressed in the ordinary manner, but, owing to the loss of so much skin, the wound healed very slowly. On May 5th, therefore, I applied sponge, and dressed it every two or three days until June 1st, when the finger was completely healed, and the sponge absorbed.

Remarks.—The sponges used were the finest grained Turkey I could obtain. They were boiled in a weak solution of hydrochloric acid for some hours, and then steeped for half a day in a strongly alkaline solution of creasote. Before application, they were rinsed in hot water, and cut in very thin slices; and the wounds were syringed with the same antiseptic solution in which the sponges had been immersed, in which also were dipped the gutta-percha and lint. A single layer of each material was applied in the following order—sponge, gutta-percha, lint—and the whole was covered with a broad strip of India-rubber plaster, applied so as to secure firm pressure. In conclusion, I may remark that I have observed that, unless firm pressure over the sponge be used, the granulations will push the sponge away, instead of growing up through its substance. There are two sets of cases in which I have noticed this adhesion of sponge, where no such adhesion has been intended: 1. Where bleeding cavities have been plugged tightly with sponge, as in excision of the eyeball; 2. Where sponge-tents have been used to dilate the cervix uteri, and have been unavoidably left in longer than usual. In both these sets, firm pressure is probably a *sine qua non* in obtaining adhesion.—*British Medical Journal*.

ON A MODIFICATION OF SPONGE-GRAFTING.—By JAMES FERGUSON, M. B., C. M.

In the *Edinburgh Medical Journal* for November last, Dr. Hamilton, now Professor of Pathology in the

University of Aberdeen, brought before the profession a method of treating certain wounds, which he, with some appropriateness, named "sponge-grafting." Prepare a piece of a sponge after certain directions, fit it into a depression in the soft parts, and, ultimately, the foreign body will be replaced, and the gap occupied by newly organized tissue; such was the teaching of Dr. Hamilton, and a number of successful cases were cited in demonstration. The theory of the originator is that the force of the blood-current causes an upheaval of the vessels lying on the surface of the wound, and that if a proper support is furnished, new growth will take place in the vessels and cause them to reach still higher levels. Blood-clot or fibrinous lymph supplies this support in many natural processes; a piece of sponge may be made to serve the same purpose. The sponge, having fulfilled this mechanical function, in virtue of its organic nature then undergoes disintegration, and may either be absorbed or discharged gradually.

I selected a piece of fine Turkey sponge, and treated it as instructed, by steeping in dilute nitro-hydrochloric acid, then washing with liquor ammoniæ, and finally setting aside in a one-to-twenty solution of carbolic acid. Some weeks afterwards, I chose an opportunity of testing sponge-grafting, though not in a crucial degree. A man was admitted to this infirmary who, having received a horse-kick on the shin three years before, sufficient only to produce an abrasion of the skin at the time, by incredible neglect had allowed a progressive loss of tissue to go on till an ulcer of the following characters presented. The sore extended almost round the calf, its width varying from two to five inches, its surface was sloughing, discharging profusely, and smelling offensively; the skin around was firmly bound down, and presented an irregular but hard margin to the sore. The man had gone on submitting to matters so long that the knee and ankle-joints were fixed at an angle implying great lameness, while the greatest circumference of the calf was nine inches, as compared with thirteen and a half inches at the corresponding level of the other leg. Measures were successfully employed to produce a clean, and latterly a richly vascular surface. The level of the sore was now for the most of its extent almost that of the body surface, but at one angle a deeply scooped depression, its dimensions about an inch by an inch and a half, presented. The case was admitted under the care of Dr. J. P. Bramwell, under whose supervision the following treatment was followed out. To the part level with the skin, particles of skin were transplanted, and the results, save at a portion to be hereafter described, have been thoroughly satisfactory. To the hollow referred to, I adapted a piece of prepared sponge fully a quarter of an inch in thickness. Three days afterwards there was adherence of the sponge, and any attempt to detach it produced abundant bleeding. I shall not describe the obvious changes which took place during eight weeks I made daily observations upon the case. Suffice it to say they confirm in a rough way the statements given with such careful detail in Dr. Hamilton's paper. One fact I may note, however, as favoring a conclusion opposite to that of Dr. Hamilton on the subject of nerve supply—he not believing in the production of nerve-tissue at an early stage. I pricked the most superficial portion of the new growth from time to time with the point of a needle, and I asked medical friends to do the same, and pain was most certainly felt by the patient on every occasion. At the same time, Dr. Hamilton's far more extended observations entitle his evidence to regard which I cannot claim for mine. Watching the progress of the

case from day to day, a fact which strongly impressed me was that a very protracted period is necessary before organization can encroach to any extent upon the sponge area. Within three days of application, there is firm union between the living tissues and the sponge. We could hardly expect the vessels to continue their invasion at the same rate afterwards. A physical law may have largely to do with starting the process, which afterwards becomes more purely dependent on vital phenomena. In my case, nearly two months after the application, I was able to remove the superficial part of the sponge with the scissors to the extent of nearly half the original thickness before I encroached on newly vitalized tissue.

In the meantime, another opportunity had been presented me for sponge-grafting, and the issues in this case were peculiar. Dr. Graham, of this city, asked me to see a private case of an ulcer of three months' standing, during which period it had baffled all ordinary methods of treatment, and to decide if the new method might be resorted to. The sore lay over the lower end of the tibia; its size was that of a half-crown; its surface was exsanguine and hard; and its edges were tightly drawn down towards its floor. As a preliminary to further proceedings, caustic was used to the margins, and a strongly stimulating lotion applied twice daily for two days to the surface. The latter proceeding had no appreciable effect. Scratching with the end of a scalpel was now resorted to, until a freely bleeding surface resulted. A bit of sponge was then applied, and kept bound on for three days, when it was found to have united. In three days more the patient complained of much pain extending up the limb, and the appearances of erysipelas were found spreading from the ulcer upwards. The patient declared himself subject to idiopathic erysipelas. These indications were judged as advising removal of the sponge, and the act produced considerable pain and hæmorrhage. A subsidence of the diffused symptoms took place immediately. As regards the ulcer, the changes were specially noteworthy. What had been the type of indolence and obstinacy among such sores was now the picture of health/ action—the surface abundantly vascular and standing well up towards the level of the skin. The simplest dressings were now sufficient to promote repair; and in three weeks from employment of the sponge recovery was complete. What was the cause of this sudden change? Was it the erysipelas, or was it a foreign body having simply an irritant action, or that effecting an action peculiar to itself? In any case, the sponge was a factor in the process, and deserved further employment.

To return to the first-mentioned case. At one portion of the sore under treatment by skin transplantation retrogressive changes set in, and became most persistent. Successive sloughs followed one another until there remained an almost circular gap of fully an inch in diameter, with edges abruptly punched out to the depth of over a quarter of an inch, and its floor, which lay close to the bone, of white fibrous-looking structure. Into this depression, after having used a knife to the floor, as in the other case, I fitted a piece of prepared sponge. Two days effected the same union as before. On the fourth day, I forcibly elevated half of the sponge—pain and bleeding again the accompaniments—and snipped off this semicircle with the scissors. The exposed part left presented highly vascular tissue, reaching well up towards the body-surface as compared with the former depth. In four days more, the remainder of the sponge was detached, and its site was seen to be occupied by a level of new tissue, very slightly higher

than the other half. The deficiency left below the level of the skin was soon made up by unaided natural processes, small particles of transplanted skin were applied, and in the end nothing remained to indicate a spot treated differently from parts around. The portion of the ulcer to heal most slowly was that where the sponge was originally applied. I should have removed the whole graft here, as in the other instances, but successive shavings from its surface, in the manner before alluded to, had left only the deep portion, which was now incorporated with the new tissue or disintegrated. Skin-grafts, it was noticeable, were slow to attach to this area, but eventually they became reconciled to it, and the result was a complete cure.

My experience of Dr. Hamilton's proposal has thus been comparatively limited, and I leave to wider observation upon it to yield more conclusive evidence as to its general efficiency. I venture to recommend, however, a recourse to the modified or temporary sponge-grafting—if grafting is, indeed, a correct expression to apply to the method I have found useful—for at least certain varieties of breach of tissue.—*Brit. Med. Jour*

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AN APPROPRIATION FOR A HOSPITAL FOR SCARLET FEVER AND DIPHTHERIA.

It has long been known by the profession that with all the Hospitals in the city and on Blackwell's Island there was no adequate means nor place for the treatment of cases of scarlet fever and diphtheria, which were sent to the reception hospital for small pox patients. It was indeed a sad commentary on the thoughtlessness or inhumanity of a rich and charitable city that in the bestowal of its munificence, it had passed by the little sufferer whose helplessness doubled their claim on the charitable. Let the profession rejoice that at last steps have been taken to secure the establishment of a proper hospital for the treatment of such cases. And this has been brought about by the indefatigable exertions and tact of members of the medical profession; who, better than any one else, appreciated the necessity for such a hospital.

Since Dr. Jacobi, in a paper read before the Co. Medical Society, stated the facts regarding the ravages of these diseases and the absence of provision for their treatment, and eloquently pleaded the cause of the little ones, and suggested the means by which the desired end could be attained, no efforts have been spared, and recently the reward has come in the shape of a \$50,000 appropriation for building a hospital for these diseases at the foot of East 16th street.

In behalf of the profession and the city we must congratulate Dr. Jacobi, President Chandler, Dr. Woolsey Johnson, Mr. Gerry, President of the Society

for the Prevention of Cruelty to Children, and all others who have been instrumental in bringing about the establishment of this most useful and necessary addition to the cities charities.

ORIGINAL ARTICLES.

MYXŒDEMA.

BY

FRANK H. HAMILTON, M. D.

In 1873, Dr. Gull read before the Clinical Society of London, a paper entitled "A Cretinoid condition supervening in women in adult life;" and in 1878, Dr. Ord, of London, published an account of three cases answering to the same description, in one of which he made a *post mortem* examination. The result of which showed that the œdema was due, not to the presence of serum in the tissues, but of mucine. He therefore gave to the disease the name of myxœdema. Since then a number of cases have been reported, in all, amounting to at least 50; the last of which is reported in the Archives of Medicine Dec. 1882, by Elizabeth M. Cushier, M. D. Physician to the New York Infirmary for women.

Dr. Cushier has reported the case very fully, as also the results of the autopsy, and of the subsequent microscopical examination of the spinal marrow by Drs. Birdsall and Putnam Jacobi.

It is doubtful, however, whether this case has thrown any additional light upon a confessedly obscure subject; an obscurity which has been intensified by the substitution of a new name for an old disease; and especially by the attempt to characterize the disease by the use of a term which represents but one of its many characteristic symptoms. The disease in question is in fact a sporadic and somewhat acute form of cretinism. Such as has been seen and recognized in the deeper valleys of the Alps, and occasionally elsewhere, since the earliest periods of history.

The picture drawn by travelers of cretinism as seen in the Haute Vallais of Switzerland, and especially by medical men who have visited these regions, have, in the recent descriptions of myxœdema their exact counter parts, and cannot fail to be recognized as representing the same malady. The discovery made by Dr. Ord that the œdema was due mostly but not wholly to the presence of mucine in the tissues and not to the presence of serum, is a fact worthy of note; but we are far from being assured that it would have been found to be the fact in every case had an autopsy been made. Certainly there is not the slightest possible ground for assuring that the mucoid deposits, or degenerations as some choose to call them,

have any relation to the etiology of the affection, any more than it would be proper to assume that a serous effusion or general anasarca, should be regarded as anything else than a symptom of some other malady. Physiologically serum and mucous are closely allied, and often alternate with each other in the same anatomical structure; so that it is easy to suppose that the conditions determining mucoid secretion might differ very little from those which determine serous secretion; in short that they might alternate with each other, and in some measure be substituted for each other, while the causes were essentially the same.

In the well known examples of dropsy of the antrum the secretions of a mucous membrane are permanently changed to serum, and the synovial membrane of joints secrete alternately or simultaneously serum and mucus.

It is plain therefore that undue importance is attached by Dr. Ord and by those who have accepted his nomenclature, to the preponderance of mucine in the few cases which have been examined by him and others. This fact is of no more consequence as an index or guide to the real pathology of the affection than would have been the presence of an equal amount of serum.

It seems pertinent also to note, incidentally, that in Dr. Cushier's case the œdema was relieved for a long time by the same class of remedies which usually relieve anasarca or general serous effusions.

Those who have written upon myxœdema have suggested a great variety of explanations of the phenomena usually presented in these cases, not one of which as Dr. Cushier says, (who writes with more than ordinary intelligence upon the subject) is supported by any basis of facts. They find in the few autopsies which have been made, a great variety of lesions, including certain changes in the nervous, vascular and muscular systems, and each one has made his choice as to which he regards the primary lesion, but his opinions in this regard are purely speculative. It is seldom indeed that correct conclusions as to the primary cause of a malady, can be drawn from an examination of the body at its termination; when a multitude of complications are necessarily present, but when it has become impossible to say of any of them whether they stand in the relation of cause or effect. What we need then is some testimony as to the earlier changes, and which no doubt precede the effusions observed by Ord and others.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, JAN. 4TH, 1883.

Dr. Fordyce Barker presided. The minutes of the preceding meeting were read and approved. After the transaction of routine business, the scientific paper of the evening, entitled

"GROWTHS IN THE NASAL PASSAGES"

was read by its author, F. H. Bosworth, M. D., and discussed by Drs. Lefferts, Brandeis, Lincoln, and Beverly Robinson. The following is a brief abstract of Dr. Bosworth's paper.

He stated that he proposed to discuss only the commoner forms of nasal growths and to offer some suggestions as to treatment.

First, there was the adenoid growth of the pharynx,

which, though commonly looked upon as rare, was very common. It was a most frequent cause of nasal catarrh. It was possible now a days by the perfected methods of rhinoscopic examination to thoroughly examine the whole nasal tract and ascertain the cause of nasal catarrh and remove the morbid condition.

There were two forms of catarrhal inflammation of the nasal passages, hypertrophic and atrophic. The adenoid of the pharynx is the result of this hypertrophic inflammation. It consists of a true hypertrophy of the normal glandular structures of the part.

(Dr. Bosworth here gave the results of the microscopical examination of five of these growths, made by Dr. Heitzmann,) he then continued: during the past eighteen months I have met with 75 cases of adenoid of the pharyngeal vault, the largest number occurring about the age of puberty. The diagnosis is usually easy, examination with the rhinoscopic mirror being sufficient without digital exploration.

The most marked symptom is the discharge of mucus and pus which in some cases enters the lower pharynx, in some is discharged through the nostrils. There is alteration in the character of the voice which loses the nasal twang. Impairment of the hearing is sometimes present. In twenty of my cases it was present and in some there had been attacks of otitis media—complaints of earache. Nasal stenosis, most apparent during sleep, is not an infrequent symptom. If there is much secretion, a laryngitis may be excited and cough is then a marked symptom.

The treatment of these growths consist in their extirpation. For this purpose different means are recommended; among them chemical agents, such as chromic acid, the cutting forceps, the curette as used by McKenzie, etc. These procedures I have never made use of. Others recommend the galvano cautery, either with the wire snare or the button electrode, but this means I regard as highly unsatisfactory. The method which I practice, and which I think is to be preferred to all others, is by the use of a modified Jarvis' snare ecraseur. A No. 5 piano wire is used. There is but little hæmorrhage and the operation is done easily and quickly. I have never in my cases seen any tendency of these growths to recur when removed in this way.

Dr. Bosworth next discussed Nasal Polypi. During the past year he had treated thirty-five of these cases. Of these the majority occurred in males, and in adult life. These polypi resemble the pulp of a grape. They do not grow to a large size because they have not room to develop. They usually spring from the middle turbinated bones. It is a purely local trouble, and does not depend on any dyscrasia. These polypi block up the nasal passages, and give rise to a watery discharge. They are hygroscopic and swell up, and give out more water in damp weather. There are frequent attacks of prolonged sneezing. Some of my cases were attended by spasmodic asthma.

The diagnosis is easy, inspection being generally sufficient to establish it. By touching the mass with a probe it can readily be ascertained if the growth is movable, as polypi are freely movable. The old method of removing these by a cord and sponge, which was introduced by Hippocrates, is still practiced, the use of astringents and injections, into the body of the tumor, of iodine, has been recommended and practiced, but the process is a slow one repeated operations and delays for the casting off of the slough. The most common method of removing polypi from the nose is by the forceps. But if the polypus be not located near the nostrils it is impracticable to remove it in this manner, the pedicle not being in view and the parts

being very sensitive at least without much injury to the healthy parts. Even if it were feasible to remove the larger polypi in this way the smaller and deeper ones which are often concealed would not be reached. The more I see of the galvano-cautery the more I regard it as an inappropriate and harmful method of removing these growths. When Hilton's snare was devised a great advance was made in the means for removing these tumors, but Hilton's snare had many disadvantages, and these were done away with in Jarvis' snare ecraseur. I have found most serviceable a combination of Jarvis' and Wild's snares. The whole ground is to be gone over as in weeding a garden until every tumor has been removed. By this means a large proportion of my cases have been radically cured.

Dr. Lefferts said that among the points made by the author some were universally accepted, some were open to criticism, and others must be disputed. Those of the profession who read could not have the belief, as claimed by the author of the paper, that adenoid tumors were rare, neither in his opinion, were they the most frequent cause of nasal discharge. He had not met with the hypertrophy so graphically described so frequently as Dr. Bosworth. In these days the tendency in treating this class of affections was to do too much.

As to the Jarvis snare it was unquestionably of great value, but applied as described by Dr. Bosworth, it required too great manual dexterity to admit of general application. The author of the paper had not called attention to cystic growths and papillomata. He would willingly emphasize what Dr. Bosworth had said regarding the necessity of a careful examination before operating.

Dr. Brandeis had frequently used the galvano-cautery for the removal of nasal polypi, and also in the nasopharyngeal space it acted as an ecraseur and a caustic, and he had not met with any bad results from its use.

Dr. R. P. Lincoln thought, that when the propriety of operating for growths in the post-nasal region was being considered it should first be determined if they were affecting the health or giving rise to special discomfort. The discharge alone might cause dyspepsia, and a very small growth would sometimes develop asthmatic symptoms.

He had employed the galvano-cautery and chromic acid with good results, and must take exception to Dr. Bosworth's statement that the wire ecraseur was the only adequate means for the removal of polypi and adenoid growths. An agent he wished to call especial attention to was the use of boracic acid by means of an insufflator.

Dr. Beverly Robinson said that while Jarvis' ecraseur was not the only means of removing these growths, it was without doubt the best, certainly, for treating tumors the size of those exhibited by Dr. Bosworth. If the tumors were very small and sessile, perhaps the galvano-cautery or scraping might be employed with advantage. He believed that the catarrhal inflammation could extend directly to the Eustachian tube, and thus impair hearing.

Dr. Bosworth closed the discussion.

The Academy then adjourned

SELECTIONS FROM JOURNALS.

THE BRADSHAWE LECTURE ON SOME RARE AND NEW DISEASES. Delivered at the Royal College of Surgeons of England on December 13th, 1882. By SIR JAMES PAGET, F. R. S.

MR. PRESIDENT AND GENTLEMEN,—It is my first duty, in delivering the first Bradshawe lecture in our college, to offer a tribute of respectful thanks to the generous lady by whom it was founded, the widow of Mr. William Wood Bradshawe, a Fellow of this college, who practised at Andover and at Reading, and died in 1866. He was a home loving and studious man, who diligently cultivated his mind in both literature and science; and his widow, who survived him fourteen years, being desirous to testify her gratitude for the happiness which she owed to him, bequeathed a thousand pounds to this college, and as much to the Royal College of Physicians, on the condition that each should institute a lecture, to be given annually, and to bear his name. She desired that the lecture should be on some subject connected with medicine or surgery, and that the choice of the lecture should rest with the president of each college for the time being. She made no stringent regulations, and seems to have wished only to maintain her husband's name in good repute, by associating it with the advancement of the science which he loved.

In my endeavor to fulfil her exemplary wish, I have chosen the subject of "Some Rare and New Diseases." I hope to be able, in speaking of them, to illustrate a part of the natural history of disease which I think is too little studied—that part, namely, which relates to the variations and the combinations of diseases in hereditary transmission. Besides, both in the choice of its subject and in the whole enterprise of giving this lecture, I have looked for an opportunity of promoting pathology by promoting pathological museums, a motive which, I am sure, will be pardoned, though I am conscious of its being in some measure personal, for I have spent so much time and thought in museums that I feel as if, in their greater utility, I should myself become more useful.

Now, first, respecting rare diseases, there may seem no want of opportunity of studying them. Our journals and the proceedings of our societies are full of the records of rare cases; many collections of such cases have been published, and there are many rare specimens in every museum. All these have that kind of attraction which belongs to everything that excites our wonder, but we too seldom let the wonder have its proper consequences; we too seldom let it provoke our curiosity so far as to make us search for the meaning and reason of the rarity. There is a question which we should often ask ourselves, Why is any disease rare! at least, why is any rare which does not depend on some accident or some rarely occurring external cause? I shall try to suggest answers which may be, in some instances, sufficient; but I fear that, in more instances, if I can be useful at all, it can only be by suggesting how answers may be found.

First, there is a difference, though it may often seem only a verbal one, between rare cases and rare diseases. A case may be called rare when, though it is evidently one of a common disease, it differs from the usual type or standard of that disease in some one or two features. Thus it is a rare case when a common disease is found in an unusual place; as an epithelial

cancer on the upper lip, or this fatty tumor on a finger; or in unusual quantity, as in this large cartilaginous tumor on a femur; or, again, a case may be rare in respect of the time of its occurrence. For instance, I have lately seen cancer of the rectum ending fatally in a lad of eighteen, and scrofulous abscess in a man of eighty; and many of us must have seen instances, though they are rare (and these are very important in the history of diseases), in which manifestations of syphilitic inheritance, usually evident in infancy, have not appeared till the time of youth or even of adult age; or cases may be very rare in respect of accidental complications or of the absence of some usual symptom. But of all these and other rare cases, the number and variety are so great, that it would be impossible to deal generally with them, except as with mere story-telling. It would be very useful if some one would collect hundreds or thousands of them, and arrange them, even though it were only under such headings as I have just indicated. But even as they are, singly and in disorder, let me say that we ought not to set them aside with idle thoughts or idle words about "curiosities" or "chances." Not one of them is without a meaning; not one but might be the beginning of excellent knowledge, if only we could answer the question, Why is this rare? or, being rare, why did it in this instance happen?

But, because of their number and variety, I must pass by rare cases and will speak only of some rare diseases—that is, of some diseases which are rarely seen and yet occur in a sufficient number of cases, and with sufficient uniformity, and sufficient difference from other diseases, to permit of their being described in general terms, and to justify their being called by distinctive names. And of these again, for they are numerous and various, I shall select only that group which seems most attractive; the group of those, namely, of which there seems reason enough for believing: first, that they were, lately, new diseases and have become more frequent; and, secondly, that they are due mainly to morbid conditions changing and combining in transmission from parents to offspring—I say due mainly. It is certain that changes in the external conditions of our life have influence on even those morbid conditions which are most personal; but this influence is very hard or impossible to trace in the cases which I have in mind, and it may to-day be neglected though not forgotten. For, in all these cases, the personal factors and those of which alone I have to speak are more potent than the conditional, the inner than the outer. We call these diseases constitutional, diathetic, or by similar names; but the chief fact in them is that they, or the necessary previous states or predispositions to them, are inborn and inbred.

Let me first show that there is reason enough for believing that some rare diseases of this kind were recently—say within the last century—new; and that, more recently, though still rare, they have become more frequent. There is, I know, a general unwillingness among pathologists to admit that there are new diseases of this kind; and this unwillingness is often just, for many diseases that may seem new have, probably existed long and been overlooked; they may be new to knowledge, but not new in fact. Bright's disease and Addison's disease were new in the sense of having first been well observed and described by those whose names they bear; but no one would venture to say of diseases so difficult to detect, as these used to be, that they did not exist long before they were well observed. We could as well believe that embolism

never occurred until just before it was found out, or that right-side hemiplegia used not to be associated with aphasia. These things were old before they seemed to be new; but how long they had existed neither records nor museums can tell. It would be, indeed, very interesting if we could tell the time and manner of first appearing in the case of many diseases which are now common; but it is scarcely ever possible. And yet, if you will allow me a digression, let me show what in some instances museums may supply, and what I hope they will in the future supply much more largely. Here are specimens of typhoid ulcers of the intestines, preserved by Hunter. Few things are more important in the knowledge of fevers than the clear proofs of the distinction between typhus and typhoid given by Sir William Jenner in 1850. It was one of the best life-saving discoveries of this century; before it both diseases were at least partially misunderstood, and neither was so well treated as now. Since the distinction between them was discovered, it has been possible to trace, in old recorded cases, probable instances of both; but there is nowhere so clear evidence of the occurrence of typhoid, a century or more ago, as is given in these specimens of Hunter's, preserved without name or history; not unobserved, and yet not in any fair sense understood. Now in this, as in many things, Hunter set us a good example. He did not think those things unimportant which he did not understand. He was a thorough naturalist, and kept specimens of everything in his field of study, which, though not yet, might become useful.

But, however much of what seems to be new we may justly ascribe to our previous oversight of what was old, there yet seems to be evidence enough that new diseases are in progress of evolution, and that as I have said, some of the rare diseases of which I have to speak, are the earliest instances of the new. Good evidence of this kind is to be found, I believe, in the peculiar joint-disease discovered by M. Charcot in association with locomotor-ataxy, and in the disease of bones, to which I have given the name of osteitis deformans. Neither of these, I believe, was described till within the last few years. They may have been overlooked, but, to believe this, we must believe what is very improbable. We must believe that all the most acute and observant practitioners before our time overlooked, not merely obscure and transient diseases, difficult to study, but cases which lasted many years, and gave constant great distress, and were manifested in signs so plain, that they could be recognized in the shape and gait, in the posture and whole aspect of the patients, in strangely large heads and curved limbs. And, further, we must believe that the morbid anatomists before ourselves overlooked changes of structures of the largest, most obvious, and most striking kind. It is, surely, very unlikely that they who studied and recorded such cases as those of extreme rickets and mollities ossium, and even called it rachitis adultorum, should have left unnoticed the cases of these two equally, and somewhat similarly, disfiguring and damaging diseases. This great improbability is strengthened by that which I believe to be a fact—that we have none but recently collected specimens of either of these diseases in our museums, not even among the crowds of bones and joints collected by our predecessors.

In twenty-six years I have seen twelve well marked cases of the osteitis deformans, and about as many in which it was only partially evident. In the last six of these years, I have seen seven of these cases, and others have been published, and yet I cannot find evidence that the disease was ever seen by any of those who had

practice like my own. Brodie and Stanley, who saw as many cases of diseased bones as any surgeons of the last generation, had seen no case but that which I showed them more than twenty-five years ago in the patient from whom these specimens were taken. Moreover, I cannot find an old specimen in our museums, or a representation of one in any book of plates, or a description of one in any catalogue. This might not seem very strange in the case of specimens troublesome or expensive to keep, or in such as are said to "show nothing." But these are very striking deviations from health, very plainly to be seen, and dry bones are neither costly nor troublesome to keep. We have large numbers of them collected by Hunter, Howship, Langstaff, Liston, Cooper, Stanley, and others, who collected not merely illustrations of diseases well known to them, but whatever was curious, whether it were understood or not. They would have looked on these bones as gems.

I might repeat this statement in nearly ever particular concerning M. Charcot's disease. I believe there is not an old specimen in our museums. There is not one in the Musée Dupuytren; I cannot find a notice or an illustration of one. And yet this disease is now so far from being very rare, that Dr. Buzzard has had nine cases under his eye at one time, and several have in recent years been shown in our societies.

Let me adduce one more instance of what I believe to have been new diseases within this century, though the museum evidence is not so strong as in those of which I have been speaking. Many believe and, I think, quite rightly—that instances of typical gout, such as gained for it the name "podagra," have lately become comparatively rare, and that a large number of less acute diseases, regarded as forms of incomplete or suppressed gout, are much more frequent. It may be that some or many of these lesser forms were always as common as they are now, but were overlooked or were not distinguished from other similar ailments. But here is a specimen of the effects of phlebitis of the femoral and external iliac veins, which, with its history, may tell that gouty inflammation of the veins was, fifty years ago, if not a new disease, yet a much rarer one than it is now. Sir Henry Halford saw as much of gout, I suppose, as any man that ever lived; for he was for many years, during a very luxurious period, in the largest practice among the richest people in this town. He gave an account in 1832 of what he called phlegmasia dolens in the male. The disease so-called was common and well known in women after parturition; so that, to justify his essay as a record of cases hitherto unobserved, it was enough for him to speak of phlegmasia dolens as occurring in men. He speaks of it as having been not long before regarded as "immediately occasioned by a deposit of milk;" but that, "being tested by a more exact pathology," it was now attributed to "an inflammation of the veins of the pelvis." And he says, "he was much mistaken if he had not seen three instances of it" in men "within the last few years." He then relates the case of the nobleman from whom, several years afterwards, this specimen was taken by Sir Astley Cooper—an admirable example of phlebitis, which we may be nearly sure was gouty, showing the changes in the blood-clots and in the walls of the veins during many years.

At the present time, phlebitis of this kind in the male can scarcely be called a very rare disease. There are few, I imagine, in large practice, who have not seen many more than three cases within the last few years. So, we may believe, I think, that the disease has become more frequent in the last fifty years; and may

suspect that not long before Sir Henry Halford's time it may have been a really new disease. It is hard to believe that it could have been overlooked. Its characters are strongly marked and evident both to eye and touch; it is a very painful, disabling, long enduring disease, often recurring, sometimes observed in several members of the same family, and commonly leaving the affected limb large, heavy, and clumsy for many years. Could this have been overlooked when similar limbs in consequence of an allied, though not the same disease, were known and described in women, and while, as it happened, the subject of phlebitis, in its traumatic and pyæmic forms, was being very carefully studied? For there was a form of phlebitis much more common in the last century than in this; the phlebitis that occurred after bleeding. Hunter had studied this very carefully, had written on it, and shown it in these specimens; and after him, both this and the phlebitis after amputation were well known. Especially after the beginning of this century the phlebitis after amputation was thoroughly worked out. It was only three years before the publication of Sir Henry Halford's essay that Mr. Arnott's renowned paper on inflammation of the veins was published in the *Medico-Chirurgical Transactions*. In the same volume are the chief papers by Dr. Robert Lee on phlegmasia dolens; and he describes cases of phlebitis associated with pelvic cancer; but not one spontaneous phlebitis is mentioned by either of them.

Now, I think that in all these facts there is enough, not indeed to prove, but to justify the belief that we have here examples of diseases which have appeared in this country for the first time within the last century, and which have since become sufficiently frequent, and acquired sufficiently constant and distinctive characters to be described in general terms and called by new names. Let me repeat; these are not diseases hard too to be discerned. They are so well-marked, so distressing, so long enduring, and both during life and after death so large and distinct in all their characters that it seems impossible that, unless they were very much rarer than they are now, they could have been overlooked.

I think it probable that there are other examples of the like kind; but I do not know them, and would rather go on to the second part of my subject—namely, to show the probability, or, at least, to justify the hypothesis that these diseases are among the instances of the results of morbid conditions changing and combining in transmissions from parents to offsprings.

It should hardly be necessary to argue that changes of type in inherited diseases—changes which may be compared with the variations of species or of varieties in natural history—do take place. Yet I venture to think that many of us are prone to think too little of these variations; to regard them as rather unmeaning exceptions, or as the results of some unusual external conditions diverting diseases from their customary course.

It will be better for us if we study, in pathology as in natural history, varieties as much as species; changes as well as more stable forms. Types there are the tenacity with which they are maintained—some, even, from prehistoric times—in all the varieties of the conditions of our lives is one of the most remarkable facts in all pathology. But they are not unalterable. Types vary in diseases as in species; even in the diseases which depend least upon external conditions, and most on the qualities which are transmitted by inheritance.

Let me give some reasons why this must be.

1st. An exact likeness is never transmitted by inheritance; neither an exact likeness of either parent, nor an exact composite of both. This is evident enough in features, size, weight, and all that we can observe in external things. If we could be exactly endoscopic we should observe equal variation within; the same want of exact likeness in liver and lung, and, I venture to say, in blood and lymph and plasma, and whatever goes to make up the whole person, healthy or diseased. The inheritance of likeness in disease, or liability to disease is, indeed, clear evidence of the transmission of likeness in the very minutest structure and composition. But the likeness is never perfect; it may in different persons deviate this way or that; it may vary towards disease or back again toward the healthy type, but it is never perfect, and in successive generations its degree of unlikeness may, in some persons, increase to a great width of difference.

2d. The certainty and probable extent of this variation must seem the greater if we consider the mingling of diatheses and of all dispositions and liabilities to diseases in transmissions from and through both parents. Consider the difficulty of maintaining the "breed" in any of the varieties of the species domesticated or cultivated by us, in horses or dogs, in pigeons or in seedling plants; the care that both parents should be of the same blood, or the same race, and that their produce should be raised in all due conditions, and then consider how numerous and wide, in spite of all this care, are the deflections from the type. With these facts before us, we cannot imagine that diseased conditions should often be transmitted singly and unchanged. It is, surely, not likely that disease should be transmitted with more fixed conformity to type than normal compositions are. Hybrids and mongrels must be even more common among diseases than among species and varieties.

3d. And, in thinking of the variation of diseases by combining or convergence of inherited qualities, we may not limit our thoughts to a single generation. It is reasonable to believe that instances occur of reversion, in which diseases, or tendencies to diseases, may appear after a lapse of many generations. Such, I expect, are some of the cases in which leprosy has been seen, even of late years, in this country, in persons never exposed to any of its external causes; and to the like of this we may refer, I think, some of the rare cases which defy all efforts to refer them to any combination of types of disease now prevalent.

Now, I half wish that I could escape from the necessity of testing my doctrine by my facts; but as I have often asked myself, so others may ask, how can the cases of rare diseases of which I have been speaking be explained as the results of morbid conditions changing and combining in transmission from parents to offspring? In the phlebitis, we may often trace a variation from the customary type or standard of the very old and heritable disease, gout. In many cases, its relations to typical gout are clear. The patients are members of gouty families, and in many of them other signs of gout are evident, either coincidentally with the phlebitis or at other times; it has, in short, all the evidences of being one of the many forms of what is called "incomplete gout." But, for a reason why this variety of gout settles (if I may so speak) in veins, especially in those of the lower extremities, I can only guess at a convergence of inherited dispositions, both to a modified form of gout and to some conditions of veins rendering them, among all the structures, the most sensitive to the gouty process. Certainly it is not accident which determines the disease to the

veins, for this disease "runs in families." I know of its occurrence in two brothers and three of their cousins; and I have heard Sir Charles Locock tell of four sisters who had phlegmasia dolens, and whose father had crural phlebitis.

I am conscious that this is little more than guessing, and for the osteitis I must guess still further; or, rather, let me say that, to the furthest bounds of propriety, I must exercise that use of the imagination which may happily discern a way towards the truth. I imagine, then, that a likeness of the osteitis deformans to several other diseases may indicate a combination, in definite proportions, of transmitted dispositions to those diseases—a combination which has become possible by changes of the type of one or more of them. First, it shows some relationship to mollities ossium and rickets: for, though it is an inflammatory disease, which they are not, yet the softening which permits of the curving of the bones is distinctive, and hardly occurs in any other form of inflammation of bone in middle or later life. And, again, the relation of the osteitis to rickets and mollities ossium is notably indicated in the porous thickening of the skull, which is found in some instances of them all, and which is well marked in our specimens of genuine rickets from erroneous diet in young lions and young monkeys. Further, there appears some relation to gout; for some of the cases have known inheritance from gout; and instances are sometimes seen, in typically gouty persons, of a single bone having all the characters of the osteitis, though all the other bones appear healthy. Such a one is the femur, for the opportunity of showing which I am indebted to Mr. Bowlby of St. Bartholomew's. There is a likeness, also, it may be said, to the osteoarthritis and other forms of rheumatic gout in the remarkable maintenance of good general health during even many years of a painful and crippling inflammatory disease; and, further, there appears some relationship to cancer, in the singular frequency with which cancer or sarcoma occurs in the healthy bones or other parts of those who have suffered for many previous years with osteitis deformans.

Thus, I imagine, by inherited dispositions, accumulating and combining, or converging in definite proportions, this disease may be produced. I would try to imagine the genealogy of M. Charcot's disease, but that I have too little clinical knowledge of it. I can only suggest a combination of osteoarthritis with syphilis chiefly localized in some spinal nerve centre; but I believe far better suggestions may be made by those who, suspecting a combination of diseases rather than many radiating from one source, will carefully study the essays of Professor Charcot and Dr. Buzzard's admirable clinical lectures on Diseases of the Nervous System. Besides, I may seem to have guessed already more than enough. Let me, therefore, say that, even if my guesses are wrong, my error cannot weaken the probability of the belief that these, and other rare diseases of like kind, are instances of settled varieties of disease, due to variations and convergence of morbid conditions in hereditary transmission. And, if this be in any measure true, or even not more than a reasonable hypothesis, then it must be of great importance that we should know much more than we yet do of the variations which, in progress of time, diseases, or certain examples of them, may undergo; of their deviations, in a gradually increasing number of instances, from typical or standard forms; their acquirements, in those instances, of other comparatively fixed and long abiding characters; of the occasional disappearance of old forms of disease, and the evolution

of new ones. Such variations in diseases should be studied as Darwin studied the variations of species. Let me be clear in saying as Darwin studied, for, in the pursuit of new knowledge, he may be a model to all, as he has been to me, so far as I could imitate him. He, as I know, would have studied these things, not by deduction, as from a law exactly formulated, and from which he could trace the course of every change, but by a most careful collection of facts, facts to be seen in specimens and read in full records, and by a study as complete for every case as if no law of evolution had ever been discovered.

Let me add that the study of these variations of disease is not one of mere pathological curiosities; it may be of great practical utility. Let me show how, if only that I may provoke some to pursue it vigorously to whom mere pathology is not attractive. We hear much, and often, of the uncertainty of medicines, of disappointments in the use of this or that supposed remedy, and substances which have long been in good repute for the treatment of this or that disease are spoken of with disrespect. It need not be questioned that in many cases the belief in the utility of a medicine has been maintained by completely erroneous observations. Such was the belief in the utility of infinitesimally small doses of anything ever yet swallowed. And other beliefs less evidently absurd may have been nearly as ill-founded. But there are many of which this is not to be said. It cannot be doubted that bromide of potassium is often very useful in epilepsy; yet sometimes, as we say, it fails; or that guaiacum is useful in some cases of chronic rheumatic arthritis, and is in others very disappointing; or that opium sometimes does, and sometimes does not, do good in cases of senile gangrene. I suppose there is not a medicine in the pharmacopœia which does not sometimes disappoint him who gives it hopefully; not one which is not, therefore, spoken of with contempt or blame as if it were a responsible agent convicted of default. But here is an unfair imputation. It is not these medicines which are in fault, but ourselves. That which some call the fallacy of therapeutics is generally the fallacy of diagnosis. To state the facts roughly, we suppose cases to be alike which are really different; and, very naturally, the medicine that does good in some of them is useless in others. For example, in the group of cases which I chiefly have in view, we do not always discern when a disease has varied so far from its usual type that it is no longer amenable to its usual remedies. A better diagnosis must precede a better therapeutics. We need not only the diagnosis between diseases essentially different, but that between the different and varying forms of each of those which we call by a generic name; and beyond this, we need a more exact power of what may be called analytic diagnosis; for there are few simple cases, and in those which are not simple we need to be able to discern all the components, and the proportions in which they are mingled or combined. Better treatment will follow better diagnosis, and better diagnosis will certainly follow a more exact pathology.

Let me illustrate this with an instance which is besides of some interest in the study of the variations of transmissible diseases and of the utility of museums. Questions are often asked as to changes which syphilis may, in course of time, have undergone; and especially, whether the internal organs were always, as they are now, liable to its attacks. It is hard to answer such questions on the evidence of any existing records; indeed, I might cite the whole history of

syphilis as an instance of the inefficiency of records for the tracing of the natural history of diseases. But here is something suggesting what museums may do; a portion of muscle preserved by Hunter, and at least a century old, in which are morbid changes which may be safely referred to syphilitic gumma. Probably similar evidence may be found in other museums, and there are other facts significant of the existence long ago of these internal syphilitic diseases, as well as of the improved treatment following better diagnosis. Fifty years ago it was the custom, as it long had been, to give mercury not only in all recognized syphilitic cases and in most acute inflammations, but in a large number of cases of which one could scarcely say more than that they were all chronic and all obscure. Especially there were many such cases of what were considered chronic inflammation of the eyes, and of the brain and spinal marrow, the liver, and the testicle. To all of these cases it was customary to give mercury till, as one said, "the mouth was touched," and then some were cured, and some uncured, and some harmed. The cures were enough to keep the mercury in such good repute that it was given more and more generally; and then the disappointments, as they were called, became too many, and the mercury was blamed, and was almost disused for chronic inflammations. But, meantime, a more exact pathology, a pathology more exact both in its morbid anatomy and in its clinical studies, was discovering the previously unsuspected syphilitic diseases of internal organs, and with this better pathology there came a better diagnosis, and with the better diagnosis a more judicious use of mercury, and good reason to believe that the chronic and obscure cases which mercury used to cure were those of syphilis overlooked. The case is an exemplary one of the relations between the true pathology and the right treatment of disease, exemplary not only for encouragement, but for method of study; for the study was both clinical and anatomical, in the living and in the dead, with records and with specimens. Such must be our study of all the cases which I have chosen to speak of—the cases in which diseases deviate from their usual type, or combine in various proportions. But there are some rules in study which are especially applicable to these cases.

1. We should very carefully study all cases which are not according to an admitted type. We should study all exceptions to rules; never thinking of them as unmeaning or accidental. Especially, we should never use, in its popular, but wrong, translation, the expression "exceptio probat regulam"; as if an exception to a rule could be evidence that the rule is right. If we use it, let this be in its real meaning; translating it, as surgeons should, that an exception proves a rule, tests it, searches it—as the Bible says we should "prove all things"—to its very boundary. In this true meaning, the words may be an excellent motto for the study of all diseases that deviate from types.

2. We should look out for indications of the existence in the same person of two or more morbid conditions or dispositions such as may be derived from both parents or from several ancestors. For, as in plants and animals there are hybrids and mongrels, or, as in chemistry, many compounds and many mixtures, so are there in diseases. We see them in the multi-form and confused varieties of what we have to call rheumatic gout; in gout crossed with scrofula, and syphilis crossed or mingled with scrofula or with gout. It is often not difficult to discern some of these combinations among our cases; and I know few things in

practice more useful than to be able, even in some instances, to adjust our treatment to the proportion of each disease in the compound. But we may be sure that there is much more to be learned in this direction; and it is best to believe that we rarely have to do with a simple and unmixed morbid constitution. There are few worse habits in practice than that of commonly saying of one case, "It is all gout," and of another it is all scrofula, or all syphilis. We might as well say of any Englishman that he is all Norman, or all Anglo-Saxon, or all Celt. We may, indeed, sometimes see persons who appear to be as types of races unchanged in many centuries, but in practice we had better study every man as, for better or worse, a composite of many ancestors.

3. We should have for all these cases a much more complete and exact study of all the personal conditions of disease than is now usual. Of course, this should include all that can be learned of each patient's family history; though there are few parts of medical inquiry more fallacious than this often is; and at the best it will need, besides, the exactest study of the patient's self. Perhaps the brilliant success which has been achieved by the recent studies of disease-producing organisms or rather materials acting on us from without—a success not equalled in any other field of medical inquiry—has made some think too little of those changes within ourselves which occur in such ordinary conditions of life that they may be called spontaneous. Yet these are not less important in the production of diseases, and these must be studied, just as in agriculture soils must be studied as well as seeds. This is true even in respect of those diseases whose essential causes are most evidently external, even of those which are due to specific contagia; their germs or seeds, if I may so speak, will not germinate in an unfit soil. I suppose there is not a day in which most of us do not inhale or come in contact with the germs of some frequent or contagious disease; but they do not germinate in us any more than do the seeds of tropical flowers in our streets or in the fields to which the wind scatters them; we do not offer the fitting soil. And even among those in whom they do germinate, the product varies according to the soil. And the study of this soil, this living soil, is yet more necessary in respect of diseases which come, in part or wholly, by inheritance; for it is in each as personal and distinct as any other constituent of personal character, and the study of it must be intimately personal, with an exact analysis of every disposition to disease. The aim of pathologists in this direction should be for knowledge like that of the keen family practitioner, who, as he says, knows the constitution of every member of a family.

All this is equivalent to saying that these variations in diseases must be studied both in practice and in scientific pathology. It is hopeless that either a practitioner who thinks lightly of pathology, or a pathologist who thinks lightly of observant practice, should do more in the study of these questions than attain to that measure of partial truth which is often as deceptive as error. Each must be tested by the other. The living and the dead must be alike and equally studied; and the dead must be studied in exact observations with accurate records, and especially with museums.

I need not dwell on the value of good records, good descriptions, and good photographs, or other representations of disease; but they never have been, and probably never will be, enough. We need, with them, museums in which changes of structure may be pre-

served for repeated and revising study and comparison. For instance, in regard to the group of diseases of which I have been speaking, we ought to have in our museums specimens in which we might study all the gradations of change of structure from type to type, all the changes due to mingling of forms, all varieties of diseases, all hybrid forms. We need to be able to study all these things, as the naturalist or the comparative anatomist needs his specimens; not only for teaching what is already known, but for continued re-examination and continued additions to his own knowledge.

And for complete study, we must have large museums showing the coarse naked-eye characters of diseased structures. I am sure no one will think me likely to depreciate the microscope; it has added, and will continue to add, more than can be told to our knowledge, but it has not diminished the value of other evidence; and in pathological anatomy, as in all our sciences, there are many instances in which the naked eye sees facts with more meaning than the microscopic one can.

This is, especially, true in the case of morbid structures resulting from nearly allied diseases, and, therefore, especially true for those of which I wish to urge the study. In morbid structures, as in species, the nearer the alliance the less are the differences to be found in minute structures, and the more must we depend for distinctions on the study of visible shapes, and sizes, and constructions. I suppose that we could not with the microscope distinguish the human skeleton from that of the monkey; certainly, we could not distinguish one skull from another in all those varieties of national form which are collected in our museum. And so it is in many instances of morbid bone formation. I doubt whether microscopic examination could detect characteristic differences in each of this group of specimens. But with the naked eye, it is sure that this is a syphilitic node on a tibia, and this a growth beneath a chronic ulcer of the skin, and this a pedicled exostosis or ossified cartilaginous outgrowth from the shaft of a long bone, and this an instance of osteoarthritis, and this a portion of the skeleton of an osteosarcoma or osteoid cancer. Moreover, it is to be observed that in morbid structures, as is those that are natural, in the same proportion as the aggregated elements of embryonic structures acquire their complete and final form, so do the bodies composed of them acquire distinctive shapes and methods of construction plain to the unaided senses. The ova of many species may seem alike both in outer shape and in their component elemental structures; but in proportion as these structures are differentiated, and developed into their higher and abiding forms, as into nerve-fibre, and muscular-fibre, and the rest, so the larger characters of even the nearly allied species—the characters of shape, and size, and appropriate construction of the whole body, and of each part of it—become more and more different; and these constitute the real distinctive characters of each species.

And so it is in morbid products. The acquirement of distinctive shapes and methods of construction coincides with the development of elemental forms. For example, in these sarcomata are only the lowest elemental structures, round cells, spindle cells, and shapeless plasma; and the masses thus combined are shapeless, featureless, decisive by negation. But in these fatty and fibrous and cartilaginous and bony tumors, in which the elemental structures have advanced to higher forms, and the masses which they severally compose are almost as characteristic and distinct in

visible shape and construction as are the several normal organs of the body.

In every case, then, both the largest and the smallest characters should be studied. The naked eye can discern one set of facts, the aided eye another; both are essential to complete knowledge; no one should be content with either, for neither is alone sufficient. So we must have large specimens as well as small ones, and certainly large ones, for the study of the gradual variations of diseases as they deviate from typical forms, and become variously mingled.

And now, as I come near to my term of time, let me, as customary in certain other places, conclude with an earnest appeal to your liberality. We want liberal contributions, not of money, but of specimens to our museums. We want specimens of many kinds; of course, we want whatever is rare, but not these alone; we want some to complete our series of typical specimens; and, to keep to the chief subject of my lecture, we want the opportunity of choosing, among many of what are called "bad specimens." We are all too ready to collect what are called good specimens, as being well-marked instances of the standard characters of diseases, and to put aside as "bad" those which deviate from those characters, just as, clinically, we speak of good and bad cases of a disease. Of course, good specimens, typical specimens must be at hand for the teaching of pupils who have to study illustrations of the accepted descriptions of diseases; but it is among bad specimens, even as it may be among exceptional cases, that those who are past pupilage, though they have not ceased to be students, may study the variations of disease.

I ask the more boldly for contributions to the pathological collection, because of its present satisfactory condition, and the activity of work in it. You will soon see it in the repaired and renovated building. Looking at the number and value of the specimens, and the wide range of pathology which they illustrate; looking at the interest of the history of our science which is told in many of them; at the memorials of Hunter and Matthew Baillie, of Astley Cooper, Liston, Howship, Lawrence, Hammond, Fergusson, Hilton, and many more; looking forward to what the museum will tell of the researches and skill of those who are still with us; and among whose names, I venture to feel sure, Mr. President, that none will take precedence of your own, while men study the specimens with which your skill and just audacity in operating have enriched the series of diseases of the ovaries and uterus. Looking at all these things, and then at the perfect order and condition in which the specimens are preserved, I feel that the collection is one in which all we members of the College may feel personal pride in calling our own, and should feel a personal duty to enrich. And its utility is being constantly more appreciated. I have been often made happy by the contrast which I have seen while working at the new edition of the catalogue. While I was writing the last edition, between thirty and forty years ago, scarcely a student ever entered the museum. Hour after hour, I sat alone; I seemed to be working for no one but myself, or for nothing but the general propriety that a museum ought to have a catalogue, though no one might ever care to study with it. Now, and for some years past, a day rarely passes without many pupils and others being at work in every part of the museum.

All this is good, but much more is to be done. Our museum should be, even more than it is, the centre in which all pathologists may find help in searches after that which is not yet known; in such searches, for

example, as may lead to a complete knowledge of the variations of diseases. For many years, even from the beginning, the anatomical and physiological departments of our museum have been not only a noble collection of specimens, but, through the renown and learning of its conservators, a great centre of teaching. Scientific men, especially comparative anatomists and anthropologists, have known that here, if anywhere, they could find whatever help a museum and a master in those sciences could give. A fortnight ago the President of the Royal Society, presenting one of royal medals to Professor Flower, said: "Professor Flower has been for more than twenty years conservator of the museum of the Royal College of Surgeons, and it is very largely due to his incessant and well directed labors that the museum at present contains the most complete, the best ordered, and the most accessible collection of materials for the study of vertebrate structures extant."

It is not for me to praise the pathological collection with similar words. But great as may have been its utility hitherto, we may be confident that it will henceforth be more useful than ever. In the vast increase of the biological sciences it became impossible that one man should be nearly complete in the knowledge of both natural and pathological anatomy. I say impossible. I believe there is not such a one living; if there could have been one it might have been Mr. Flower. Now, we may hope that labors as "incessant and well-directed" as his will be devoted especially to the pathological collection.

It is known to many of you that Sir Erasmus Wilson, in his usual liberality, gave the College £5,000, of which the interest should be spent in the promotion of pathology; and he agreed that this would best be done by helping to the appointment of a curator of the pathological department of the museum; and we have an admirable one. Mr. Eve is a worthy colleague and helper of Mr. Flower, excellent 'like him not only in knowledge, but in that which is even more rare, the love of museums, and of all that belongs to their maintenance and illustration, even to the making of catalogues. In all these good qualities he has distinguished himself at St. Bartholomew's. I believe that we may rely on him for making so good use of the museum, and of all that can be brought to it, that the College shall be the chief centre for the study of pathology, even to the farthest point at which it can be studied in specimens of diseased structure. I beg your help that it may be so; and if I shall have helped to-day to this good result, the first Bradshawe lecture in our College will have well fulfilled the purpose of its founder.—*Brit. Med. Jour.*

ON BENT TIBIÆ IN CHILDREN: CAUSE AND TREATMENT. * By CHARLES STEELE, M. D., F. R. C. S.

In this short paper, I do not intend to dwell upon either the characteristic forward bending of rickets or the severe cases of bent tibiæ associated with deformity of the knees or ankles, but to speak of those milder cases where the inner surface of the shaft of the tibia, instead of being straight from the upper to the lower extremity, presents a curve outwards and backwards; and, in doing so, gives a twist to the ankle, which carries the foot with it, and compels the toes to turn inwards. This unseemly appearance is very objection-

* Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Worcester, August 1882.

able in children belonging to the upper classes; and by it, in some instances, I have detected the cause, and confirmed by diagnosis on examination.

These children, with their feet and legs naked, cannot possibly turn their feet outwards when walking, unless they straddle their knees; but as, under proper treatment, the curved tibiae approach the normal straight line, the feet naturally turn straight, and can be turned outwards. If not detected and treated early, bandy legs probably result; and the condition can be remedied, whether late or early, by the use of irons, persistently applied for some time. But irons are objected to if the case be mild, because they are conspicuous; or if the child be very young, because they are likely to tax its strength, and this I have known them to do. Straight wooden splints are used by some; and I have tried them, but without satisfaction, because they take their bearings upon the knee and ankle, if these joints be normal, is objectionable; while, as regards both irons and wooden splints, the most valuable time—namely, the many hours during which the child is asleep, and therefore no weight is upon the bones, and no muscular effort can bias treatment—is lost, as irons and splints cannot be worn in bed; and splints, if worn, are either kicked off or pushed by the child into an useless position.

This state of bent tibiae is generally observed in fine children soon after they begin to walk, and is believed to be caused by the child's legs having to carry a weight heavier than they are able to support. I believe this to be an intensifying, but not the primary cause. I hold in fact, that, like talipes varus and talipes equino-varus, of which this may be considered the mildest modification, it is congenital, and due to the position which the child's legs and feet occupy *in utero*; the most favorable exciting cause being that of a large child lying in a uterus containing but little liquor amnii, so that the lower extremities are obliged to conform to the rounded containing cavity.

All obstetricians must have observed how newly born infants' limbs, when extended, rebound into the bent position they occupied in the uterus; and that often involves the appearance I have mentioned, and even talipes varus and equino-varus. It is well known also that a good nurse, by daily manipulations, can cure even pronounced talipes. What we need, therefore, for treatment, and early treatment, is an elastic power acting directly upon the bone affected, leaving free the knee and ankle joints, which can be worn when the child is awake and active, and particularly during the long hours of rest. These small light steel spring splints, which I have devised, and which a clever mechanist, Mr. Bryant of Lower Park Row, Bristol, made in accordance with my instructions, are designed to act in the same manner as manipulation. If we place the fingers of one hand on the upper extremity of the tibia, and of the other hand on the lower extremity, and both thumbs on the outer surface of the limb, the bone can, with gentle firm pressure, be soon made to assume almost the straight line, as at an early age it is cartilaginous. These splints consist of a spring shaft well curved outwards, having the lower extremity cupped to cover the malleolus of the fibula, and to the upper extremity fixed a transverse band of malleable iron to partially embrace the limb below the knee. In applying them, the centre of the shaft and the lower portion are first bandaged in position; then the upper part is pressed to the limb, the soft band moulded to the surface, and the bandaging completed. I have lately had straps affixed to the extremities of the splint, and these keep the splints in place without

bandages. It is requisite that the splints be not strong, or they cause pain; but, if they be mild and well fitted, I find that mothers and nurses readily apply them, and see their operation; and children do not get them out of place, and wear them willingly both when asleep and when awake; and, so far as I have had time to observe, the results are most encouraging. I have adapted the same principle in these splints for bent radius and ulna in boys, the result of walking stick fractures which had occurred some months before I saw them; also for keeping a toe straight after division of its flexor tendon for contraction.

NOTES ON A CASE OF DEAFNESS FOLLOWING CONCUSSION OF THE BRAIN.* By RICHARD ELLIS, F.R.C.S.Ed., Senior Surgeon to the Newcastle on Tyne Throat and Ear Hospital.

The patient, aged 28, the second officer of a steamer, on going on board his vessel in the harbor of Leith, at night, and where the light was bad, fell off the gangway, between the vessel and the wharf, into the water, a distance of about twelve feet. In falling he struck his head against the sponsoom of the vessel and he was in the water for some minutes. When taken out, he was insensible, and remained so for twelve hours. Upon recovery of consciousness, he remembered nothing of the fall; he was told he had vomited much, and bled freely from the mouth, nose, and left ear. Meantime, as his general symptoms were promising, he was allowed to proceed quietly in his vessel to South Shields. On arrival at this port, he found he was totally deaf in the left ear, for which he applied to Mr. Rajaonah, the house-surgeon at the Ingham Infirmary, who sent him up to the Newcastle Throat and Ear Hospital, where he came under my care a week after the accident, presenting the following symptoms. There was a lacerated wound on the upper portion of the mastoid process; the pinna was also lacerated; these wounds were in a healing condition. He could not hear the watch on contact; he said that, on closure of his good ear, he could not hear the noise of the railway-train on his journey up. The tuning-fork was heard very faintly and indistinctly. On using the otoscope, no impulse was heard from the Eustachian tube. The tympanum was dull in color, particularly in its lower segment; the cone or pyramid of light was not seen. The diagnosis was intratympanic hæmorrhage, blocking the Eustachian tube; and laceration of the lower segment of the tympanum, which was possibly fastened down by a coagulum of blood, thus preventing vibration.

Treatment.—The meatus was filled with a warm solution of bichloride of soda, in distilled water, with glycerine. This was renewed, and the steeping continued, for about twenty minutes. The syringe was now very gently used, which brought away a small thin coagulum, about half the size of the little finger nail, and he expressed a sense of relief; but still the hearing, although much improved, was defective. The Eustachian catheter was passed, through which a weak alkaline solution was passed by means of a syringe; finally, he was Politzerized, with the result of there and then completely restoring his hearing. I recommended him to take, for a week or so, a mixture containing five grain doses of the iodide of potassium.

* Read in the Section of Otology at the Annual Meeting of the British Medical Association in Worcester, August 1882.

PARALLEL HISTORIES OF TWO CASES OF BLEEDING MYOMA.*—By LAWSON TAIT, F.R.C.S.

It is now just ten years since I introduced the operation of the removal of the uterine appendages for the arrest of hæmorrhage; and though at first my results were so unsatisfactory as to lead almost to a desertion of the practice, within the last six years the results, both primary and secondary, have been so brilliant, that I have every reason to regard this proceeding as the most satisfactory addition to gynecology which has been made during the present generation.

The idea seems to have occurred simultaneously to Professor Hegar and to myself; and the performance of the operations in order of date gives only a few days' priority to Professor Hegar. But, for the relief of pain, I had performed the operation seven months before Professor Hegar. At first I was contented to remove the ovaries, but I soon found that the results were not speedily and completely satisfactory unless the tubes were removed. Increased experience in this class of cases has satisfied me that it is with the tubes that we have chiefly to do, and that the function of menstruation has little or no dependence on the ovaries. If the tubes are removed and the ovaries left, menstruation may be entirely suspended. Thus it will be seen that the principles upon which is based the operation introduced and practiced by myself differ very much from those of Hegar and Battey.

I have already published several series of cases of removal of the uterine appendages for the arrest of intractable hæmorrhage, in which I have shown that both the primary and the secondary results are more satisfactory than those of lithotripsy in the male, so far as these are known.

I have now to give the histories of two most curiously parallel cases of bleeding uterine myoma, the contrast afforded by these being a singularly powerful argument in favor of the operation I advocate.

The first case is that of a young woman, aged 28. I admitted her to the Hospital for Women on May 15th, 1879, on account of profuse menorrhagia. She was in a condition of the most extreme anæmia, due to the presence of a small myoma in the fundus. Every therapeutic measure had failed to make the least impression on the hæmorrhage, and I therefore attempted to remove the myoma by dividing the cervix and opening the capsule. This was done on August 12th, and a mass as large as a hen's egg was removed. She hung between life and death for weeks, and was eight months in recovering strength sufficiently to get about. In a report published in the *Lancet*, I remarked that I was of opinion that, in such a case, the removal of the appendages was a much safer proceeding than enucleation of the tumor, and that it had given much better results. There can be no question that enucleation is a most terribly fatal operation; and even when it does not kill, it is not necessarily successful, as will be seen in the second part of the history of this case.

I saw her from time to time after she left the hospital, and she became strong enough to resume occupation in July, 1880. She became engaged to be married about this time, and everything promised well for her future life, for her menstruation was normal, and her uterus quite as it should have been. But in December, 1880, she came to me on account of increas-

ing menstruation; and I found that the fundus was enlarged, and in all probability the seat of another myomatous growth. In April, 1881, matters were much worse, and I then proposed to her the more complete operation for the cure of her disease—removal of the uterine appendages. She was quite prepared for anything, but the consent of her intended husband had to be secured for the proceeding; and here a difficulty was encountered. In spite of my assurance that with myoma she had little or no chance of being a mother, and that with the increasing hæmorrhage she had little chance of surviving her marriage more than a few months, my advice was rejected, and she was taken to London for the opinion of a distinguished surgeon there. I am informed that his advice was that nothing should be done, as the tumor was small, and would probably never trouble her, and that she might be married. She married in June and died of hæmorrhage in August.

In the same period exactly which limits the history of this case, I had another under my care, sent to me by Dr. Law Webb of Ironbridge. She was thirty-two years of age, and had suffered from profuse menstruation for about twelve months, when I first saw her in February 1879. I found the cause of the hæmorrhage as in the first case, a small myoma. I enucleated it also, and she made a very tedious recovery. Up to January 1881, she remained perfectly well; but she came back to me in August last with all the old symptoms, and I found another myoma. On August 25th, 1882, I removed the appendages, and she made a speedy recovery. On January 30th 1882, she came to see me, looking very well, expressing herself as being much stronger; and she told me that there had been no return of menstruation. The last interview I had with her, in June last, was to discuss the question of her marriage. The tumor had become greatly reduced in size; and as she was entering into the married state with full knowledge, in the case of both parties, that she could never be a mother, I could see no objection to the step, and it is about to be taken.*

The lessons from these two cases are: first, that hæmorrhage due to a myoma may be fatal; second, that enucleation of a tumor is often not a successful operation in its secondary results; and this fact, together with its enormously high primary mortality, is quite enough to condemn it.

The series of cases I have already published prove conclusively: 1. That the primary mortality of removal of the uterine appendages for bleeding myoma is very small, and is limited to those cases already so reduced by loss of blood as to be practically unable to withstand any surgical proceeding; 2. That the secondary results of the operation are extremely satisfactory, and are permanent, the arrest of the hæmorrhage being followed by the shrinking of the tumor, and in many cases by its complete disappearance.

The objections to the operation, so far as I have seen them, are only two. (a) It deprives a woman of her sexual powers. This is proved on all hands to be incorrect; but even if it were true, nothing could be more immoral than to refuse to relieve a suffering woman on such a plea. (b) It is argued that it completely destroys the possibility of maternity; but the answer to this is, that the chances of a woman suffering from uterine myoma becoming a mother are infinitely small, and if she should become pregnant, she runs a most serious risk of her life.

* Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Worcester, August, 1882.

* She has now been married some months, and is in perfect health. The tumor is about one-third of the size it was at the time of the operation (December 20th, 1882).

CASE OF ISCHIO-RECTAL ABSCESS CURED WITHOUT THE FORMATION OF A FISTULA. By CHARLES B. KELSEY, M. D.

The patient, a professional man, aged thirty-seven years, had been suffering for several years from large internal hæmorrhoids, which bled freely. For some weeks before sending for me he had been under the care of an irregular specialist, who had been following out some plan of local treatment for this condition, the nature of which the patient did not understand. Although there was some decrease in the amount of blood lost, his general condition became far from satisfactory. Though naturally a large, healthy man, and accustomed to hard mental work and abundant exercise, he began to suffer from lassitude, loss of appetite, and emaciation. Finally, a hard mass was felt in the right ischio-rectal fossa, which caused him a good deal of pain, and after this had lasted five days he sent for me.

Examination.—A hard, brawny, painful swelling completely filled the right fossa. The skin over it was red and hot, but there was no fluctuation. There had been a chill, some fever, and complete loss of appetite, with a good deal of rectal tenesmus.

Operation.—The patient was etherized, and a deep incision made into the swelling. Although the cut was made over the most prominent portion of the mass, it failed to reach pus, being too far out upon the buttock. A longer, straight knife was again entered within half an inch of the margin of the anus, and carried steadily upward, parallel with the bowel, about four inches. The blade was turned in its track occasionally as it was entered, to allow of the escape of pus as soon as it was reached, but none appeared till the depth mentioned was arrived at. After pus was found, the knife was withdrawn, making an incision fully three inches long at the surface, in an antero-posterior direction. Into the opening thus made the finger was passed till it reached the abscess cavity, and all partitions were broken down. This part of the work was done very thoroughly, and the original incision was made still longer, so that future borrowing might be avoided. A solution of carbolic acid was then injected into all parts of the wound, and the cavity was dressed with lint soaked in carbolized oil (1-12). After this the sphincter

was dilated, and several large hæmorrhoidal tumors were removed. The dressing thus introduced was allowed to remain undisturbed for three days, when it was removed and a similar one replaced, after a thorough washing out of the wound and the introduction of the finger into all parts of it. The patient was kept strictly in bed, and the bowels confined for one week with medicine, at the end of which time they moved easily and painlessly after a dose of salts.

The operation was performed July 5th. On September 15th he was entirely well, the wound having completely closed. This time might have been shortened a good deal had the patient not been obliged to be up and about his business during the latter part of the time the wound was healing. He was seen two months later, and was "as well as he had ever been in his life."

This case illustrates exceedingly well several points in rectal surgery. As to the causation of the abscess, it cannot be positively stated whether it was the result merely of his general depreciated condition, whether it was the result of direct injury while undergoing some secret treatment for hæmorrhoids, or whether it was purely idiopathic. Whatever its cause, the condition was one which certainly would have ended in a deep fistulous track opening high up into the rectum, above the internal sphincter, had not this particular operation been performed. It is safe to say that had this abscess been left to its own course, or had it been opened in the usual way—that is, by making an incision just large enough to fairly evacuate its contents—the subsequent history of the case would have been entirely different. The fistula which would have resulted would have required a deep incision, involving both sphincters, for its cure, and such an incision is exceedingly apt to be followed by incontinence of fæces. The case is one of a class which, left to the course of nature, often work irreparable injury—injury—injury which may render the patient's whole subsequent life one of suffering in spite of any future surgical procedures—and yet, if treated promptly and efficiently, may be brought to a very happy termination. It is the kind of case in which a single day's delay may be ruinous to the interests of the patient, and for that reason alone I have thought it worthy of special note.—*New York Med. Jour.*

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HÆMORRHAGIC DIATHESIS.

Dr. Dunn, of West Chester, Pa., has published in the last number of the *American Journal of Medical Sciences* a very interesting and instructive paper on the Hæmorrhagic Diathesis, or, as Dr. Dunn calls it, in imitation of some French and German writers, "Hæmophilia," a term which implies a love of blood, or a desire to bleed; and which, as Dr. Legg says, is "both stupid and barbarous," or, as we would say, absurd and ridiculous. By the Germans, also, a person having this diathesis is termed a "Bluter," or Bleeder. This will do; yet if we were permitted to have our own way in this matter of nomenclature, we would retain the old term of "hæmorrhagic diathesis," although it required a few more words to convey our meaning. Think of a poor lad who is subject to nose bleeding being called a "bleeder," or a "lover of blood."

"The essential elements of hæmophilia," says Dr. Dunn, "are a hereditary and congenital hæmorrhagic diathesis associated with a tendency to swelling of the joints." But the limitations in this definition are scarcely justifiable. There is no evidence that the hæmorrhagic diathesis is not sometimes acquired, and in no sense hereditary: nor is a tendency to swelling of the joints anything more than an occasional circumstance, or if present in a majority of severe cases, it is too often absent to be regarded as an essential element.

The writer makes reference to 780 recorded cases, and after a very thorough analysis draws a number of

conclusions, some of which are warranted by the premises, and some of which are not. The largest number of reported cases have been found in German and English literature, and Dr. Dunn seems therefore to infer that the Germans and English are most subject to the disease, while it only indicates, perhaps, that the medical men in these two countries have chiefly interested themselves in the subject. The disease in question is probably very common in all parts of the world, and it has been recognized and spoken of since the days of Albucasis. It is probable, therefore, that not one in many thousands of the actual cases have been recorded.

The reader will be surprised at the relative infrequency of this condition in females. Of the 780 cases, 717 were males and 63 females; a fact which seems to us to admit of no satisfactory explanation, except in the monthly evacuations, which possibly may afford a certain amount of relief to the vascular system of women. We may also offer, in partial explanation, the fact that while habitual epistaxis is regarded as coming under the definition of hæmophilia, menorrhagia is not. The reason for which distinction is not given. If habitual menorrhagia were regarded as one form of hæmorrhagic diathesis, the difference in point of frequency between males and females might disappear.

The writer falls into a solecism when he says of a malady whose essential characteristic he declares to be that it is hereditary, that "an hereditary disposition appears the best established cause."

As to the precise anatomical or pathological conditions which favor these hæmorrhages there is as yet no agreement of facts or consent of opinion. The number and lumen of the superficial vessels is generally increased; the muscular coats of the arteries are thinner; the heart is occasionally found hypertrophied, or having undergone more or less fatty degeneration; the blood contains an unusual proportion of serum. But none of these conditions are present with sufficient uniformity to enable us to declare them pathognomonic. It is also known that their actual presence is not necessarily or generally accompanied with the hæmorrhagic diathesis. The very natural suggestion that this condition may be due to a lack of fibrin in the blood is not sustained by careful analysis, and the blood, when drawn, coagulates as readily as does the blood of persons who have not the diathesis.

There is no evidence of the soundness of the suggestion that it may be due to fluctuations in the amount of blood. If this were so, then the bleedings would not occur whenever a wound was inflicted, as is notoriously the fact in these cases.

The existence of a disturbed or defective innervation of the vaso-motor system, may be regarded as probable, but not proven,

The treatment so far as constitutional or internal remedies are concerned is purely empirical. It might

be supposed that whatever improves the general health would be serviceable, but even this is not shown by any reference to the facts of experience.

The local treatment must be varied according to the seat and nature of the hæmorrhage. The socket of a tooth, or the nasal membrane, a deep or superficial wound of the soft parts, each demand peculiar methods of management. When the hæmorrhage is from the soft parts and parenchymatous, moderate pressure with styptics and cold or hot water are often sufficient. Hot water is especially efficient in this class of cases, and is not, like cold or ice water, liable to the danger of causing sloughing.

As to prophylaxis, it is evident that a condition so commonly hereditary can only be met successfully by hygiene practiced through a succession of generations.

In conclusion, we wish to say, that Dr. Dunn has performed the duty which he imposed upon himself, of gathering together the literature of the subject, in a very satisfactory manner, and the article will be read with interest and profit by medical men.

SUMMER RESORTS AND TYPHOID FEVER.

In August last two of the guests of the Hotel Bellevue, near Sea Bright, N. J., were attacked with typhoid fever, and recovered only after a long and serious illness. The hotel was kept by Capt. Corey, who on being informed of the facts, ordered the sick persons to leave at once. Their physicians declared that they could not be removed with safety and the friends refused to move them. Capt. Corey then threatened to remove them himself unless he was paid \$5,000. This sum was paid to him under protest by Mr. Albert Levy and Cyrus W. Field, jr., and their friends were permitted to remain. A suit was commenced in the Supreme Court of New Jersey, at the town of Freehold, on January 16th, against Capt. Corey, on an indictment of the Grand Jury charging him with "robbery, riot, extortion, assault and battery, and maintaining a nuisance."

The case promises to be one of unusual interest, involving, as it does, important sanitary and medico-legal questions.

POLYCLINIC.

We quote the following from our esteemed contemporary, *The Medical Record*:

POLICLINIC OR POLYCLINIC.—The word policlinic is derived from *polis*, a town, and *klinā*, a bed. It means, therefore, and always has, since its introduction as a word, a city clinic or hospital. A frequent mode of spelling the word in American medical literature is polyclinic. This assumes, arbitrarily and incorrectly, that the word is composed of *polus*, many, and *klinā*.

It is not to us so apparent that Americans have fallen into an error in the spelling and significance of this word. Dunglison gives us two words, namely, *policlinica* (from *polis*, town), meaning a town clinic; and *polyclinica* (from *polus*, many), or any hospital, whether in city or country, provided with many beds.

According to Dunglison, then, we have a right to speak of a polyclinic without reference to whether it is in the city or country.

It is our opinion, however, in the absence of any testimony to the contrary, that the word has been strained or perverted from its original meaning even by Dunglison, and that the word polyclinic instead of being interpreted, as it is by him, to mean "provided with many beds—as an hospital," should have been

interpreted precisely as it is used by us, to mean *clinics upon many subjects*.

We do not see the need of such a word as *policlinic*, meaning a hospital in a town or city as distinguished from a hospital in the country. Strictly speaking there are, with us, no hospitals out of the towns or cities. The word is therefore useless, and we very much question whether it was ever used by a medical man in that sense.

Nor is there any more need of the word *polyclinic* if it only means what Dunglison says it does—a hospital of many beds. We do not often find hospitals with but one bed, and it is scarcely necessary therefore to invent a term which shall imply that the hospital has two or more beds.

In addition to all this it may be said, that a clinic is always understood to imply something more than a bed containing a patient, although derived from the Greek word *klinā*, meaning a bed. It implies most especially *teaching*. A polyclinic is a place where many subjects are taught by the actual presentation of cases. These cases may be in hospitals and in bed, but not necessarily.

LECTURE.

A CLINICAL LECTURE ON ARTHRITIS.

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

By

PROF. H. B. SANDS, M. D.

I. ELBOW JOINT.

GENTLEMEN: I have had these cases brought in together in order that you may see them at the same time, as examples of a similar disease.

This young woman is eighteen years of age, and she comes to us for a disease of the elbow joint, which dates back a period of three years. She does not know what was the cause of this swelling. Now the fact of an inflammation of a joint having lasted three years with an absence of any particular cause, raises the suspicion whether this swelling of the joint is not due to an arthritis.

You notice that she carries the joint in a state of semiflexion, and the hand is pronated. This is the attitude generally assumed in chronic inflammation of the elbow joint. The joint is swollen and uniform in outline, and the swelling extends two or three inches both above and below the articulation. The redness of the skin here is due to the use of counter irritants.

You have seen several examples of this affection here, and I have already told you that the tendency in this disease is to a disorganization of the structures involved in the inflammation. The cartilages of the joint may become softened and disintegrated or eroded, and the articular lamellæ may be perforated or destroyed, and the exposed surfaces of the bones may be left in contact, or with only granulations to separate them.

On further examination I discover that any attempt to move the joint gives her pain, and on rotating the forearm to see if I can appreciate any grating sensation from the movement of the exposed surfaces of the bones on each other, I find none. I cannot get any sense of fluctuation to indicate the presence of pus in the joint. Here, then, there can be no doubt as to the diagnosis, but there is some doubt as to the extent

of the destruction produced by the disease. The fact of its having gone on for three years shows that the disease is only of moderate intensity, and the absence of any grating sensation makes me think that the bony surfaces are not yet exposed by the process of ulceration. But this is not certain, for sometimes the articular cartilages will be destroyed and the lamellæ eroded, and yet the fungus material thrown out to take the place of the bone interferes with the grating sensation which would otherwise be obtained.

Upon further questioning, the patient says that her elbow had been tender to the touch for over two years up to last summer, but it had never been painful nor caused her much inconvenience till last August, when she caught a cold, and after that the joint became swollen and useless. She has been treated for rheumatism by several doctors, but has not improved.

In cases of disease of this sort the proper treatment, for some time at least, is to keep the joint at rest and immovable. For this purpose a plaster of Paris splint may be used, or a water glass splint which, I think, is still better, and at the same time her general health should be built up by the use of such tonics as iron and cod liver oil, perhaps. In any case a long period of time must elapse before the joint can be restored so as to perform its natural functions, if indeed this is at all possible. But if you find that the joint surfaces are severely disintegrated or destroyed, and you know that recovery is impossible without ankylosis, then active treatment is proper. When this condition exists in the knee or hip joint it is generally best to seek to procure ankylosis, but not so in the elbow joint, for if you do the arm will remain almost useless. So most surgeons prefer here to resort to excision and remove the articular ends of the bones and so restore motion to the arm.

In this young woman's case I should prefer to try the effect of rest with the arm and forearm at right angles to each other for a month or two, and then if she shows no signs of improvement, I would advise an operation for excision of the joint.

II. ELBOW JOINT.

This next patient is a printer by trade, and he tells us that about a year ago he had a sudden twist of the right arm. No harm seemed to follow this till about four months ago, when the elbow joint became painful and swollen, so that he could no longer use his arm. After a time it was examined by a surgeon who, finding that matter had formed in the joint, opened it and evacuated the contents, and here you can see the evidence of this in a sinus which still remains open.

I will pursue the usual method of examination here. In the first place we notice that the arm is swollen in the neighborhood of the elbow joint, and the whole contour of the limb is quite striking. The arm at its upper part is quite thin from emaciation because he has not used the muscles to any extent for the past four months. The swelling is in the plane of the elbow joint, is uniform in outline, and greatest opposite the two condyles of the humerus. I now try the mobility of the joint as to flexion and extension, and in doing this I seize the arm firmly with one hand and the forearm with the other, and gently move the latter up and down. I can move the forearm thus through an angle of ten or fifteen degrees, so I am satisfied that there is yet no ankylosis at the elbow joint. I can even flex the arm to a right angle, but this causes a good deal of pain. This swelling may not be in the joint itself but rather in the textures surrounding the joint, and this gives rise to the impediment to motion.

The hand you notice is held in a state of pronation, the position generally assumed in inflammations about the elbow. There is never extreme supination, but the hand is held either like this or midway between pronation and supination. I further test the condition of the articulation by pushing the forearm upwards and crowding the heads of the ulna and radius against the condyles of the humerus, and though he says this causes pain, yet it is not very severe. So the results of this test are uncertain, for this pain might depend on an inflammation of the joint or it might not. I appreciate no sense of grating on rotating the forearm. There is, therefore, no evidence of any disappearance of the articular cartilages such as commonly occurs in diseases of the joints. Yet the ends of the bones frequently become covered over by granulation tissue even when there is no longer any articular cartilage, and so the bones are prevented from grating against each other.

Now we will try to determine by the probe whether this sinus is kept open by a necrosis of bone in the neighborhood of the joint or by a disease of the joint itself. I find that the probe passes from the under side of the elbow directly inward for a distance of two inches in the plane of the elbow joint, and I get no evidences of any sequestrum.

I can only suggest the pathology of this case, for the results of the examination are not positive. It is quite possible that the disease is located in the elbow joint while the usual symptoms are not all present, but what looks most like it is, the swelling and contour of the joint.

He has been taking the sulphide of calcium as a medicine. I mention this fact because this remedy is much used at present and it is supposed to limit or prevent suppuration. I can not say whether it has this action or not. The question now is, what to do for this man. As the disease has been going on for at least four months, if it is a case of necrosis the dead bone is probably separated by this time, but perhaps not, and in that case the rule is to wait till it becomes separated before attempting its removal. But it is very probably a joint disease, or a disease of the bone of considerable extent and involving the joint. If it is simply a joint disease, as he says that it feels better now than it did, it is quite probable that he may yet recover with a movable joint, but it is more probable that it will be with ankylosis of the elbow. It will therefore be advisable to place and keep the limb in a better position for future convenience so I would advise him to wear an apparatus for keeping the arm in a rectangular position with the hand across the breast in order that it may become ankylosed thus. If after a reasonable length of time ankylosis does not take place, then I would open up the fistula and examine the condition more carefully and treat the case accordingly. As this man is a printer however and his hand would be very much disabled if ankylosis should occur I should say that the best treatment here would be excision of the joint so that he may retain motion of the forearm and hand. I would not advise this operation immediately but would have him wait until the natural termination of the case can be foretold.

III.—ANKLE JOINT.

This young man received an injury about the ankle joint three years ago last June, and this was followed by swelling and increasing disability of the joint, so that for the past six months he has had to go on crutches. He has not suffered much pain at any time.

Now, gentlemen, you can learn something by inspection of the diseased parts here. In the first place notice the position of the limb. The foot is not kept at right angles to the shaft of the tibia, but the toes are pointed downward and forward and the axis of the foot is nearly in a line with that of the leg. This is suggestive of chronic joint disease, for in nearly all chronic diseases of the ankle joint the extensors of the foot are stronger than the flexors. In the second place you notice that the circulation in the leg is feeble, for the color of the skin is dark and almost livid or purple, and this discoloration is more marked in the neighborhood of the ankle joint. At the inner side of the foot I find a perforation of the skin. The next thing we notice is that there is a uniform swelling around the ankle joint. These symptoms then, taken in connection with the history, suggest the probability of this being an arthritis, or a chronic disorganizing disease of the ankle joint. But we cannot determine this certainly without a further examination of the parts. This includes palpation of the joint, and moving the bony parts upon each other to see if pain or a grating sensation or free motion can be obtained, and probing the opening in the skin to see if it leads down to disease or necrosed bone or into the joint. I find that there is no ankylosis here, for the movement is free, nor do I get any grating sensation to show that the articular cartilages are destroyed. But on crowding the bones together I do get evidence of much pain, and this indicates some injury of the joint. Rotation of the foot is negative here. On examination of the swelling I find that it is firm to the feel and gives no sense of fluctuation, as it would if due to an accumulation of synovial fluid. When the ankle joint is the seat of a synovial inflammation there is a bulging on either side and fluctuation can be felt. We have here, however, a thickening of all the textures about the joint and the bone. There is a decided increase of temperature over the joint.

You notice now that I have been able to insert the probe for two-thirds of its length, but I am not able to appreciate that it comes in contact with exposed bone. If it did I should, without any hesitation, pronounce the correctness of my diagnosis, but as it is, I am nearly certain that it is correct, namely, a chronic strumous arthritis, or "white swelling," or, as it is sometimes called, a scrofulous arthritis of the ankle joint. The absence of exposed bone does not throw out the diagnosis, because frequently it is not felt by reason of the tortuosity of the sinus preventing the probe from reaching it, or granulations may so fill up the joint and cover over the surfaces of the bones as to prevent them from rubbing together or being exposed to contact with the probe. This formation of granulation material has given rise to the name of "fungus articuli" or fungous disease of the joints.

Now the question is, what should be done here? These cases of white swelling are sometimes called scrofulous, but they often occur when there are no other signs of tubercle anywhere. Nevertheless they frequently do appear in connection with tuberculous disease of the bones. If the bone itself is diseased and the cartilages are gone then recovery cannot take place so that movement of the joint will remain possible, but the best result that can take place in such cases is to procure ankylosis, and you should treat the case with this result in view when you are satisfied that movement cannot be restored, and you should seek to get the ankylosis in the best position for the limb, which is with the foot at right angles to the leg. I would therefore advise to give him ether and put the

leg in a straight position, and give him a plaster of Paris splint to retain the foot in position and to give it rest from pressure, and this should contain a number of fenestræ for the escape of the discharges. Under these conditions you may get ankylosis, but generally the disease progresses and the limb finally becomes useless, and resort must be had to amputation. Sometimes, however, resort is had to excision of the joint, but the result of this operation is doubtful, and so here in the lower portion of the limb amputation is generally to be preferred. Syme's amputation gives a good stump for an artificial limb, and I should in most cases prefer this and not waste any time in doubtful measures.

There is another operation possible which I should mention, perhaps. This consists in scooping out the carious bone by a sharp spoon-shaped instrument, and thus avoiding the necessity for excision. The diseased bone is gouged out and removed as far as possible with this spoon, and then the wound is left to fill up and heal by granulation. This operation is not very frequently performed.

IV. KNEE-JOINT.

This boy is six years old and his knee has troubled him four years. It is not the result of any injury so far as is known. His parents and their family are healthy and none of them have had consumption. The first thing that the mother noticed was that the right leg appeared stiff in walking, and then it became painful and at last the knee became permanently bent, and the hamstrings were cut by a surgeon in order to straighten the limb again.

Now when a child complains of pain occurring spontaneously in the knee and you find nothing there to account for it, on examination, the seat of the disease is nine times out of ten in the hip joint. But this was not the case here, for the knee-joint became bent by contraction of the hamstring tendons, and a swelling of the knee took place, and it became tender to the touch. This then was a case in which all the tissues of the joint were affected. To relieve the deformity which resulted resort was had to dividing the inner and outer hamstring muscles, an operation frequently successful, and then he wore a splint for a time and did get better, but now the inflammation has returned with increased severity. The swelling here is particularly prominent in front and at the sides of the joint, and you do not often get it behind in these cases. Notice also this recession of the limb just below the patella. This is due to a so called subluxation or a luxation backward of the bones of the leg. The ligaments of the knee being affected become weakened and when the knee is bent allow the posterior muscles to draw the leg back to a certain extent, and so a luxation is produced and the limb becomes fixed in this position. The luxation is in some cases greater than this you see here. On examining the swelling closer I find that it has a solid feel and this is due to thickening of the ligament and periosteum and probably of the synovial membrane and the tissue of the articular ends of the bones. The disease involves the inferior portion of the femur therefore and the superior portion of the tibia and perhaps the fibula. I find no evidence of any pus in the joint. Whether the bones are actually disorganized or not I do not know, but it is very doubtful if they are. I will not make the examination necessary to determine this with certainty on account of the pain it causes the boy, but I find that a slight motion of the joint is easily made and I do not discover any grating sensation.

I would not advise any very active measures here, but I should say that he ought to be treated still on the expectant plan. I would keep him in bed and procure pressure on the joint by an elastic bandage and extension by a weight attached to his foot. Then it would be well to put a splint on again to steady the joint and then not allow him to walk at all, or else if he does walk he should use crutches and not allow the foot to touch the ground. It is quite possible that he may yet recover with a very useful limb, and he may have considerable power of motion in it, or there may be ankylosis. If the latter result is to be obtained it is well to put the limb in the best position for convenience. If the limb remains completely extended this is not the best position, for locomotion will then be awkward because the foot will drag unless the limb makes an excursion or a curved movement outwards with every step forwards. So it is best to retain the limb flexed at a slightly acute angle just enough to let the toe touch the ground in walking. When ankylosis is desired excision of the joint is often performed, but this operation has not found very great favor among surgeons in case of the knee joint, while in case of the elbow joint it meets with the approbation of all.

V. HIP JOINT.

This little child was brought to me five or six weeks ago complaining of pain in the hip, and on examination I discovered that the cause of the pain was hip joint disease. The affected limb was apparently elongated, and the apparent shortening of the other limb I may say was due to a dropping of the pelvis to the side diseased. This causes the apparent lengthening of the affected limb in the first stage of hip disease, and the shortening in the second stage is due to the final disappearance of a part of the bone or to a displacement of the thigh bone. The reason of the apparent lengthening of the affected limb is not generally well understood, but it is very simple. For in the first stage the limb is abducted and the patient carries the heel away from the ground and hence the pelvis is rotated on its antero-postero axis so that it drops towards the affected side, and the opposite side is drawn up so as to cause an apparent shortening of that limb. Where there is apparent shortening in the second stage it is because the limb is here adducted to the other side and lies in front or crosses over the other, and the pelvis is therefore tipped toward the opposite side in order to bring the two limbs in parallelism. So the limb is apparently lengthened in one case and apparently shortened in the other.

This child has been treated by the application of a plaster splint. This is a very good appliance where the patient can not afford an expensive apparatus. The plaster of Paris is applied so as to form a splint covering over the knee and the hip joint, and a spike is placed about the hip and abdomen. This keeps the diseased parts in coaptation and prevents motion from taking place between the neighboring surfaces.

Another efficacious method of treatment consists in keeping the patient in bed with a weight and pulley attached to the foot, so as to make extension of the limb and prevent its becoming deformed by reason of the spasmodic contraction of the muscles. This method is sometimes even better than supporting the limb by a splint, for it not only keeps the limb straight and the joint at rest but it also keeps up extension and prevents shortening. It has the disadvantage of keeping the patient out of the open air. Yet I think if any of you will go to those hospitals, where these limbs are treated by the weight and pulley, you will be sur-

prised to see how well these patients bear this forced exclusion; for so long a time as eighteen months perhaps, and yet how much they improve.

The apparatuses that are made for those who can better afford them are of steel, and so arranged so as to produce extension and counter extension combined with rest of the joint, and at the same time they enable the patient to go about the same as when a plaster of Paris splint is worn. But they are both expensive and troublesome to keep in order, and a skilled manipulator is necessary to adjust them if they happen to get displaced or loosened.

Excision of the joint is often performed among the poorer classes, but seldom among the better classes because a very great majority of them will ultimately get well if they can spare the time necessary, and have good food, careful nursing, and fresh air in abundance. In the poor resort must be had to operation because they can not afford these luxuries.

An illustration of the effects of bad living is seen among the poorer classes in Europe rather than here. For there the poor are not so well fed and because they are obliged to live on so poor and so little food there are a very large number of children affected with carious disease of the joints. But in this country a man is usually able to work and earn enough to supply his family with food of a fair quality and hence these affections are comparatively rare.

This child is doing very well, and though wearing a plaster of Paris splint, it causes her so little inconvenience that she does not know that she has it on. She will have to continue to wear it for a long time yet, and you must not expect to cure a child of hip disease in a short space of time.

When a child comes to you with pain in the hip or knee or any other suspicious symptoms, never make light of it and put off treatment if you suspect hip disease, but give the patient the benefit of the doubt and treat the case as one of hip disease, by enjoining rest of the joint, and so prevent the trouble which might ensue from taking too much exercise if the joint should prove to be really diseased.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, JANUARY 10, 1883.

Dr. G. M. Peabody presided. The minutes of the preceding meeting were read and approved.

Dr. Ripley presented a specimen of

"NEURO FIBROMA,"

accompanied with a written history.

Dr. H. N. Heineman presented a stomach removed from a patient twenty years of age, which showed the lesions of

"CHRONIC GASTRITIS."

The patient was an inmate of Mount Sinai Hospital. His health had failed for fifteen months preceding his death. He was sent South for his health, but did not improve. He developed a carbuncle on the neck, general weakness and loss of power in the lower extremities. He was given to masturbation and had irregular dyspeptic symptoms. On returning home his symptoms grew worse. After eating solid food he would suffer from pain in the epigastric region. Liquid food would be regurgitated immediately after being

swallowed. Stricture of the œsophagus was suspected and rectal alimentation tried but he finally succumbed. On autopsy the only lesions found were in the stomach which was atrophied and the seat of chronic gastritis. The interesting feature of the case was the marked nervous symptoms during life, which were unaccounted for by any post mortem lesions.

Dr. Wyeth presented four or five specimens of

"URETHRAL CALCULI"

removed from a man aged forty-five, at the Polyclinic. The man had stricture of the urethra and urethrotomy and urethralithotomy was done.

Dr. Wyeth also presented specimens showing the lesions of

"SYPHILITIC AND TRAUMATIC ENDOARTHRITIS."

He showed by diagram the nature of the lesion described. The specimen showing traumatic endo-arthritis was a microscopic section of the carotid artery of a horse. In traumatic endo-arthritis there was a true proliferation of the intima.

Dr. Peabody did not think it fair to call endo-arthritis a syphilitic lesion, he had frequently met with it cases of chronic Bright's, phthisis, and malignant tumors. The Society then went into executive session.

SELECTIONS FROM JOURNALS.

REMARKS ON PHYSIOLOGY OF AUDITORY VERTIGO AND SOME OTHER NEUROSES PRODUCED BY EAR DISEASE. By P. McBRIDE, M.D., Lecturer on Diseases of the Ear in the School of Medicine, Edinburgh.

On reading for the first time the larger works on otology, the practitioner cannot but wonder at the number and variety of symptoms ascribed to ear disease. Careful consideration, combined with a basis of physiological training, will, however, do much to explain what at first sight seems a mystery.

Let us glance for a moment at the afferent nerve-supply of the essential parts of the organ of hearing. From the meatus and outer layer of the tympanic membrane, sensory impressions are conducted to the brain by means of the inferior maxillary division of the fifth nerve. The auricular branch of the vagus also, as we know, ramifies in the external auditory canal. In the tympanum is situated the well-known plexus, composed of fibrils from the glosso-pharyngeal, sympathetic, and fifth nerves.

The chorda tympani, from its exposed position, is very apt to suffer in suppurative middle-ear disease, as pointed out by Urbantschitsch, giving rise to anomalies of taste. It must be well known to all here how pathological conditions of the tympanum, or even of the meatus, may, by influencing the chain of ossicles or the fenestræ, produce stimulation of the auditory nerve. Now, the latter we must, in the present state of our knowledge, consider as equivalent to two independent nerves; the one connected with the auditory centre, which, when stimulated, gives rise to sensations of sound; the other connected with a centre, the stimulation of which produces vertigo and other allied symptoms. The former has its peripheral end organs situated, for the most part, in the cochlea, while the latter is distributed to the semicircular canals.

From the peculiar anatomical relations between the

various parts of the ear, it is quite possible that we may have several afferent nerves stimulated at one and the same time. For instance, in the case of a foreign body in the meatus, the latter may cause irritation alike of the fifth nerve and of the auricular branch of the vagus. Then, again, it may at the same time, by pressing against the drum-membrane, produce increased tension of the labyrinthine fluids, and cause, in this way, giddiness and tinnitus.

As our time is limited, I will not detain you by detailing other possible conditions which are capable of producing stimulation of the various afferent nerves which terminate in the ear. Many will, I am sure, suggest themselves to those present.

Now, although, as far as I know, no actual physiological experiments have hitherto been made in this direction, it still seems fair to conclude that reflex phenomena are more likely to occur when a stimulus is applied to two or more afferent nerves at the same time than if its action be confined to one. It is a well known fact that, whereas syringing the ear with warm water is not usually followed by any untoward effect further than a slight and transient feeling of giddiness, the results produced by substituting cold water are much more serious, comprising marked vertigo, nausea, and even syncope. The only physiological explanation which seems satisfactory is that, while in both cases we have stimulation of the auditory nerve in the labyrinth by the pressure of the column of water against the drum-membrane, there is, when cold water is used, an unwonted irritation of those branches of the fifth nerve which supply the meatus. It is, I believe, the simultaneous passage of afferent impressions along the auditory, or rather that portion of it which supplies the ampullæ, and the fifth nerves, which accounts for the unpleasant and serious symptoms sometimes produced by injecting cold fluids into the ear.

So far, we have considered the ear as a favorable starting point for reflex phenomena, on account of its great and varied nerve-supply. There is, however, yet another reason why disease or injury in this part should tend to produce disturbance of the nervous system.

Ruthertord and Hallenstein (*Handbuch der Physiologie*, Hermann, Band ii, 118) both found that, in stimulating sensory nerves, the reflex phenomena are more marked the nearer the centre the irritation is applied. In other words, the less the distance an afferent impulse has to travel, the greater will be its effects. All the nerves which supply the ear are, as we have seen, cranial, and the peripheral endings in the organ of hearing are in no case separated by any great length of nerve-tissue from their terminations in the brain. In proportion as this is the case, then, their stimulation by ear-disease will be apt to cause marked reflex phenomena.

We know that various functional nervous affections may have their origin in aural lesions. Thus, epilepsy has been traced to the presence of a foreign body in the meatus, and to pathological changes in the middle ear, as for instance, chronic suppuration. Cases have been recorded by Schwartz, Köppe, and (more recently) by Browne, in which mental disorders were distinctly traced to pathological conditions of the organ of hearing; and, what is more important, cured by local treatment of the part. Less marked phenomena, such as loss of memory, depression of spirits, are described by Von Tröltsch as of comparatively common occurrence in chronic middle-ear catarrh. Quite recently, I had occasion to treat a patient who, besides being very deaf and suffering from constant tinnitus, had become childish and forgetful. Suitable treatment,

directed to the ear, materially relieved all the symptoms.

The group of symptoms which are now almost universally admitted to be due to lesions of the semicircular canal, must be familiar to you all. The morbid condition may be an actual pathological change in the labyrinth, or simply an alteration in the relative tension of endo, and perilymph, such as may be caused by disease of the middle ear, or even by the pressure of a foreign body on the drumhead. In a typical case of ear-giddiness, the most striking phenomena are—(1) vertigo, (2) nausea or actual vomiting, and (3) faintness, going on even to actual syncope.

The questions I now propose to discuss are—

(a) How can we explain the occurrence of these symptoms from irritation of that portion of the auditory nerve which supplies the semi-circular canals?

(b) What is the relation between auditory and stomach vertigo?

The elementary facts of nerve-physiology teach us that in a centre—be it the brain or spinal cord—impressions conducted thither tend to radiate. In the common experiment of tickling the sole of the foot, the impression conveyed by the sensory nerve is radiated first to the motor nerves of the leg, and then, if the stimulus be still applied, to all the motor nerves of the body. It is urged by some that, while radiation from a sensory nerve to a motor often occurs, yet radiation from one afferent nerve to another does not take place. In reply, we may cite the pain referred to the knee, which is a frequent accompaniment of hip-joint disease. Another example, and one with which all here must be familiar, is the reflex ear-ache produced by a diseased tooth. In this country, if a patient complain of severe ear-ache, without deafness, and without inflammatory changes in the meatus or drum-membrane, the cause may generally be sought in some dental inflammation.

With this statement, I think, most of you will agree. The explanation of the pain being referred to the ear is, that the impression originating in the decayed tooth has, in the Gasserian ganglia, been transferred to those centripetal fibres which correspond to the auricular branches of the fifth nerve, and has thus been conveyed to the sensory centre as a message from the ear instead of from the tooth—if I may be allowed a simile. It is sometimes asserted that, in these cases, the pain is due to secondary vaso-motor changes in the ear; in fact, to inflammation. All that I can say is, that I have seen many cases of aural pain due to diseased teeth in which there was no trace of inflammatory reaction revealed by inspection of the meatus and drum membrane. Indeed, it is the absence of all signs of inflammation that enables us to diagnose the cause of the suffering.

Now, so far we have studied the phenomenon as a transferred impression—the radiation taking place in the Gasserian ganglion; but these cases sometimes go a step further if the tooth be not removed. The nerve-impulse is then radiated to centres corresponding to nerves which supply the arm and mammary region, causing pain in the shoulder and mastodynia.

I believe that the explanation here adopted is simpler, and in the present state of our physiological knowledge more scientific, than theories based upon hypothetical reasoning.

The phenomena of auditory vertigo are to be explained on the same principle.

It will, I think, hardly be denied that stimuli conveyed along the ampullar portion of the auditory nerve are conducted to a brain-area, which, when active, produces the phenomena of vertigo. This we are

taught alike by experiments upon animals and by clinical observations. If the stimulus be severe, however, it radiates beyond the vertiginous centre, and next involves the vomiting centre, producing nausea, if not actual vomiting. A still more severe stimulus will travel further and involve the cardiac inhibitory centre, causing faintness, chilliness, and even syncope—the vital phenomena of auditory vertigo. The loss of consciousness, which sometimes occurs in so-called Menière's disease, is probably oftener due to syncope than to any other cause.

We have seen that a nerve-impulse reaching the centre of the ampullar nerves tends to spread first to the vomiting and then to the cardiac inhibitory centre. The oculo-motor centre seems to be less frequently involved in man, although the experiments of Cyon show that nystagmus is a common result of section of the semicircular canals in some of the lower animals. Cases are on record where the latter symptom was found to depend upon ear-disease in the human subject. It is difficult to see how any other explanation than the above can be found to account for the phenomena of Menière's symptoms—not the vertigo alone, but its accompaniments, sickness and syncope. Here it will at least be difficult to find a vaso-motor connection between the labyrinth and the various centres involved.

I shall now consider the relation between auditory and stomach vertigo. For the production of giddiness, it is essential that the brain-area which corresponds to the ultimate origin of the ampullar nerves be stimulated. We have already seen that this vertiginous centre is in intimate physiological relation with the vomiting centre. The latter is directly connected with the vagus. The physiological process in the production of stomach-vertigo is, I believe, as follows: By irritation of the afferent fibres of the pneumogastric, an impression is conveyed to the brain, producing either nausea or actual vomiting, and it then radiates to the physiologically adjacent vertiginous centre, causing giddiness.

In auditory vertigo, then; we should expect the first symptom to be giddiness, because the wave of nerve-impulse is conducted directly to the vertiginous centre. In stomach vertigo, on the other hand, we should expect, first, nausea or vomiting, because the wave of nerve-force has to pass through the vomiting centre first. So far as I have seen, this is borne out by clinical experience.

In the case of ear-cough, an analogous explanation of the phenomenon suggests itself. The auricular branch of the vagus conducts an impression to the respiratory centre, producing the combination of expiratory movements known as cough. In his work on *Deafness, Giddiness, and Noises in the Head*, Dr. Woakes says, in speaking of ear-cough, "Thus, it cannot be said that the conducting of morbid impression along the sensitive fibres, from one region to another, will produce the symptoms; because, if reflex action be excited through a sensitive nerve, this is manifested as muscular contraction in the correlated area."

Now, I think that in the preceding part of this paper it has been shown that impressions may be transferred from one sensory nerve to another, or, rather, to its centre, without inducing muscular spasm. Thus it is in the case of the pain in the knee occurring in hip-joint disease, and again in earache, brachial neuralgia, and mastodynia, which may owe their origin to a decayed tooth.

Again, Dr. Woakes, in support of his theory, has laid much stress on the trophic changes in the larynx which occur in ear-cough. I am strongly

agree with Dr. Orne Green, who ascribes them to the commotion of the larynx. In answer to his objection, Dr. Woakes says that this explanation "failed to commend itself for acceptance, chiefly because such laryngeal complications are so frequently—one might say usually—absent in chronic bronchitis, whooping-cough, and other diseases, in which the larynx is even more violently commoted by cough than in the cases referred to in the context."

In reply, and in conclusion, I simply ask whether inflammatory changes in the larynx have indeed been proved to be, relatively, more frequent in cases of ear-cough than in the diseases named.—*Brit. Med. Jour.*

OBSERVATIONS ON SIX HUNDRED CASES OF DIABETES TREATED AT NEUENAHN.

By RICHARD SCHMITZ, M.D., Neuenahr.

Six hundred patients have been under treatment; of these, 420 were Germans, and 180 foreigners; 5 were under 10 years old, 25 between 10 and 20 years, 56 between 20 and 30, 104 between 30 and 40, 134 between 40 and 50, 196 between 50 and 60, 60 between 60 and 70, and 20 between 70 and 80 years of age: 248 of the patients came of families in which diabetes had already appeared; 51 came of families in which some serious psychosis had manifested itself, and 45 more had relatives who were remarkable for eccentricity or irritability, and 42 came of families which were markedly tuberculous; 93 of the cases were Jews, and of these 48 had diabetic relatives, 18 had relatives with psychoses, and 9 tuberculous relatives. In 8 cases, both husband and wife were at the same time suffering from diabetes. In 183 cases, the immediate exciting cause of the disease appeared to be some acute disturbance of the nervous centres, and only in 18 was there any essential disease of the nervous system; in 153 cases, the diabetes was attributable to an excessive indulgence in sugar and saccharine food. In 45 cases it was attributable to gout, and, in several instances, alternated with a gouty attack. It was in these cases that alkaline water and salicylate of soda were most useful; in 22 cases, diabetes seemed to be the result of the exhaustion consequent on some severe and long continued disease. The specific gravity of the urine varied from 1025 to 1035; the highest was 1042, the lowest was 1013, and in this latter 1 to 5 per cent. of sugar was found. The average daily amount of theurine was 2,500 c.c. to 3,500 c.c.; in only one case was it 9,000 c.c.; in 14 cases it was as low as 500 c.c. to 800 c.c., in spite of taking 1,600 grains of the sprudel water; but wherever the quantity of urine was small the perspiration was great, and where perspiration became copious the sugar decreased, which may explain the beneficial action of pilocarpin and of Turkish baths. Generally the day urine contained most sugar, exercise diminished it, while mental exertion and nervous excitement and pain increased it. The sugar varied from one to three per cent.; in only one case was it as high as eight per cent. When albumen was present, as not unfrequently happened, it seemed to be in inverse relation to the sugar. After the disappearance of the sugar, a material increase of phosphates, and, in some, of oxalates, was noticed; in four cases, hippuric acid was present. In two cases, sugar was simulated by a form of uric acid when the copper test was used; the fallacy was rectified by the polariscope. When the skin was dry, there were considerable polyuria and much emaciation; if there was a fair amount of sensible skin-action, the emaciation was not marked; 35 cases were very fat,

and other 46 had lost little of their former corpulency. The muscular weakness is the consequence, mainly, of degeneration of structure, which affects not only the voluntary muscle, producing the unsteady gait and the easy fatigue, but affects the cardiac muscles, producing the small pulse, the feeble heart contraction, the syncopic attacks, and the death by asthenia; the intestinal muscles producing the constipation, and the ciliary muscles producing the errors of accommodation. The cardiac weakness accounts probably for some of the causes of death, with accompaniment of coma or convulsions, which have been attributed to acetonaemia. Of the condition called acetonaemia, there were six cases. That it is caused by the absorption of some noxious product of fermentation in the bowels is certain, but whether this is always acetone is doubtful. The case was relieved as soon as a free evacuation of the dark colored, very foetid contents of the bowels was secured by castor-oil. If this could not be accomplished, the patient died.

Two forms of hunger are to be noticed: one, the normal hunger produced by the need to replenish the great waste of tissue; the other, a form of bulimia, a ravenous desire for any kind almost of food, which I consider a neurosis. In this connection is to be noticed the frequent insatiable desire for sugar, similar to the alcoholic craving of the drunkard. Thirst is to be looked on as the result of the drain of water, rather than as the result of the passage of sugar. A foetid odor of the breath is proportionate to the amount of sugar passed. Looseness and falling out of the teeth is often an early sign of diabetes. Gastric disorders are rare, in spite of the food being difficult of digestion; but intestinal troubles are frequent, notably constipation, and sometimes diarrhoea. Constipation appears to me to depend less on the nature of the prescribed food, than on the weakness of the degenerate and enfeebled muscular coat of the intestines. When diarrhoea occurs, there is evidence in the grey foetid motions, which are quickly covered with a thick froth of fermentation of sugar, unnaturally present in the bowels; of which the urine, at this time, is found to contain very much less than just before the attack of diarrhoea. Neuroses of various kinds, such as a form of hunger, already referred to, are not uncommon; they are chiefly neuroses of sensibility; of motor neuroses, cramp was the only one noticed. Crural neuralgia was not uncommon; sciatic and lumbar neuralgia less frequent; some cases of cervico-occipital neuralgia were noticed, and one of mastodynia in a man of seventy-five years. For their relief, codeia and salicylate of soda were most useful. The vulvar pruritus common in female diabetics is probably largely neurotic; it is greatly relieved by lotions of salicylic acid. Apathy is probably produced by the direct influence of the sugar-holding fluids on the brain.

Tuberculosis became developed in the course of diabetes in twenty-six cases only. Impotence was frequently present, but, in twelve cases, sexual desire and capacity was increased. Balanitis was occasionally observed, and was relieved or cured by strict cleanliness and salicylic acid lotions. Dimness of sight was frequent, partly produced by accommodation disturbances, and partly by turbidity of the lens, which disappeared with an improvement in the diabetes, except in three cases, where there was cataract, which was successfully extracted in all. Boils were common, produced by nutritive disturbances of the skin, as also erysipelas and phlegmon. The prognosis should not be so discouraging as has hitherto been the custom.—*Brit. Med. Jour.*

REMARKS ON THE TREATMENT OF RECENT WOUNDS. By RODERICK MACLAREN, M.D., Senior Surgeon to the Cumberland Infirmary.

The treatment of recent wounds is a matter in which we all have experience. Within the limits of our Branch, we see them not only among a healthy, vigorous agricultural population, but also in town populations with constitutions deteriorated by overcrowding, under-feeding, and the various vices which abound in the lowest strata of the people. As to surroundings, we meet with wounds where we have all that money, mode of life, and skilled nursing can do to promote a successful termination. We have them in hospitals, where the nursing, feeding, and appliances are very much what we think the best for the class of cases; and, on the other hand, wounds have to be treated where every favorable condition is absent, where there is no nursing, where the hygienic conditions are of the worst possible kind, and where the feeding is imperfect. It has, therefore, seemed to me that an interchange of views and experience among us would be specially valuable. In the few remarks I am going to make, I cannot tell you anything new, but merely give you my opinions and experience on certain points more or less familiar to you all. Nor can I pretend to make an exhaustive statement of so extensive a subject; I shall content myself with laying down certain broad propositions, which, in my opinion, embrace the great majority of cases.

In the first place, I may express my conviction that no one method of treating wounds is likely to give the best attainable results under all circumstances and with every variety; and, when a man sets forth that one treatment best promotes the healing of every such injury, I think that he is either generalizing on imperfect observation, or allowing enthusiasm to warp his judgment. I purpose considering wounds under their ordinary divisions of incised, contused and punctured.

First, as to incised wounds: for wounds of small or medium size, not involving bones, cavities, or the sheaths of tendons, I have seen the best results from the most absolutely simple treatment. 1. The first thing is careful cleansing of the wound, and removal of any foreign substances, if such be present. For this purpose I prefer carbolic lotion (1 to 20); boracic lotion (saturated); or even simple dry rag or other convenient material. I am convinced that the water in common use is often a medium which brings deleterious matter into contact with a wound, and, for that reason, to be avoided. 2. Next to this follows suppression of hæmorrhage, and the more thoroughly this is done, the better is the chance of primary union; indeed, the ability to completely control it is one of the limits to this simple treatment. Ligature of vessels with catgut and torsion are the simplest means at our command. Sometimes, especially if a wound be over bone, a pad of absorbent cotton-wool, applied for twenty-four hours, will stop oozing. 3. The next stage is the bringing of the sides of the wound into complete contact. For this purpose I am in the habit of employing one of two methods—suture or pressure. The sutures I prefer are silver wire, hair, or common sewing needles. I believe it to be an advantage to use very fine sutures; and, for small wounds, hair answers most admirably; it is very strong, unirritating and easily procured. A very excellent way of closing scalp-wounds is to push a sewing-needle through the two edges, and bring them together with a thread in figure-of-eight. In using sutures of all kinds, it is of great consequence to pass them through the tissues

beyond the wound whenever this can be done. Thus, with hare-lip, after paring, I pass needles right through the whole thickness of the lip and mucous membrane, keeping them (the needles) entirely from contact with the wound. I have sometimes seen suppuration commence at a suture, and spread from it, breaking up a wound which was promising to heal well. This risk can be avoided by keeping the suture away from the cut surface. Occasionally, a wound is so placed that a pad will close it throughout. Absorbent cotton-wool is the nicest material for this purpose. If it come near the edges, it is an advantage to have it impregnated with an antiseptic. When a wound of the class I am speaking of is efficiently closed, and all hæmorrhage has stopped, I look on any dressing not only as superfluous, but generally as injurious. Simple exposure to the air, keeping the wound dry, cool, and, above all, at rest, are all that is needed. We all know that heat and moisture promote putrefaction; and they should therefore be avoided. Sticking plaster is, of all known ways of keeping a wound together, the worst, almost invariably producing suppuration of the parts with which it is in contact. The only departure from the above way of treating moderate sized flesh wounds is where the surroundings are unhealthy, and especially in hospital, where the presence of suppurating surfaces and various ailments causes special risk of infection; then the complete Listerian dressing is the proper one to adopt.

I will next speak of large flesh-wounds, wounds involving joints and other cavities, and wounds involving bone, such as amputations. These may be all classed together, for one treatment is adapted to all. I am not aware of any treatment which will, in the majority of cases of this class, secure primary union; nor do I think it is likely that any such will ever be discovered. No doubt it occasionally occurs under various methods of dressing; but where there is considerable oozing, which cannot be completely stopped, where muscle is no longer in contact with muscle, tendon with tendon, or subcutaneous fat with fat, but each in apposition to tissue of another kind, it does not seem likely that primary union will ever be the rule. In all cases of this class, I regard asepticism, in its most exact signification, as involving least risk to life, and as most favoring local cure, of any method of treatment with which we are acquainted. No method of maintaining asepticism equals the carbolic gauze dressing, with all the adjuncts of spray, carbolic lotion, etc. I have tried, or seen tried, a great variety of other dressings avowedly antiseptic; but no other as yet seems worthy of holding a permanent place. I have no doubt that a better will be discovered. Its disadvantages are obvious enough. It is troublesome, cumbrous, somewhat irritant, and, above all, it keeps the wound sodden; and this unquestionably is not the most favorable condition for healing. But its certainty—the fact that it *will* do what we intend unfaillingly, where the conditions are at our command, and we make no mistakes—places it above everything else yet brought forward. The drainage-tube is too essential a point of this dressing to be passed over without a word; it provides a ready channel for the escape of discharges, and prevents distension. Drainage should be limited to as few lines as possible, so that the surfaces may be kept thoroughly in contact.

Only one set of incised wounds remains, where the wounds are connected with suppuration already existing, as in opening an abscess, excising a suppurating joint, or removing dead bone. Unless the whole surface which discharged pus can be removed, such

wounds may be expected to continue suppurating. In these, also, complete asepticism should be secured whenever possible; but, in a great many, from the impossibility of reaching every corner where putrefaction dwells, it cannot be attained, and I believe we then do best by using some efficient unirritating antiseptic, such as carbolized oil (one to twelve), applied on lint, and frequently renewed. In this class, I find myself yearly using the drainage-tube less and less, preferring, in a great majority of cases, to make a large wound, and leave it fully open. If the case be one where there is a reasonable probability of securing complete freedom from putrefaction, I put a plug of carbolized gauze in the wound, and an ordinary gauze dressing over it. If it seem hopeless to expect an antiseptic condition, I plug the wound with lint, soaked in carbolized oil, and have it frequently changed. Excisions of joints, as of the elbow and hip, I now treat in this way, and have got better results than when sutures were used. There is no possibility of discharge being retained; the wound heals uniformly from the bottom, no pockets of pus or sinuses remain; I believe healing is more rapid. I showed you at last meeting a case of excision of the elbow, for suppuration in the joint and sinuses communicating externally, which was absolutely healed in five weeks and four days after the operation. These remarks apply also to cases in which a cavity, that the tissues will not fill, remains after an operation. It is better to leave such a cavity open, than to shut it up by pulling skin over it.

I now come to contused wounds. When these approximate the characters of incised wounds, as so often happens with the scalp, the edges being sharp and clean, with little damage to the tissues around, they should be treated as incised wounds. The results are often surprisingly good. Large, irregular, branching wounds, caused by a blow from some blunt instrument, or a fall, often heal without any formation of pus. If these are at one end of the scale of contused wounds, at the other are cases where there is no doubt that the vitality of the injured part is forever destroyed, and that amputation is our only resource. As this brings them into the class of incised wounds, they call for no further remark. But there is an intermediate class, where the amount of injury is doubtful, and where only time can show whether the tissues can live or not—cases, I may say, often of great responsibility and great anxiety. Such injuries, if seen early, should have antiseptic measures put in force at once. To be successful, they should be done very early, as everything in the condition of the wound favors the speedy advent of putrefaction. Very many cases so treated will well repay the trouble. I have seen apparently hopelessly damaged tissue retain its vitality, and I have seen sloughs slowly absorbed without constitutional disturbance or infective sequelæ. When a contused wound of this kind becomes putrid, I generally have it dressed with carbolized oil or charcoal poultices until the sloughs are mapped out, and then remove these as speedily as possible. I do not think too much importance can be attached to this, for dead and putrifying tissue forms a terribly active centre of constitutional contamination. Continuous irrigation with carbolic lotion or Condy's fluid, gives often good results with this kind of injury, specially where efficient treatment has not been instituted at once, and where widespread putrid suppuration is going on. It washes away the discharge as it is formed, and by its mechanical, as well as by its antiseptic action, it tends to keep such a wound sweet.

Punctured wounds do not call for much comment. They bear a small proportion to the other classes in civil practice. Their importance depends very much on the tissues or organs they involve, and it would be beyond the scope of these remarks to go into details. Small punctured wounds heal readily with rest alone. For medium sized ones, an ice-bag is a useful application, the larger one should be treated antiseptically.

In conclusion, I propose making a few remarks on the principles and objects we have to keep in view in treating recent wounds. First in importance is the avoidance of constitutional infection; and, second, the speedy healing of the wound, and the restoration of the part to usefulness. These are not synonymous for a treatment which, if successful, results in speedy healing, but may, nevertheless, involve great risk of general infection in the event of its failure, such as the dry treatment of large wounds. I think it is our duty always to keep before us the gravity of the constitutional risk, and to consider first what reduces this to its lowest point, and to regard local recovery as an important but still secondary matter. If we inject a putrid fluid into an animal, we can get exactly the disease which used to afflict our surgical wards, and the evidence is very conclusive that the poison which produces grave general risk, in inseparably connected with putrefaction. Any one who goes over the experiments of Pasteur, of Lister, of Roberts, or of Tyndall, can, I think, come to only one conclusion, that putrefaction invariably originates in infection from without. But it needs a suitable soil, a certain amount of moisture and heat. Various substances are prone to it in various degrees, living tissues much less than dead ones, healthy much less than unhealthy, thick fluids much less than thin. We may, therefore, endeavor to carry out an antiseptic treatment from two opposite directions. We may either make the soil a very unsuitable one, as in the dry treatment, or we may prevent the access of septic material, as by the Listerian dressing. Experience and science alike tell us that, while we look after the wounds, we must not forget the body in which they are, and that pure air, good food, and careful nursing are not less essential than lotions, and sutures, and dressings.—*Brit. Med. Journ.*

MEDICAL NOTES AND NEWS.

The 8th session of the International Medical Congress will take place in Copenhagen during the days from the 10th to the 16th of August 1884.

Before his Time.—A medical man, practicing in Dantzic, recently undertook the resection of the lung of a young female patient, with the consent of her parents. The *St. Petersburg Medicinische Wochenschrift* understands that, through the denunciation of two colleagues, the case, which ended fatally, will be made the subject of a judicial inquiry; all parties, however, appear to admit that the attempt of the surgeon was made in perfect good faith, and in the full belief that it gave the patient a chance of recovery from otherwise incurable lung disease. Was the surgeon's conduct simply foolhardy and entirely reprehensible, or was he, on the other hand, before his time? It is by no means impossible, judging from analogies that abound in scientific literature and biography, that works may appear, one century hence, treating of resection of the entire lung as a recognized operation, and recording how, in the nineteenth century, the first pneumotomist got into trouble. Some, though not the

majority of innovators, live to see their views and their practices established. In any case, full inquiry and fuller details of the Dantzig operation are imperatively demanded.

New Operation for Spina Bifida.—Mr. A. W. MAYO ROBSON, reports the case of a child, six weeks old, upon whom, when six days old, he had performed a new operation for spina bifida. The redundant parts removed by the operation were also shown. After the removal of these parts and after stitching up the arachnoid over the spinal canal, periosteum from a rabbit was inserted between the meninges and the skin so as to cover the gap in the bones. The wound had perfectly healed; the skin over the lumbar region was quite level; there seemed to be no tenderness on pressure; the child looked strong and healthy. The sac, examined by Mr. F. H. Mayo, was found to be of the size and shape of half a swan's egg; the wall consisting of true skin and subcutaneous tissue lined by serous membrane. At one point the sac was very thin and transparent, appearing to consist only of the serous membrane covered by a thin layer of epidermis, when fresh minute blood-vessels could be seen to ramify over it. Mr. Robson drew attention to the following points: 1, the operation was performed with full antiseptic precautions, eucalyptus air being used instead of carbolic spray; 2, the meninges were closed by uniting the serous surfaces, as in peritoneal surgery; 3, the transplantation of living periosteum and its continued vitality; it had not yet, however, formed new bone; but already the covering of the canal had a greater than mere skin-firmness; 4, the entire absence of bad symptoms in the child, operated upon at so early an age, was noticed.

Extraperitoneal Rupture of Bladder, Non-traumatic.—Dr. JOHN BROWN (Burnley) reports a case, in which there was probably a chronic abscess in front of the lower part of the bladder, which opened into the bladder. Urine was extravasated, and followed an unusual course, passed upwards behind the abdominal muscles, between them and the transversalis fascia and peritoneum, as high as the umbilicus, and then appearing in the superficial subcutaneous tissue between the umbilicus and pubes. The history was as follows: on February 13th, he was first seen, his complaint being of incontinence of urine at night, and sometimes in the day. There was dulness over the region of the bladder, and about a pint of normal urine was withdrawn by a catheter; he was told to pass a catheter himself night and morning. On March 13th, he noticed, on drawing off his urine at night, he had some pain, and about a tablespoonfull of white matter came away. Next day, he was suddenly seized with pain at the lower part of his belly and a desire for frequent micturition. At this time, pus was noticed in his urine. These symptoms continued. On March 27th, dulness of percussion was found at the lower part of the belly to the right of the middle line. Two days later, this head extended upwards, and fluctuation was made out. On March 31st, dulness extended to the umbilicus; a feeling of a ledge extending backwards was observed on pressing the finger deeply into the umbilicus. There was a superficial swelling presenting fluctuation, which was opened in the middle line, two and a half inches below the umbilicus. From this in-

cision, urine drained away freely for six days; an India-rubber catheter was passed, and retained in the bladder, with immediate cessation of the flow from the incision and relief to the feverish symptoms from which the patient suffered. One week later, the catheter got blocked; and in two hours' time, urine had made its way to the seat of the incision, which was then healed. There was again rise of temperature to 103° ; but the flow being re-established, in two days the temperature was normal. The same phenomena were observed on two occasions, with an interval of ten days, when the catheter had been withdrawn. On April 6th, Mr. Lund of Manchester saw the case in consultation, and the plan of treatment being now vigorously carried out, a successful issue was obtained. The facts that no sloughs or suppuration followed in the track of the extravasated urine, and that a fall of temperature so immediately followed the provision of a drain by the retention of the catheter, were mentioned as proofs that the urine had caused the feverish disturbance by the retention it occasioned by its presence in the tissues, and not by putrefactive changes, causing no more irritation than any other bland fluid would have done.

Annual Meeting of the Bellevue Training School—Twenty Diplomas Given.—The rooms of the Bellevue Training School for Nurses, at No. 426 East Twenty-sixth street, were crowded with the friends of the school at its tenth annual meeting. The report of the managers stated that at no time had the demand for trained nurses in the hospital and in private families been more urgent than during the past year; the Medical Board of Bellevue, by special resolutions, had acknowledged the value of the services of the nurses, and given testimony to the great benefit conferred upon the hospital by their work, and urged the managers to extend their operations. The managers had to report that in consequence of the increased number of nurses employed in the hospital they were prevented from supplying the demands of private families, from which more than 700 calls had been received during the year; that so many graduates were employed in responsible positions in hospitals in this and other cities that there were left only eighty, who were now engaged in their professional duties in this city; a register of these graduated nurses was open at the school. It was stated that 168 nurses have graduated, many of whom are employed as matrons and heads of training schools in other hospitals. Particular mention was made of the fact that three of their nurses had recently gone to Italy to establish a training school in Rome. The managers expressed deep sorrow for the loss of their president, Mrs. Lane, well known in this city for her many good works during a long life. After the reading of the report the diplomas were delivered to the twenty graduates. No less than eight States were represented in this list, as follows: Sarah W. Adams, Maine; Harriet M. Alford, Connecticut; Elizabeth J. Barnard, Vermont; Lucy M. Boddie, North Carolina; Agnes S. Brennan, Ireland; Hannah D. Clancy, New York; Alice L. Conway, Vermont; Sarah J. Crosby, Ohio; Sophie Disbrow, New Brunswick; Sarah C. Drake, New York; Emma Knapp, Connecticut; Clara W. Law, New York; Jeannette C. Manly, New York; Adelaide S. Martin South Carolina; Katharine G. Shaw, New York; Susan Shoemaker, New York; Mary L. Slayton, Vermont; Lida Starr, Iowa; Dell Traver, Ohio; Emily Wright, New York.

An address was made by Dr. Gaspar Griswold, who

has been an earnest friend of the school, giving instruction by lectures and otherwise to the nurses for several years. An interesting paper was read showing the work of six nurses, who have devoted themselves to visiting among the poor, chiefly on the East Side. These nurses are supported by charitable ladies. Dr. Vandyke closed the meeting with a few words.

Organic Impurities in Water.—A very simple and important test for determining the quality of drinking water, and especially as to its freedom from sewage contamination, is given in *The Pharmaceutical Journal*. This consists in placing a few grains of the best white lump sugar in half a pint of the water in a perfectly clean, colorless glass-stoppered bottle, freely exposed to daylight in the window of a warm room. If the water be perfectly free from sewage contamination, it should not become turbid, even after an exposure of a week or ten days, in which case it is almost certainly safe, otherwise not.

Boracic Acid an Unsafe Antiseptic.—The London journals publish an interesting communication by Mr. Gade, a well-known medical authority, criticising the use of certain chemical substances at the present day for preserving articles of diet—substances which, however small the quantity employed in order to insure the preservative effect, must, in the long run, enter considerably in the animal economy, and thus, in a longer or shorter interval, impairing the health. In this class, according to the communication in question, boracic acid is to be included. It appears that while residing in Sweden, Mr. Gade used boracic acid for preserving the milk supplied to his household from decomposition; for some time no ill-effects were noticed, but after using the milk for a short time two of his young children fell ill—they became languid and drowsy, and their appetite failed. This was at first attributed to the hot weather, during which the boracic acid had preserved the milk quite sweet and pure; but it was soon traced to this article of diet, and the physician who was called in to the cases pronounced that to be the cause,—the boracic acid acting, he said, as an anodyne.

The Hygiene of Snowless Streets.—Medical statisticians have been at fault in not collating the snowfall and mortality of cities, for the result would probably show that the death rate every winter rises after an unusually heavy precipitation of snow which is allowed to lie and gradually melt. It is usually supposed that cold, and consequently the icing of a filthy area, has an antiseptic effect, destroying the myriad germs of disease in the dust and dirt of alleys and highways. But that this is a delusion has been repeatedly demonstrated by careful experiments. In 1878 the German investigator Frisch, by means of solid carbonic acid and ether, exposed putrefactive fluid bacteria and other forms of germ life to intense cold. While in a temperature of four degrees below zero they were apparently numbed, but after subjecting them to the enormously low temperature of eighty-seven degrees below zero, which was allowed gradually to rise in the course of two and a half hours to the freezing point, he found they were not killed, but when

transferred to a suitable nutritive fluid they grew rapidly. Similar results were reported to have been obtained last year by a French investigator. So long as the streets and courts are not coated with snow or ice the winds and rains may be counted on to carry off some dust and do a certain amount of scavenging. But the snow and ice coating serves as a protection to the disease-breeding germs, under which they hibernate only to come forth when we have a thaw with increased pestilential power. The problem of keeping dry and iceless streets in winter is as grave as that of keeping clean streets at other seasons of the year. When it is remembered that the hygrometric condition of the air also is most perilous to health when the iced pavements are giving off their accumulated moisture no effort to keep them dry seems too painstaking. Apart from the inconvenience and costly delays to business caused by snowed-up streets in our large cities sanitary considerations alone would justify a large outlay of money to have the crystal masses hauled away from the main thoroughfares to points where they would be harmless.

Banting Outdone.—A somewhat novel plan of reducing corpulency to graceful dimensions has been devised by a German medical writer. The author, in a small pamphlet (*Corpulency and its Cure, according to Physiological Principles*, by Dr. W. Ebstein, Wiesbaden, second edition, 1882), points out defects in the various treatments in vogue—Banting's and the mineral-water system. The curious thing, however, is his own method, which, he says, has the venerable authority of Hippocrates. In the author's opinion, corpulency is caused by too great a quantity of albuminoids and of sweets; and the cure is, to diminish these and to increase the quantity of fat in the food. He gives an example of the success of his dietetics. A healthy man, forty-four years of age, who, from his twenty-fifth year, had begun to grow very stout, owing to a sedentary life and to the dietetic use of an excess of alcohol, of albuminoids, and of sweets, lost twenty pounds in six months of following the prescribed diet. It may be added that, though the proportion of fatty matters was large, the diet altogether was little better than starvation fare.

Treatment of Meniere's Disease.—Dr. Grazi, in an article (*Gazzetta degli Ospitali*) on this subject, extols the use of quinine. He gives the valerianate in combination with extract of aconite. At first, the noises in the head are made worse by the treatment; but after a short time great improvement takes place. In 1875, Charcot recommended quinine in the same disease. He gave from seven to fifteen grains daily for two months and a half.

Professor Carl Braun has performed Porro's operation in Vienna nine times. In eight cases, the pedicles were treated by the extraperitoneal method, and five recoveries were recorded. These five women are living now in Vienna, and are exhibited annually at the clinic. The ligatures in Professor Braun's last case were of strong silk, prepared antiseptically, and were most carefully applied.

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EVOLUTION.

What used to be called "progress" is now known as "evolution," and is recognized as the inevitable result of certain preexisting forces, which, although often unrecognized, are always present and never cease to act. These forces exist in all forms of inanimate and animate matter. In inanimate matter their existence is demonstrated by the periodical returns of vegetable life at fixed seasons of the year, and by the growth and improvement of plants in successive generations. In matters pertaining to animal life, and of human existence, they make themselves apparent in a multitude of ways, the mode of manifestation depending in each instance upon the quality or nature of the element to be moved. Perhaps indeed, it is proper to assume that each element has its own specific force which permits of evolution only in one direction. Thus, there may be a specific germ or protoplasm for politics, manners, customs, ethics, religion, law and medicine; or, as Buckle would express it, the direction and character of the evolution will depend upon what one eats. But whatever may be the nature of these forces—and upon this point we are not disposed to speculate—it is certain that everywhere in the regions of science and human thought these exist, and that they are at the present moment particularly active.

But what we wish now to call attention to, is their unwonted activity in the domain of medicine. In the department of operative surgery everything indicates change and development; either actual, or as foreseen through inspired vision. The eye is subjected to new incisions. The nasal, pharyngeal, auditory and laryngeal passages are explored, irrigated, dredged and snared by many ingenious devices which were lately wholly unknown. The walls of the chest resound to the blows of the hammer and chisel. The abdomen is invaded from every direction, and especially from that side where nature has placed the fewest barriers, the region of the female pelvis. Through the whole length of the male urethra there is unwonted activity.

Medicine is also of late unusually restless; science is

beckoning to empiricism; women jostle hard upon the men in the struggle for patronage. Medical colleges and professors are multiplying. Post-graduate and Polyclinic schools are now for the first time in this country opening their doors for practical instruction. The roads leading to the medical profession are more and more thronged; but the roads never become blocked because (let us be grateful for so simple and happy an expedient) the gates are always held wide open at both ends.

All these things denote, as we have already intimated, progress, or evolution; and they are the result of the pressure of certain occult forces which are struggling for expression, but the nature of which we do not attempt to explain.

Last of all there is heard a rustling among the leaves, and a new development or evolution is seen to be in progress in the department of *medical journalism*. Latent forces are becoming active here also, and under this influence medical journals are multiplying, enlarging and beautifying their petals, and acquiring more strength and stamina. *The Medical News*, *The Medical Record*, *Gaillard's Journal*, *The New York Medical Journal*, *The Sanitarian*, are swelling and developing into new forms.

For ourselves we do not think we are experiencing the inward pressure, or divine afflatus to the same extent as are our groaning contemporaries, for the reason perhaps that it is but a short time since we felt the same inward emotion, and groaned in the labor of evolution. Indeed we are to-day placed in a position to sympathize with our struggling contemporaries, and to offer them encouragement in the prospect of their new and improved forms of existence. May they find in them both pleasure and profit.

DR. GEORGE M. BEARD.

Dr. George Miller Beard, of this city, died January 23d of pneumonia, after an illness of three or four days.

Dr. Beard was born in Montville, Conn., May 8, 1839. In 1862 he graduated at Yale College, and he took his degree in medicine in 1866 at the College of Physicians and Surgeons in this city.

He was a brilliant and forcible writer. His first literary effort was a paper on "Electricity as a Tonic," written in 1866, and he subsequently wrote "Our Home Physician," published in 1869; two popular treatises, entitled respectively "Eating and Drinking" and "Stimulants and Narcotics," 1871; "Medical and Surgical Electricity," 1875, with Dr. A. D. Rockwell; "Hay Fever, or Summer Catarrh," 1876; in 1877, a monograph on "The Scientific Bases of Delusions Being a New Theory of Trance and Its Bearing on Human Testimony;" in 1880, a practical treatise on "Nervous Exhaustion;" in 1881, a work on "Seasickness," and in the same year "American Nervousness, with Its Causes and Consequences;" in 1882, "Psychology of the Salem Witchcraft Excitement, and Its Practical Application to Events of Our Times." Among his later writings were a work on "Sexual Neurasthenia," "The Physiology of Mind-reading," and a host of pamphlets relating to electrology, neurology, and psychology. He also made constant contributions to the *North American Review* and *Popular Science Monthly*.

Since about the year 1876, when his attention became more especially directed to psychological studies, he has devoted a large portion of his time to the study of

insanity, and of mental disorders in general. He has become most widely known, however, from his investigations and public demonstrations on the subjects of trance, hypnotism, mesmerism, mind-reading, muscle-reading, and cognate themes; and whatever opinions may have been formed as to the soundness of his theories and the value of his practical demonstrations, no one will call in question his sincerity, nor that he brought into the discussion much talent, learning, and ingenuity, with most unwearied perseverance. There is, however, one work of his life upon which his reputation must chiefly rest, namely, the "Treatise on Medical and Surgical Electricity," the result of the joint labors of Drs. Beard and Rockwell, and which was first published in 1875, a work of great labor, originality, comprehensiveness and clearness, and of which it may be said, what can seldom be said of treatises on electro-therapeutics, that it makes no false claims. Indeed, the whole book seems rather to be given up to a statement of what electricity cannot do, rather than to what it can do.

Dr. Beard was a member of the American Academy of Medicine, and at its last meeting contributed a valuable paper on the subject of medical education.

IS CONSUMPTION A SPECIFIC AND CONTAGIOUS MALADY, OR IS IT NOT?

Dr. Formad, the pathologist of Philadelphia, in a paper read before the Philadelphia County Medical Society, claims to have proven the fallacy of Koch's theory as to the specific nature of tuberculosis; and he denies the existence of the tubercle bacillus, except as an accidental and secondary circumstance. Tuberculosis is, therefore, not contagious.

Prof. H. C. Wood, his co-laborer in the same field of study, holds the same opinions. Dr. H. D. Schmidt, of New Orleans, believes that he has made it certain that Koch's tubercle bacillus is only a fat crystal. A number of foreign experimenters are equally unable to find the tubercle bacillus; but very recently, Dr. Hirschfelder, of San Francisco, has found it again, and has shown, as he thinks, that Dr. Schmidt had deceived himself, by washing out the coloring matter with ether, and thus rendering the bacillus invisible.

Prof. Wood also declares that the specific and contagious nature of tubercle is opposed to clinical experience, while Prof. Janeway reports a group of cases which tend to support the doctrine of Koch. A man suffering from tuberculosis communicated the disease to a pet dog who habitually slept with him; and the dog died. A second dog, which he substituted for the first, shared the same fate, and a third bled fair to succumb in like manner, but he was fortunately saved by the timely death of his master. It is not said that in the case of these dogs the existence of tuberculosis was verified by the medical attendant or by an autopsy, but no doubt Prof. Janeway is well assured of the correctness of the report as made by him.

Meanwhile, the disciples of the two schools are arranging themselves under their appropriate banners. In most cases the younger members of the profession, who never miss a chance for a seat in the car of Progress, arrange themselves as disciples of the German school. They hold to the bacillus. While the older and more conservative members, as a rule, are to be classed among the doubters, if, indeed, they be not properly classed sometimes as open scoffers. *We will see.*

LECTURES.

A CASE OF LACK OF DEVELOPMENT OF THE FEMALE GENITALS,

A CLINICAL LECTURE DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS

BY

T. GAILLARD THOMAS, M. D.

GENTLEMEN:—The history of this little girl is a clinical lecture in itself. I will read it to you:

"Rachel W., 18 years old."

This is the whole of the lecture. Imagine that girl being eighteen years old! Yet she is the type of a large class of cases, and in practice you will find many girls like this one who are really eighteen or more, yet only twelve years old in appearance. She has not developed into womanhood at all, and though physiologically twelve, she is chronologically eighteen years of age.

Her mother gives this account: "The girl seems to be sick all the time, and she complains of back-ache, pain in the head and sickness everywhere." The girl is intelligent, and gives the same story, and you notice the peculiar voice in which she tells it. That is not the voice of a girl, but it is the voice of a boy of eighteen just as it has got through changing, and if she were not dressed as a girl you would think that it was a boy who is talking. She says that her headache does not persist all the time, but she has it every week; and she also complains of pain in the chest. If she goes out into the cold air she has a tendency to cough. She cannot walk far at a time from lack of strength. She has never had any monthly sickness, and she has never menstruated nor seen any sign of menstrual blood. That physiological change therefore which ought to have shown itself at twelve or fourteen years of age has not yet appeared in her. There is a time in the month when she feels unusually sick, and this occurs at the same time every month, and then she complains most of headache, pain in the back and pain in the abdomen. There is the history of this case. The changes which ordinarily take place at the age of puberty have not occurred in her; but why, is not known.

You know that the changes of puberty develop at very different periods in different families and climates and races. Now this girl is a Jewess, and these changes usually occur very early in that race, so she ought to have experienced them as early as twelve, or, at least, thirteen years of age; but for some reason nature seems to have forgotten to make this change here. Naturally at that time the vagina begins to develop very rapidly, and then the uterus, and ovulation takes place, and then the ovaries develop still more and menstruation takes place. But in some cases like this nature fails in her attempt to produce these changes, and menstruation does not take place at all, and the girl remains a child twelve years of age for the rest of her life. This girl at forty may be wrinkled and old-looking, but she will experience no marked change, and will still be a child in reality. She may improve much mentally, for she is now quite intelligent, and she seems to appreciate her condition thoroughly.

This same condition can be produced by a removal of the ovaries, for it is found that if a girl has them removed before the age of puberty, she does not develop as she should. Her voice will not be that of a woman, but more like that of a man, and her body

will not become so rounded out as it should, but she will remain smaller generally than is natural, and altogether there will be a complete lack of development. Exceptionally, however, you will find a woman without ovaries or vagina who is well formed and handsome in appearance, but as a rule you will meet with this condition which you see here now.

When I saw this girl in the other room a few minutes ago and heard her story, I of course proposed a vaginal examination here, and she readily consented. This is what I discovered. I could pass my finger through the vulva very easily, and I then found that I could pass it still further along a very long and narrow vagina, not much larger than my finger, and at its end I discovered a very small cervix, and above this I could feel a rounded acorn-like mass, which I knew to be the uterus. I then drew my finger back a little and tried by pressing it to one side and the other to map out the ovaries, but I found nothing to show that there were any in the pelvis. But no deduction can be drawn from that fact, because even when of the normal size you will sometimes not be able to map them out. It is not so easy a matter as it is often described to be to map out the ovaries when of normal size, and many who imagine that they find them, because they know where they ought to be, really do not feel them at all. Here, then, we have to deal with an infantile uterus in an eighteen year old girl whose ovaries are probably also undeveloped and whose uterus has not grown at all for the past five or six years.

Now what is the prognosis here? Fifteen or sixteen years ago this class of cases received a great deal of attention in this city, and a great many remarkable results from the methods of treatment employed were reported, and I myself had then great confidence in their efficiency and warmly advocated them. But I have since lost much of the confidence I then had, for I have found that the wonderful results which were so commonly reported only are obtained in exceptional cases. At last so many failed of success in their trials that this plan of treatment was almost abandoned, and now it is very rarely resorted to. Yet I have still confidence enough to try it here if the girl and her mother will consent, for it is occasionally successful, and I have seen much benefit result from it even when there was not a complete cure, and she ought to have the benefit of a trial of it, for she ought to be developed into a woman, if anything in science will help her. I would propose to test the treatment on her, and then if at the end of three months trial there is no progress toward improvement, I would give it up.

The rationale of the plan of treatment I would propose is this:—If you can develop the uterus and by any means bring it to a larger size by directing nutrition to it, and then through the uterus irritate the ovaries by any reflex method, you will do much good in restoring their natural functions and in time you may bring about menstruation. In the case of a girl of seventeen whom I have been treating on this plan at my private hospital, but in whom several erratic attempts at menstruation had already been made before she came to me, I was successful in bringing on the flow at the natural periods, and she is now menstruating and feels greatly improved in general health. The plan I used with her, and should in this case if I get the opportunity is, to begin by putting into the cervix a small sea-tangle tent and passing it through the cervical canal into the cavity of the uterus, and then tamponing the vagina and leaving the tent there for twenty-four hours. I then draw it out, and on the third day after I put in another, a little larger, and

leave it for twenty-four hours. After removing this I put in two tents at once, and later three side by side, and in this way I gradually distend the uterus mechanically and attract more blood to it so that its nutrition is increased, and I know from experience that you can make the uterus grow in this way, though it is a very clumsy means of inducing a physiological result. After a while I put in large sized tents every week, and when at length the uterus has become quite large then I withhold the distensible tents and replace them by a glass tent composed of a stem with an expanded bulb-shaped end, and then I introduce a cup-shaped pessary, into which the bulb of the tent rests, and this keeps the glass stem from falling out. This is left in the cervix night and day for three or four days, and then, after a period of rest, the instrument is cleansed and replaced.

This local treatment is not carried on to the exclusion of other means, but at the same time that it is being carried out I direct other means to the improvement of the general system. I enforce a full diet, and require the consumption of a large amount of nutritious food six times a day. The plan of diet I pursue at my private hospital is this:—I require the patient to eat the three full regular meals, and then midway between the hours of breakfast and lunch I order her to take a tablespoonful of the extract of malt in milk. She must eat this whether she has any appetite or not. Then between the hours for lunch and dinner she must take another allowance of the extract of barley and milk, and this is repeated between dinner and bedtime. Now this girl here probably eats but very little, and her blood system is consequently bad, and nutrition is hence low, but with proper feeding all this will be changed and the conditions for increased nutrition will be favorable.

When I was in Europe I learned a lesson in feeding, for they have there at present a very curious method of fattening poultry. They have a number of large coops arranged in tiers one above another and encircling a pivot on which they revolve. In each coop there are a number of nests and in each nest is a chicken, and the head of each chicken protrudes between the slats of the coop, where it is held fast. Then a man with a sort of a stomach pump turns the coops about on the pivot, and as it revolves he catches the head of each chicken and puts the tube in its mouth and then fills its stomach with a mixture of milk and wheat. In a few days the chickens become trained to this method of forced feeding, and as the contrivance revolves they protrude their heads and open their mouths ready for the food. This feeding is repeated every three hours. As a result, a chicken which would never fatten in one of our barn-yards, or which a farmer would impoverish himself by fattening by the usual means in six months, will fatten in six weeks, and the flesh will be uncommonly white and sweet from the character of the food on which the chicken has been fed. Now that is essentially the process of feeding which I have adopted in my private hospital, but I enforce it not by using the stomach pump, but by combatting the patient's will. All the patients at first say that they can't eat so much, but after three or four days of forcing their appetites they take their extract of malt and milk regularly, in addition to their ordinary meals. In this way they increase in weight at the rate of one and a half to two pounds a week and the improvement is very marked, while the whole effect on the system is remarkable. So this is the plan of general treatment I would carry out in this girl while her uterus is being improved in condition by local measures.

This girl's skin too is dry and cold and resembles parchment paper, and it is in very much the same condition as you will often see in men with cirrhosis of the liver. When you take hold of her hands they feel very much as Dickens says some men's hands feel when you shake them and that is, "as if you were taking hold of a fish in the dark." To stimulate the skin to its proper functions, if she enters my hospital she will get three Turkish baths a week, and on the three alternate days she will have massage thoroughly applied by trained hands. The plan used is generally known as Ling's Swedish Movement Cure, and a woman who makes this treatment a profession often receives as much as ten or twelve hundred dollars a year. For the benefit of those of you who do not understand just what is meant by massage I will describe how it is applied in a few words. The trained woman first begins with the finger, and she rubs it and works briskly for a few moments, passing from the first to the second joint and then to the third, and then she does the same with the other fingers, and then passes to the hand and arm, and she pinches and slaps the skin till it burns and becomes absolutely uncomfortable; then she passes to the other arm and upwards to the chest, and so goes all over the body except the face. This brings the skin everywhere into active circulation, and it gives passive exercise to all the muscles at the same time. Then I have the patient go through some sort of gymnastic exercises every day, till the muscles grow firmer gradually and the state of the nervous system begins to improve. You may ask, how are we to carry out this plan of treatment where we can not get professional manipulators. I reply that you can imitate this in private practice by showing the mother or some other intelligent attendant how it should be done. If you begin this treatment in any case I am sure you will be encouraged to go on with it.

I have told you thus far that your efforts should be directed first, to improving the state of the blood; second, to improving the cutaneous condition and the state of the nerves; and third, to developing the uterus. Now in relation to this third matter I have something more to add. As soon as the uterine canal has become so dilated that a large sized glass stem can be used, I then put a cup shaped electrode about the cervix and attached to it one of the wires of a galvanic battery, or sometimes I used a faradic machine, and the other electrode I have passed first to the nape of the neck, and then over the region of the ovaries, and so I stir up the ovaries and excite them by the direct action of the electrical current passing through them and the uterus at the same time. After this had been done daily for three months it may be that this little girl will be taken with an erratic hæmorrhage lasting perhaps for twenty-four hours, and if the treatment is still persevered in perhaps at the end of twenty-eight days or even six weeks, there will be another similar but more natural hæmorrhage lasting for two or three days and at the end of another month this may be repeated. In my other case of the young lady at my private hospital I can now produce such a flow every twenty-eight days. You may ask me if this is really menstruation. I do not know, but at any rate it is very satisfactory in simulating it, for this young lady feels that she is changing, and besides she is looking so much better that every one who knew her is struck by her improvement. She is going to leave me after I have induced the next menstruation, and then after that I have told her to come to my office three days before the time for her next menstruation. When she comes I will take an ordinary Peaslee's uterine sound and cover all but the

end with a piece of rubber tubing, and after introducing the exposed portion into the cervical canal I will pass through it as strong a galvanic or faradic current as she can bear for five or ten minutes, but not so strong as to cause her great pain, I will then send her away and tell her to come again on the second day before the expected menstruation and I will repeat this treatment, and then again on the first day before, and finally on the day the menstruation is due. Then I will wait to see the result, and I am encouraged to believe that in this way I can bring on menstruation in her whenever I choose.

Now this girl ought to have something done for her, and I would advise her to submit to this plan of treatment. It is not enough for us to say that we can do nothing for her and send her away without hope, or to give her quinine and iron and tell her to take exercise and plenty of good food and so forth, hoping that this will benefit her. If this is all you do you will not be doing your full duty. But I would put her under the plan of treatment I have described and then, if after three months of fair trial it showed no effect by inducing an erratic effort at menstruation, I would let her go. I do believe that by the end of three months we ought to get some evidence of success if the treatment is to be of any use. She ought by that time to look better and weigh eight or ten pounds more, and there ought to be a slight uterine hemorrhage at least.

The first case to which my attention was attracted when this plan of treatment was started, ten or fifteen years ago, was a young lady in whom there was a similar condition to that which exists in this girl, but it was associated with attacks of epilepsy. She was treated by a very eminent gynecologist who so far relieved her that the attacks of epilepsy almost disappeared, and menstrual discharges came on regularly, and it was altogether a brilliant success. This and similar remarkable results led me to advocate this treatment warmly. But now I have not the same confidence in it as formerly, because, though in a few cases it succeeded well, yet I found that in the great mass it did not succeed at all. In like manner sterility was treated in this city fifteen years ago almost universally by cutting open the neck of the uterus, and of the large number of patients so treated, perhaps five out of every hundred would be cured. These would go about among their friends and tell of their success and advise them to undergo the same operation, so it began to be performed recklessly by inexperienced physicians and in all sorts of cases, and so after a time, though most operators would read of the successes of others, they found that they themselves did not succeed at all, and the operation fell into disrepute. So now it is almost given up, and I think that it is resorted to at present less than it ought to be, for I believe it is beneficial in some cases, and hence I have not entirely given it up.

Now, if the mother will let this girl go to the Woman's Hospital, I will see what I can do for her, and I will report progress to you regularly every month. She belongs to a race, I may say, who are very much disinclined to accept charity and so I may have some difficulty in inducing her to go to the hospital, but she is quite intelligent and wants to improve and so I think she will be persuaded. She is a native of Poland. In appearance, she verges on cretinism, and resembles that peculiar class of people which inhabit one of the districts of Switzerland, but her mind is not cretanic at all, and so I think I can persuade her to go to the hospital, and if so I will tell you. Meanwhile I want you to recollect the peculiarities of her face, manner, and size, so that you may appreciate the change if you

see her again after she has been subjected to the plan of treatment I have described.

CASE II.—Infantile Leucorrhœa.—This little girl's name is A. M., she is nine years old and a native of the United States. Her mother says that she has been suffering from a very profuse leucorrhœa for a long time and a burning sensation at the vulva, and this has not been cured by any of the remedies that have been employed.

In the other room I made an examination of the genitals, not by the finger because of her age, but by separating the labia the vagina could be seen to be of the color of red flannel, and bathed with a profuse leucorrhœal discharge which also invaded the urethra and thus set up a urethritis, and the discharge seemed to almost pour out of the vagina.

I see perfectly well what the condition is here and it is a very common difficulty. There are various ways in which such cases will be brought to your notice. The mother comes to you alarmed perhaps at finding such a state of affairs, and she is apt to be suspicious of some injury to the child, especially if she comes from a tenement house in some of our poorer districts where the child is much exposed. But it is only a disease in reality, and you can therefore always quiet the mother's mind by telling her that it is a common difficulty and readily curable. It is a case of infantile leucorrhœa, or a better name would be infantile vaginitis.

There are several causes of this condition in children. One of the most frequent is that hygienic precautions are neglected, and because the parts are so undeveloped they are not cleansed properly by the nurse or mother, and hence the leucorrhœal discharge collects in the upper part of the vagina and irritates it, just as in balanitis in boys the secretion from the glands of the glans penis collects beneath the tightened prepuce if it is not properly cleansed. Another cause is a depreciated condition of the child's general health, or a condition of *spanæmia* or impoverished state of the blood. The children who suffer from vaginitis from this cause also generally suffer from gastric or intestinal catarrh. Moreover if the mucous discharge does remain in contact with the vaginal walls in a healthy child it will not produce the same amount of trouble as in these pale and weakly children. Again this trouble is often caused by the introduction and irritation of ascarides from the rectum which pass into the vagina, or generally by the irritation which they set up about the anus, and especially by the scratching which is thus excited.

As to prognosis: It can be cured at once if treated properly, and generally the cure can be effected within two weeks.

In treatment, first find out if there are any ascarides in the rectum, and if so make use of one of the simplest and best remedies I know of for this, and that is, the injection of salt water, a remedy which affects this class of ascarides very disagreeably. It should be injected just before having an action of the bowels. Then tonic treatment must not be neglected. Meat, malt, milk and butter all enrich the blood, and the vegetable tonics, with iron and the hypophosphites, also render it more healthy. Lastly the vagina should be washed out thoroughly by a syringe which throws the water up to the end of the vaginal canal, and you should teach the nurse or mother how to do this properly. This is often all that is necessary for a cure, but in some cases where the condition has lasted for a long time it will not be. In such cases one of the best remedies I know of for infantile leucorrhœa is the

preparation known as "black wash" which is a solution of calomel in lime water. One half to one ounce of this should be added to a pint of water, and after the vagina has first been washed out and cleansed with clear water, this solution should be injected. This must be done twice a day, on rising in the morning and on retiring at night. I have never seen a case of infantile leucorrhœa that could not be cured by this means, nor do I doubt that it would effect a cure here in less than two weeks if properly performed. But I warn you to avoid making one mistake. If you simply tell the mother to give the remedy herself, and to inject a pint of warm water first, and then wash out the vagina with the black wash, she will probably inject about half an inch of the lower part of the vagina and cleanse it well, while she leaves alone in the upper part a half an inch of pus which keeps up the irritation, and so there is no improvement. You had better therefore show the mother how to do this washing out, and see her do it yourself the first time. You know there are three tubes or nozzles which come with the ordinary Davidson's syringe. Of these you should use the middle sized one which is the rectal tube, and pass it up the vagina as far as it will go, which will be about the length of the little finger, and then let the water flow so that it cleanses all parts of the vagina, and you will get the result I have described.

ECZEMA OF THE FACE WITH SECONDARY GRANULAR INFLAMMATION.

A CLINICAL LECTURE DELIVERED AT THE UNIVERSITY MEDICAL COLLEGE.

BY

PROF. J. WILLISTON WRIGHT, M. D.

This patient's name is J. G., age 24, a laborer. Four years ago he first noticed a pimple on his chin, which spread something like a ring-worm till it extended to the side of his face. Then similar patches appeared on his chin and all over his face, and wherever these were the doctors pulled the hairs out and found the roots diseased. It was two years before these patches got well. Six months ago this trouble about the right ear came on. You notice here that he has a scaly or scabby sticky eruption extending along the cheek in front of the ear, and the whole of the ear itself is involved, and also the skin behind the ear. The tissue of the ear is very much thickened, and is hard and inflamed, and discharges a sticky serum. Behind the ear there are also a series of small swellings, some of which fluctuate while others are quite hard.

Now he says that the doctors who treated him two or three years ago differed in opinion as to the nature of his disease, some of them calling it sycosis, or, in other words, "barber's itch," while others called it an eczema. Now I presume from his story that he did then have a patch of sycosis or some one of the kind-red eruptions which occur about the roots of the hair; but that is not the matter for which he comes here now to be treated. I see that his face bears the marks of an eruption of some kind almost everywhere; his forehead, and cheeks, and skin are scarred, his eyelids are rough and the conjunctiva thickened, and the eye itself looks sore. This trouble on his face, therefore, I should call unquestionably a moist eczema. This is a common form of eczema, in which the skin is thickened and infiltrated, and is in a chronic state of in-

flammation and attended with the formation of little pustules which finally break and discharge their contents upon the skin, and thus form scales and unsightly crusts when they dry. So much for the eczema.

But what is this other trouble behind the ear where there are several quite large swellings? They are the glands of the neck which have become diseased, and some are hard while others have gone on to suppuration. I make bold to say, too, that I think that this condition of the glands here is secondary to the eruption on the side of the face. That is to say, he has an eruption which irritates the parts about the ear, and he therefore probably scratches in order to relieve the itching. Now there is a sort of satisfaction always experienced by scratching a part that itches, and so the scratching of an eczema is accompanied by a feeling of pleasure at the time. But, as is often the case in the indulgence of other pleasures, there is apt to be a sequel involving a penalty, which consists here in setting up an additional irritation attended by smarting and burning sensations, and the like; for the scratching tears off the dry epithelial scales and thus leaves the inflamed surface exposed, and from it serum is poured out in large quantities, which also becomes dry, and again forms crusts and scales only to be again removed by the same process. Now this irritation of the surface is undoubtedly transferred by the terminal nerve fibers to the absorbent vessels which all terminate in neighboring lymphatic glands, and so these themselves finally become inflamed secondarily, and at last go on to suppuration. I say this with confidence, gentlemen, because I have very often seen such glandular inflammations follow a very obstinate eczema like this, but more commonly in that sort of eczema which appears about the anus, and which gives rise to one of the most uncomfortable forms of pruritus ani. In a case of such an eczema about the anus, when the patient goes to bed he sometimes can scarcely wait till he gets his clothes off before he begins scratching, he is so very uncomfortable; for as the night air comes in contact with his naked body it stimulates the little nerves on the surface, and an irritation is thus produced which sets up a violent itching, and the pleasure which the patient finds in scratching this part is one of the greatest for the time being that can be experienced. But the point I wish to bring out here is, that in this condition of the anus and perineum you will often find first one lymphatic gland and then another in the neighborhood become large and inflamed, and then pass on into suppuration, and so the patient will often have from one time to another as many as ten or twenty little abscesses to be opened, and all about the size of those which we find behind this man's ear.

You all understand, of course, that it is a difficult matter to treat successfully an eczema of this character and of such long duration, and where there is besides a constitutional tendency to it as here. For he says that he has it in other parts of his body also. In treating this man I would first put him on the old standard remedy for this disease, namely, on Fowler's solution of arsenic, beginning with five drop doses, and then carry it up to the point of toleration, increasing the dose by one drop every day, until he takes ten drops or more at every dose, and only stop when the eyelids begin to look puffy and some gastric disturbance appears. I would try this drug for one month, and then, if he showed no improvement, I would stop it and put him on this new remedy, which has gained such a reputation, the *viola tricolor*, or

three colored violet, and with this I would give a little senna as a laxative. I would mix one or two drams of the leaves of the *viola tricolor* with an ounce of senna and make an infusion of about one-fourth of this at a time, and take it as a drink on going to bed. This remedy has given some most satisfactory results in curing this form of eczema. As a local application I would order for a case like this the ointment of ammoniated mercury, also known as the ointment of white precipitate, and I would make it of the strength given in the United States Dispensary, which I believe is 4℥ 2℥ss to the ℥ of simple cerate. But first I would poultice off or grease off these crusts, by rubbing in oil or lard till they became softened so as to be easily scraped off, and then I would have the ammoniated mercury ointment well rubbed in with the fingers, and then I would cover the sores with a piece of lint spread with the same ointment and so keep it constantly in contact with the surface. I believe that frequent washing of these eruptions does harm, and therefore I would not wash them more than once a week, and I would keep the ointment in close contact with the skin until it produced a certain amount of irritative action and made the integument look red and inflamed. After I had in this way set up a sufficient amount of inflammatory action of a new kind I would stop this application and cover the surface with some of the milder ointments, such as the ointment of the oxide of zinc, for instance, so as to lessen the inflammation which has just been kindled up.

Recollect, now, that the important thing in the local treatment of such an eczema is to keep the ointment all the time in contact with the diseased surface, for if you neglect to take this precaution it will be of no use. So avoid removing the coverings frequently to see how it is getting on, and then at the end of a few days stop the more powerful ointment and treat it with oxide of zinc, or other mild ointment, and in the majority of cases you will soon see the eczema improve. I have seen a case of the eczema of the leg in a business man, which had lasted for eight or ten years, and the disease was located just under the knee, which is a very common situation for it, and this man had tried many applications for this, but it never got well. I treated this patch of eczema with the white precipitate preparation I spoke of, and in a very few days I found he began to improve, and in three or four weeks he was well. This same treatment would probably prove as successful in these patches of eczema on this man. These little abscesses in his neck, back of his ears, had better be opened to let the matter in them out, and then they should be treated in the same way as the other patches.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, JAN. 18TH, 1883.

In the absence of the President, Dr. Fordyce Barker, the Vice-President, Dr. R. F. Weir, presided.

The minutes of the preceding meeting were read and approved.

Dr. Carpenter read the report of the section on Practice of Medicine; Dr. Hunter the report of the obstetric section.

Sharpe's celebrated engraving of John Hunter was presented to the Academy by Dr. Milne. The thanks of the Academy were voted the donor.

Dr. Paul F. Munde read a paper entitled, "SECONDARY PUERPERAL HEMORRHAGE."

The following is a resume of the points made by Dr. Munde and of the discussion by Drs. Polk, Partridge and Hanks:

While primary hemorrhage had been treated of fully the secondary variety recurring at a more remote period from delivery, was not treated of in some standard text books, and in others very briefly, reference being usually made to the exhaustive essay on this subject by McClintock.

Dr. Parvin, President of the State Medical Society of Indiana, had recently in an excellent paper called attention to the importance of the subject.

Dr. Munde wished to report a case which had come under his observation and to elicit a discussion as to the best method of treating these cases.

August 2d, 1882, he had been called in consultation by Dr. Cohn to see Mrs. C. G., 25 years old, the mother of three children, the present being her fourth labor. She had always enjoyed robust health.

She had been in labor 21 hours when it was found impossible to effect delivery with the aid of the forceps when craniotomy was resorted to and it was found that hydrocephalus was the cause of the obstructed labor. The placenta was adherent to the fundus. 3 ii ergot were given and all hemorrhage ceased. The cervix was torn. The lochia were fetid till the sixth day, then right until eleventh day when they again became fetid. Temperature had fluctuated about 101°. On the thirteenth day the patient sat up. Appetite for solid food wanting, but liquid food was taken with relish.

On the sixteenth day, at five in the morning, the patient was taken with a profuse hemorrhage, but those about her not appreciating its importance, the Doctor was not summoned till some hours afterwards. The bleeding was arrested by hot water injection, and the vagina tamponed. When Dr. Munde arrived he found the patient nearly exsanguinated, head low, face pallid, pulse 120°, great prostration, fundus on a level with the umbilicus, tampon protruding from the vulva, uterus distended by coagula. Dr. Munde fearing septic absorption rapidly removed the tampon and several handfuls of coagula. He found the endometrium smooth, but mucous membrane thickened as in septic endometritis. The uterine cavity was rapidly cleared out, washed out with carbolized water, speculum introduced, 3 ss. pure tincture of iodine injected into the uterus and vagina tamponed with cotton, instructions being left to remove the tampon at the end of six hours. Ammonia, camphor, hypodermics of brandy, ergot, and bottles of hot water to the feet were administered.

The following morning pulse was 120. Temperature 101½, eyes bright, cheeks flushed and vomiting frequent. The uterus was injected with dilute warm solution of permanganate of potash and carbolized uterine injections ordered every two hours. Enemata of beef and brandy were given and every means taken to make up for the loss of blood. The temperature varied between 101 and 103 for three days when a circumscribed swelling was made out on the left of the umbilicus. As this disappeared the discharge became more purulent and patient became more comfortable. Recovery was very slow, convalescence not being established until five weeks after the sudden hemorrhage.

This was the most desperate case of hemorrhage Dr. Munde had ever seen recover.

The cause of the hemorrhage he believed to be sloughing of the endometrium at the placental site. Dr. Munde here detailed the causes mentioned in the

books as inducing this variety of hemorrhage. To those usually mentioned he wished to add some spoken of by Winckel alone, viz: Distension of the urinary bladder, forcible straining during defecation, and diseases of the endometrium. In the case narrated he had examined the uterus thoroughly and there were no placental fragments left in it.

A second point of interest in this case was the date of the hemorrhage after delivery, it occurring long after the time at which such hemorrhage was looked for. A third point was the diagnosis. The boundaries of the uterus should be early defined, and if necessary the finger should be introduced to aid in diagnosis.

The significance of such a hemorrhage depended on its source and amount.

The means employed to check the hemorrhage was worthy of consideration. Dr. Munde was not aware that iodine had before been used in cases of secondary hemorrhage. In this case it performed a double office, it was styptic and antiseptic. The ergot had been given as a specific hemostatic, though appreciating its depressing influence on an exsanguinated patient he had feared to omit so powerful a means of controlling the hemorrhage.

The tampon was only resorted to on account of the necessity of adopting at once every available means for preventing further loss of blood, and with the proviso that it was to be removed in six hours.

Eventual closure of the cervical rent was imperative, but this could not be done satisfactorily at the time of hemorrhage.

Dr. Munde stated, in conclusion, that it was not his intention to go over the whole ground of the etiology and treatment of secondary puerperal hemorrhage; he would refer to Barker, Playfair and McClintock for a fuller discussion of the subject. He wished simply to report this case and to formulate some rules respecting the management of labor, which, if followed, would reduce the possibility of the occurrence of primary or secondary hemorrhage to a minimum.

The hand of the accoucheur should not be removed from the fundus till the placenta was expelled.

Ergot should always be given after the birth of the child. A syringe filled with ergot for hypodermic injection should be always in readiness.

Ice should be always on hand, and the fundus should be rubbed over with a piece of ice, and, if necessary, a piece introduced into the uterus.

The value of hot water injections in controlling hemorrhage should be appreciated.

Apply the child early to the breast.

An equably tight binder should be applied.

Do not allow the patient to leave the bed before the tenth day.

Warn the nurse against introducing the nozzle of the syringe too far.

Dr. Polk in discussing the paper said that he only met with one case of this variety of secondary hemorrhage. When this danger arose it taxed the resources of obstetricians.

The case alluded to occurred on the 15th day after confinement. He had used a tampon and a solution of sulphate of iron, 1-4. He had instructed the nurse to syringe the vagina, but she had failed to do so, and at his next visit he found that there was complete atresia of the vagina. Antiseptic uterine injections were not free from danger. The question of secondary hemorrhage must be considered from both a local and constitutional standpoint. The tendency of all inflammations of the uterus was to prevent contraction. Lymph is not exuded from the vessels and proper organization does not take place.

As regards constitutional causes, any cachectic condition was likely to predispose to secondary hemorrhage.

He believed hot water preferable to cold to control hemorrhage.

As to operation on the cervix at this time he believed it out of place.

Dr. Partridge said that while the graver cases of secondary hemorrhage had been alluded to, the milder had not; he wished to call attention to these. Whatever permitted of improper uterine tone might give rise to these less severe cases which might manifest themselves by prolonged oozing, which during the puerperal state attracted little attention. Such subjects as this he considered well worthy professional consideration. If the rules suggested by Dr. Munde were followed there would be fewer sequelæ of labor in the shape of uterine disease. Operation on the cervix at this time he did not regard as feasible.

Dr. Hanks said the subject was one of great interest, and the paper of Dr. Munde would doubtless do much good.

Nine years ago he had himself prepared a paper on uterine hemorrhage.

He had met with cases such as were so fully treated of by Dr. Munde. He had seen patients almost exsanguinated 14 days after labor from malarial secondary hæmorrhage. Hot water would check the hemorrhage. It was not a new remedy. He did not usually tampon as the uterus needed constant watching, and this was therefore a bad measure to recommend to the general practitioner. He approved of the iodine injection. He did not however believe it was necessary to give ergot in every case as it was throwing a pontoon bridge over a dry meadow. The case should be carefully watched and if ergot was needed it should of course be given, but why induce uterine colic when there was no necessity for giving ergot. Dr. Munde closed the discussion.

A paper entitled

"ECZEMA: ITS PATHOLOGY, AND THE PRINCIPLES OF ITS TREATMENT,"

was read by its author E. B. Bronson, M. D.

The author regarded Eczema as a local cutaneous inflammation of a catarrhal character not the manifestation of a constitutional dyscrasia. He believed that it originated in the rete mucosum and not in the tissues beneath as was generally maintained, as we learned more of the physiology of the peripheral nerves. We should know more of the pathology of eczema which depended on sensory disturbances and trophic changes of the epidermis.

Dr. Bronson gave a very comprehensive review of the theories regarding the pathology of the eczematous process. He then passed to a discussion of treatment which presented two indications, viz: To allay irritation and to assist repair. These included measures of rest and measures of stimulation, internal medication and topical application. Local treatment might be divided into the mechanical, the chemical, and the dynamic. Wet applications in the form of lotions were as a rule the best, at a later stage the insoluble powders came into use, and still later the ointments. The same remedy was not applicable to every stage. As regards the ointments to be used, zinc ointment was the best.

As modifiers of vital action alkalies came into play. They had a sedative influence over the sensitive nerves. The virtues of the alkaline bath were not sufficiently appreciated. So long as the inflammation was a site

alkaline washes were indicated, later on, and in the chronic forms of the disease soaps with glycerine were of service—strong alkaline solutions were less available than soap in the chronic cases.

The pruritus of Eczema was best treated by hot water, the application of which had a sedative effect. What was wanted was not so much more efficacious remedies as more improved methods of making the present remedies more available at an early stage of the disease.

Whatever the predisposing causes of the disease were, it was essentially a local disease, and internal medication should take a subordinate rank in its treatment; local treatment alone being able to cope with the disease single handed.

Dr. R. W. Taylor had listened to the paper with great satisfaction, he thought, however that Dr. Bronson's view of the superficial origin of the disease was not correct, the invasion was in the deeper tissues below the rete mucosum.

The principles of treatment laid down were most important. Stimulation was one of the cardinal points of treatment. The application of zinc ointment was futile unless something directly curative be added to it. He had found that soap would fail when solutions of potash would relieve. He was glad to hear that Dr. Bronson took the view that eczema was a local trouble, the other view was visionary, a dream, a lucubration of theorists.

A fact not sufficiently brought out was the predisposition to recurrent attacks of the disease after an acute attack early in life.

One remedy had not been given due prominence to, viz. arsenic, which was doubtless of great service through its power to stimulate the skin. The golden rule, however, was to look after the local measures.

Dr. Bulkley thought the paper read the best exposé of eczema that had ever been presented. The fact that the use of tobacco would bring on an acute attack of eczema had a bearing on the nervous origin of the disease. He did not believe in the vast majority of cases that the eczematous individual was in a perfect state of health constitutionally.

There was no specific for eczema. Fowler's solution was of great service on account of its effect in quieting nervous irritation.

Dr. Bronson closed the discussion. The Academy then adjourned.

SELECTIONS FROM JOURNALS.

NOTE ON THE PRACTICAL APPLICATION OF SPONGE-GRAFTING.—BY D. J. HAMILTON, M.B., F.R.C.S.E.

As from time to time since I wrote my paper on "Sponge-Grafting" in the *Edinburgh Medical Journal*, cases have been recorded in the *British Medical Journal* and elsewhere, in which its application for the purpose originally intended has been successful or unsuccessful. I think it may not be uninteresting if I add a few words in addition to what I have already written on the subject in regard to its practical application.

The first experiments I made were by placing a thick slice of sponge in the wound, sufficient to at once fill up the gap caused by the loss of tissue. There are several objections to this procedure, the chief being that a mass of sponge three-quarters to one inch thick placed over a suppurating wound becomes soaked with pus, and prevents any free drain from taking place. The pus so accumulated is almost sure to putrefy, and

so interieres with the process of organization going on in the deep layers. The danger of contact of such a putrefactive mass with an open wound, although less in the case of one that is granulating, is probably not to be underestimated.

I have, accordingly, generally found that in such cases it is necessary to cut off the superficial parts of the sponge, leaving the thin layer, which had become infiltrated with organizing tissue, adherent. All this inconvenience can be avoided by adjusting the sponge in successive thin layers over the wound. These layers are not more than an eighth of an inch thick, and must be cut in large slices with a perfectly regular surface. The only method I know by which this can be accomplished is by means of a freezing microtome. I happen to possess a large microtome suited for the purpose, which I employ for cutting sections of the entire brain. It holds an entire Turkey sponge; and when the latter is frozen, the whole mass can be cut into perfectly regular slices, of any desired thinness. Such a layer can be laid with the greatest facility over the wound, so as to fit into all its irregularities. In a few days, the first layer becomes organized. A second can then be placed over this, and so on, a mass of tissue being thus, in course of time, built up. There is no bagging of pus by this method of applying the sponge, and the danger of putrefaction occurring is reduced to a minimum.

Another precaution that is necessary is, to see that, where the wound is granulating, the edge of the layer of sponge does not come into contact with the pellicle of young epidermis at the side. If so, the epidermis will undermine it, and cause displacement. There ought to be one interval of about an eighth to a quarter of an inch between the edge of the epidermis and that of the sponge.

Dr. Sanctuary, in the *Journal* of December 16th, makes the remark that firm pressure is a *sine quâ non* in obtaining adhesion. I agree with him so far that, when first applied, there ought to be firm and equable pressure all over the surface; but I question, after adhesion has once taken place, whether pressure exerts a salutary influence in promoting organization. On the contrary, I should consider that the interstices of the sponge would fill up quicker if the vessels of the granulating part had free play. I should almost say that, in the treatment of a granulating wound of the lower extremity, it would be advantageous, when the sponge has once taken firm hold, to allow the limb to hang downwards, and probably to encourage the patient to take gentle exercise. By this latter means, the circulation through the granulation loops will be rendered active, and a certain amount of vascular turgescence is what is really required.

As regards Dr. Ferguson's observation (*British Medical Journal*, December 16th, 1882) that, in a case where he applied a layer of sponge, a quarter of an inch thick, to a wound of the calf of the leg, and where, after organization had taken place, the new tissue proved to be sensitive, I may say that this might quite well be accounted for by small branches of nerves being carried into the interstices of the sponge by the granulation-vessels.—*Brit. Med. Jour.*

LARGE CYST OF THE MESENTERY SIMULATING AN OVARIAN CYST: OPERATION: DEATH. By CHARLES H. CARTER, B.A., M.D., B.S. (Lond.),

Cysts of the mesentery are exceedingly rare. At present only a few such instances have been recorded

Dr. R. Watts (*American Journal of Obstetrics*, 1879, xii, p. 333) describes one which was mistaken for an ovarian cyst, and operated upon: the patient died; also Péan (*Tumeurs de l'Abdomen* pp. 1,111, 1,112, and 1,115) describes three such which were operated upon, one of the patients recovering. Mr. Spencer Wells speaks of what he considers to be one in a note on Mesenteric Cyst and Tumors in the *JOURNAL* of December 9th; and Mr. Knowsley Thornton, in the *JOURNAL* of December 23rd, describes another, which at the time of operation, he considered of ovarian origin, and included in his list of ovariectomies. The following is an account of a cyst which sprang from the left side of the spine in the lumbar region where the mesentery is attached, and either rose between its folds, or from the subperitoneal tissues below it. Its fluid content was peculiar, and differed from that which has been found and described in the few recorded cases. It was about sixteen pints in quantity, a thin, clear, slightly opalescent fluid, alkaline, specific gravity 1.009, giving on boiling, no deposit, but on adding a few drops of nitric acid a very slight film, redissolved on adding more; no change at the line of junction on pouring some of the fluid in a layer of nitric acid; on adding a 10 per cent. solution of nitrate of silver a very copious white precipitate. The fluid, therefore, contained no albumen, but a large amount of chlorides. Dr. Murchison (*Clinical Lectures on Diseases of the Liver*, p. 61) says these are characters which apply to no other fluid in the body, whether healthy or morbid, but to the fluid from an hydatid cyst. The fluid was carefully examined under the microscope, but no hooklets or anything characteristic could be seen; unfortunately the part of the cyst wall removed was not at once examined to see if it presented the laminated appearance of an hydatid cyst wall. Fluid somewhat similar to this is also found in so-called cysts of the broad ligament.

The following is the history of the case. A.B. aged 44 married twenty-five years, and never pregnant, attended at the Out-patient Department of the Hospital for Women, May 18th, 1882, and was seen by Dr. Mansell Moullin, who found the abdomen distended by a tumor which presented all the characteristic marks of an unilocular ovarian cyst. The patient had noticed the abdomen enlarging for two years. She was admitted under my care June 22nd. With the exception of one brother having died of consumption, her family history presented no marked features. The only illnesses to which the patient referred were one which she called inflammation of the bowels twenty-five years ago, and a second six years ago, when she had "bilious fever" and a second attack of inflammation of the bowels. Her present illness began two years ago, when she noticed a lump in her abdomen, about as large as a good sized orange, about the level of the navel; it appeared to move from side to side with the movements of the body; it gradually enlarged, and as it did so it became less movable; it had grown more rapidly during the last six months. She had had no pain till recently, and that only "a bearing down," no trouble or difficulty with micturition; the bowels were constipated. She was regular every four weeks, but scantily. On examination, the abdomen was distended, and especially on the left side, where there was dullness on percussion far back; on the right side there was resonance up to line of the insertion of the rectus muscles. Fluctuation could be distinctly felt all over the front of the abdomen in every direction; in the middle line, dullness extended six inches above the umbilicus. The abdominal measurements

were, at umbilical level 38 inches, 3 inches above umbilicus 36 inches, 3 inches below umbilicus 38 inches. The distance from the ensiform cartilage to the umbilicus was 9 inches, from the umbilicus to the pubes $8\frac{1}{2}$ inches; from the umbilicus to the iliac crest, on each side, 10 inches. The vaginal examination showed that the cervix was drawn over to the left side, the fundus lying towards the right foramen ovale; the sound passed $2\frac{1}{2}$ inches; the uterus was movable; nothing of the cyst could be felt by internal examination. The case was diagnosed as an unilocular ovarian cyst, and on July 13th she was operated upon. An incision was made in the middle line, about four inches in length; and the abdominal walls, which were thin, were easily cut through. On opening the peritoneum, a thin walled cyst was seen covered in all directions with large veins; the hand, passed in, met with no adhesions in front or at the sides, but at the upper part something was recognized as holding the cyst. The cyst was tapped, and about sixteen pints of fluid, with the characters above described, flowed away; as it did so, the cyst was drawn out and was found to have no pelvic attachment and to be unconnected with the ovaries or the broad ligaments; the uterus and the ovaries were found in a natural condition. The cyst was firmly attached to the side of the spine and the left lumbar region; the spleen and the kidney on the left side were recognized as distinct from it, and on drawing up the cyst, its attachment was seen to be closely surrounded by coils of small intestine, which were firmly adherent to it. Seeing it would be impossible to free the cyst from its insertion, an attempt was made to enucleate it by stripping off its peritoneal covering; but this procedure was abandoned, as so many vessels were torn through and the hæmorrhage was free. It was then decided to fasten the cyst to the abdominal wall, cutting away as much as was possible; the circumference of the cyst was tied by six ligatures, and then the cyst was stitched to the abdominal walls by silkworm gut sutures, and a drainage-tube of India rubber put into the cavity of the cyst; the peritoneum was sponged out and the abdominal wound closed and dressed with antiseptic gauze. The operation was performed under the carbolic spray.

The patient did well for the first twenty-four hours, and then the temperature rose on the evening of the second day to 101.2° and the pulse to 104. On the morning of the third day the dressings were found stained with blood, and there was seen to be a slight oozing from the cyst wall. The pulse and temperature kept up, and the patient began to show signs of septicæmia (with some internal hæmorrhage, this continued), and she rapidly sank and died on the sixth day after the operation.

At the *post mortem* examination, the part of the cyst left was empty and much contracted; the abdominal walls, at its attachment, drawn inwards and inverted; it was firmly attached to the side of the spine and the left lumbar region by a broad attachment, and its insertion was closely surrounded by coils of small intestine, which were intimately adherent to it. On the left side of the cyst the peritoneal coat had been stripped off by an extravasation of blood from a large opened vein, forming a sac about three inches by four, full of semicoagulated blood, and, without doubt, one of the large veins covering the cyst had been pierced by the needle carrying the suture, which fastened the cyst to the abdominal wall; and as the blood flowed, more and more of the vessels were ruptured, and the peritoneal coat torn back. There was also found some slight peritonitis. The uterus and ovaries were quite

natural; all the other organs were healthy, but very bloodless.—*Brit. Med. Jour.*

MEDICAL NOTES AND NEWS.

We have just received the report of Dr. Nagle, New York Board of Health, on "Suicides in New York city during the eleven years ending Dec. 31, 1880."

The total number is 1,521: of whom 1,518 were whites, and 3 colored: 1193 were males, and 328 females.

The colored race show the lowest ratio of suicide to the population, and the Irish show the lowest rate among the foreign born population. The Germans, although in general much more prosperous than the Irish, commit suicide in a vastly larger ratio. (We are reminded by this fact of the reply of a woman who during the riots lived in a quarter of the city largely tenanted by German laborers. She was asked, "are you not afraid?" "Oh no," she said, "the Irish kill other people, but the Germans only kill themselves.")

The Report states that there were 12 suicides of children whose ages ranged from 10 to 15; and a German woman committed suicide, by severing the vessels of her arm with a razor, who was 91 years old.

After supplementing his report with a large amount of foreign statistics, Dr. Nagle makes some inferences with regard to the influence of religious faith which the facts as presented do not seem to warrant. Contrary to what he concludes, the statistics, as we think, indicate clearly that a strong christian faith without reference to whether it is Catholic or Protestant, has always had the effect to diminish the number of suicides; while in those countries where either Protestantism or Catholicism has given place largely to religious scepticism, suicide is more common.

In a paper read before the New York Academy of Medicine, Jan. 4, 1883, Prof. Frank Bosworth, says: "Habitual mouth-breathing, especially during sleep, I believe to be a most prolific source of throat catarrh and bronchial disorders."

Speaking of adenoid nasal and pharyngeal growth, he says, "as regards the absolute destruction of these growths, or in fact any morbid growths of any size by the galvano, cautery, I have only this to say. It is an immensely over estimated instrument, and, in my experience, has utterly failed to accomplish what we formerly anticipated from it."

Galvano-cautery, as a means of removing morbid growths, in this and other parts of the body has enjoyed among certain specialists a brilliant but brief reputation. By most of experienced general surgeons however, it was always regarded as more sensational than sensible.

The French Minister of Public Instruction and Fine Arts has issued a circular to the Faculties of Medicine and other collegiate bodies in France, that they consider the expediency of creating a new medical degree, the title of which shall be, "Doctor of Medical Sciences." The proposition has not been received with favor by most of the medical men in France. One might reasonably ask, what is a doctor of medicine, if he is not a Doctor of Medical Science?

A Twin Monster.—M. Paul Bert has had the opportunity of examining a living twin monster at Geneva, which differs in many respects from any of the modern show cases. It is a male child five years of age, possessing two heads, two thoraces, four arms, one abdomen, and two feet. The fusion of the two bodies takes place at the umbilicus, so that above this point there are two individuals, but below, only one. Notwithstanding the anatomical unity as regards the lower half of the body, physiologically or psychologically this part is dual. Each individual claims the extremity of its own side as its own: they play and strike each other with their respective *leg*. Their features are exactly alike. Their mental development is fair; they speak French, German, and Italian. They are quite healthy, but rather anæmic. They cannot walk. They are two distinct beings, and quite independent of each other mentally. The sensations of hunger and thirst are not simultaneous; if one eats the other is not satisfied. The duality of the stomach requires a dual satisfying of the food-requirement. They have been baptised separately under the names of Jean and Jacques. In describing the above case P. Bert mentioned that of the court jester of James IV. of Scotland, who was a monster of a similar kind. Of the two beings of which it was composed one was full of intelligence, wit, and *verve*; on account of his beauty, as well as of his mental gifts, the pet of the court ladies; whilst the other was disgustingly idiotic, and so addicted to drink that in a drunken fit he at last smote his brother, from the effects of which both died. The two individuals could not live in peace; they struck one another and used to snatch the wine flask out of each other's hands, the one that he might drink, and the other to throw it away.—*Med Press*.

The Water Bed for Lying-in.—A woman, 22 years of age, in the 8th lunar month of pregnancy, the subject of Bright's disease, with great œdema, was transferred from the Medical Klinik of the Vienna Hospital to Professor Braun's department, for the purpose of having premature labor induced. The œdema of the external genitals was so great that gangrene had set in, commencing at the nymphæ. As a person in such a state brought into a lying-in hospital would be likely to prove a focus of infection for the other inmates, Professor Braun had her placed in an isolated room, provided with a separate nurse, and told off a special medical attendant to take charge of her. So far the pulse and temperature were normal, and he (Prof. Braun) determined to await for a short time the course of events, in the meantime washing out the vagina with a 3 per cent. carbolised solution, applying thymol dressings, and placing her upon generous diet. He came to this determination from believing that premature labor was not urgently called for, and from a strong objection to do anything that might lead to the carrying of any infective material into the uterus; "and to undertake anything that might possibly cause the death of the mother, for the sake of a fœtus whose vitality is doubtful, I consider unjustifiable." Thus three days passed in expectation, on the fourth the temperature rose to 40° C. (104° F.), and on the fifth day a living child was born, weighing 2,100 grms. As the gangrene had now extended to the thigh, and threatened to advance still further, she was at once placed in a bath. Up to the time of writing she had been in five days, during which time she had remained free from pyrexia, the gangrenous places had cleaned, her appetite was

good, and there was every hope that her life would be saved. Prof. Braun concludes: "But this hope is entirely due to the water bed. It sounds strange, and up to the present such a procedure as putting a lying-in woman into a warm bath has scarcely ever been carried out. But theoretically, there can be no objection to it. In the case of our patient, the water bed, with its continual irrigation, and washing away of putrid and infective secretions, and thereby avoiding the absorption of them, was the only way by which her death could be prevented. Her general condition is as good as can be wished, she is quite comfortable in the water, and we are delighted to have brought her thus far in safety on the one hand, and on the other to have saved our Institution from the perils of infection."—*Med Press*.

The 19th annual report of the "New York Society for the Relief of Ruptured and Crippled," reminds us that its kind-hearted founder, Dr. Knight, is still permitted to continue his useful labors, and to witness the wonderful success of the humble enterprise which he started more than twenty years ago. The building occupied by the children is admirably adapted to the purposes for which it is designed, both in an economic and hygienic point of view. Lighted abundantly, and having a most perfect system of ventilation, its spacious halls and apartments are cheerful and free from drafts or impurities, and for all this the public is indebted to the sagacity of Dr. Knight. Of late years a large portion of the labor of supervision has devolved upon Dr. Gibney, who has from time to time contributed to the profession much valuable information, drawn from his large experience and the experience of Dr. Knight in connection with their hospital. There are constantly in the hospital as permanent patients about 360 children, between the ages of four and fourteen, all of whom are systematically educated during their stay in the hospital. During the last seventeen months, 13,001 patients have been treated in either the in-door or out-door department. ■

The annual report of the Supervising General of the Marine Hospital Service of the United States, for the year 1882, contains much useful information and many important suggestions in reference to this service. During the year, 36,184 received relief in the various hospitals and dispensaries belonging to the departments. Trusses, elastic stockings, etc., were distributed to many. A few incurables were sent to their homes without cost to themselves; 273 seamen in the Revenue Marine Service have been examined, and 33 seamen of the Lighthouse and Merchant Service; 2,000 pilots, also, have been examined for color blindness. The receipts from all sources were \$408,215.69, and the expenditures \$468,120.16. This includes \$54,192.02, which were expended on account of extraordinary alterations and repairs to hospital buildings. The report includes an interesting paper on the "Hygiene of Steamboats on the Western Rivers," by Surgeon Walter Wyman. Nothing is said of the yellow fever in Texas and Pensacola during the last summer, in the management and arrest of which General Hamilton has brought to the Department, of which he is the chief, so much credit. We shall look with interest for a full statement of the methods employed, and their results, in the next annual report.

Dr. Mering, Germany, has announced two new Anæsthetics, "Diethylacetat" and "Dimethylacetat."

An effort is being made in Pennsylvania to secure the passage of a more liberal law providing for anatomical dissections.

Dr. Liébault declares that of 1,014 persons whom he attempted to hypnotize, only sixty failed to give evidence of its influence.

The title of nobility has been conferred upon Pettenhofer, by the King of Bavaria, in recognition of his services to medicine and sanitary science.

Is inebriety a disease or a vice? This is a question which is at present agitating Dr. Crothers and other patho-psychical philosophers. Without waiting to be asked, we answer that, in our opinion, it is a good deal of both.

In the report of the Secretary of the Interior for 1882, speaking of progress of education, the Secretary says: "Great efforts are made by the professions and by professional men to advance the standard of admission to the practice of law, medicine, engineering, chemistry, and pharmacy."

Grave robbers are having a hard time. Two medical students and two colored men have been sent to prison in Richmond, Va., for body-stealing. In Philadelphia, Dr. Forbes, Professor of Anatomy in the Jefferson Medical College, is under arrest. Similar arrests are reported to have been made in Goldsboro, N. C., and in Montreal.

Dr. Tilt in the last edition of his work entitled "The Change of Life," indulges in some ill-natured and personal remarks about American gynecologists. We never object to fair and manly criticism; but Dr. Tilt's remarks are not of that character, and are much more discreditable to himself than to the gentlemen who are assailed.

Dr. W. S. Tremaine, U. S. A., has reported in the *Buffalo Medical Journal* an example of paralysis of the right vocal cord as the result, it is believed, of an injury to a branch of the spinal accessory, which latter nerve, as was first shown by Bischoff in 1832, is connected with phonation, the connection being established indirectly by inosculation with the recurrent laryngeal.

The following names compose the Standing Committee on Public Health in the Assembly during the present session of the New York State Legislature: Messrs. Nelson of Cortland, Delehanty of Albany, Craig of Steuben, Sheridan of Kings, Murray of Fulton and Hamilton, Roesch of New York, Mullaly of New York, Derrick of Rensselaer, Benjamin of Steuben, Wertelman of New York, and Mulholland of Kings.

A Medical correspondent of the *Buffalo Medical Journal*, writing from Philadelphia, says: "Levis is 'a brilliant operator and a good lecturer,' but that there is no one 'who competes with Agnew for the first place.'"

A famous quack was asked by a regular doctor how he succeeded in imposing upon so many people. "Look out of that window," said he, "and tell me how many of the people who pass seem to have any brains." After a time the doctor replied, "only about five per cent." "That is so," said the quack, "and the ninety-five are mine, while only the five are yours."

In 1881, out of 7,338 cases of scarlet fever among the children of this city, 1,964 resulted in death; and of 5,272 cases of diphtheria among children, 2,249 were fatal. Most of these were in apartment and tenement houses. From which facts we infer the unsanitary condition of these tenements, and the need of a hospital for children suffering from infectious diseases.

A regular meeting of the New York County Medical Society was held on the 22d of January, at which only 40 members were present, the total number being over 900. On a vote for the repeal for the amended code of ethics adopted by the State Medical Society at its last meeting, there were 9 votes cast in favor of the repeal and 31 against. On motion of Dr. Sayre, the ayes and nays were taken, for which purpose the whole 900 names had to be called.

Prof. Jaccoud asserts that there is no satisfactory proof of the existence of a specific form of bacterium for every form of infectious disease. Bacteria are only bearers of infection, as a fly may become the bearer of small-pox. Bacteria, which are morphologically the same, and appear to be identical, may convey diphtheria, small-pox, or nothing at all, according to their source; and so, also, the intensity or malignancy of the disease conveyed will depend, not upon the specific character of the bacterium, but upon the source from which it came.

Speaking of the frequency of puerperal fever in certain public institutions. Dr. Lydston, of Chicago, writing for the *Medical Record*, says: "The results of my observations have been such as to lead me to believe that as a rule we are many of us inclined to interfere too much with our obstetrical cases, and that we had better give Nature the same chance that she had before syringes and 'germs' were invented. Not but that I fully recognize the potency of those same minute organisms, and appreciate the value of antiseptics and kindred measures, for I freely acknowledge their usefulness, but I am firmly convinced that less interference with our obstetrical cases, even in public hospitals, is in order."

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SPONGE GRAFTING.

It has long been known that sponge embedded in an open wound for a period of several days, would become penetrated by the vessels in such a way that the removal of the sponge would be rendered very difficult; its removal being accompanied usually by pain and free bleeding. In some instances the vessels having penetrated to the outer or exposed surface of the sponge, it has become covered with granulations; and if the wound were permitted to close, the sponge has disappeared from sight and been ultimately absorbed.

In the *Edinburgh Medical and Surgical Journal* for November 1881, p. 385 Dr. D. J. Hamilton announced a new method of healing old ulcers and large and indolent wounds, by what he termed "Sponge grafting." His method of procedure was as follows:—a piece of fine sponge was washed and then soaked in dilute nitro-hydrochloric acid, to free it from the mineral salts; then washed in liquor potassa to remove the acid; subsequently washed in distilled water, pressed dry and placed in a one to twenty solution of carbolic acid and water, when thoroughly carbolized it was ready for use.

Dr. Hamilton pressed the sponge thus prepared into the open wound or sore, and left it to itself, until in the process of granulation and cicatrization it had become buried and finally absorbed.

These experiments have been repeated by Dr. Hamilton himself, by Porritt, Hall, Burnett, Whitman, and White, with varying success, but not with an amount of success to awaken much interest in the subject. Apparently the success of the procedure depended chiefly upon the equable pressure made upon the indolent granulations by the sponge, and upon its excellent qualities as a means of drainage. Its application, as a surgical expedient, seemed therefore to be quite limited; but the *Medical News* for November 25th 1882, contains a paper from the pen of W. L. Estes M. D., of South Bethlehem Pa., which has invested sponge grafting with new interest, inasmuch as, if his observations are sustained by future experimenters,

sponge grafting promises to become the substitute for skin grafting in most cases demanding a resort to Surgery.

Essentially, his process of preparing the sponge, is the same as that employed by Dr. Hamilton, but instead of using large pieces of sponge, Dr. Estes uses very small pieces, and applies them to the surface of ulcers precisely as we apply bits of integument in skin grafting. Instead of adhesive plaster, Dr. Estes applies the Lister "protective" and complete Lister dressings. On the 3rd day he has generally found the bits of sponge adherent. If examined at this time with the naked eye, it will be seen that the graft is surrounded with a faint white zone; which zone under a glass will be found to be composed of "radiating bands of lymph, inclosing minute bloodvessels which run into the sponge." In about fourteen days the bits of sponge are usually absorbed, and there is presented in their place a central or *independent* point of cicatrization. At least this happens, Dr. Estes is assured, in a certain proportion of cases; while in nearly all, marginal or peripheral cicatrization is hastened; occasionally the pieces of sponge are not absorbed, and have to be torn away; and this is especially apt to happen if, when putting the graft in place the granulations are made to bleed.

The number of observations made by Dr. Estes is small,—only seven, and they were not all successful, but the manner in which they are reported is calculated to inspire confidence in the general accuracy of his observations.

It has generally been held that new tissue can only be formed as a product of its own kind, or that it requires at least for its development the proximity, and vital influence of its kind, and as an inference it has been supposed that skin could not form in the center of an old ulcer, unless through the medium of skin grafts, or epithelial cells. This doctrine, however, is not universally accepted, since every now and then it has been claimed that true skin might originate from other tissues.

If Dr. Estes observations are sustained this important question will be definitely settled.

THE USE OF ANÆSTHETICS.

The general value of anæsthetics to the human family no one has questioned; but medical men are far from being agreed as to which anæsthetic is entitled to the most confidence, or indeed as to which should be regarded as the safest.

Notwithstanding a formidable record of fatal results credited to chloroform, it still holds its reputation fairly among English Surgeons, although it by no means occupies the position which it did a few years since. In France and Germany chloroform is probably less used than in England; while in the United States chloroform is employed only rarely by surgeons, except in the Southern States, where it is not unusual to hear of medical men of large experience who affirm that, in their hands, it has always proved itself to be a perfectly safe agent. Thus, Dr. Chisholm, of Baltimore, says:—"of over 12,000 patients upon whom I have operated under the narcotic effects of chloroform, I have not lost one." But Dr. Chisholm has of late renounced chloroform in short operations, for the bromide of ethyl, notwithstanding the two fatal cases occurring in the practice of Dr. Sims and of Dr. Levis, respectively, and which by most Surgeons had been accepted as evidence of the extra dangerous nature of this agent.

In Dentistry, the question whether anæsthetics ought to be employed in ordinary dental operations, especially in the extraction of teeth, has been for a long time, answered in the negative, by most intelligent Dentists. At least it may be said, that a large majority of them refuse to assume the responsibility of giving an anæsthetic, or of assisting in its exhibition for such purposes as the extraction of teeth, for the reason that they do not think that the gravity of the operation justifies the trouble and the risk.

There are a few, however, who see no danger in their careful use; and these few have, very generally, after many fatal experiences with chloroform, and not a few with ether, decided to give the preference to nitrous oxide gas; and at present the use of this agent is almost confined to a very few dental operators, who make a specialty of "giving gas." It is probably well to have its use limited to a few experts, since it is more likely to ensure purity in the gas, and skill in the necessarily rapid manipulation of the forceps. Through the medium of the *New England Journal of Dentistry* there was recently reported a discussion held in the Connecticut Valley Dental Association relating to this subject and from which we quote as follows: "Dr. J. J. Vincent did not give gas, believing it injurious, more or less, in every case. The effect upon the lungs, he believed to be similar to that of hot water upon a sponge. The lungs were like a sponge in a certain sense, and only those without conscience should ever administer gas."

Dr. Morgan said: "A certain writer has said that no one can become thoroughly drunk without there being a lesion of the brain. Whether this is true or not, it is reasonable to suppose that there is more or less injury to the nervous system—of which the brain is the center—from an agent that acts so rapidly as gas does. I could not approve of the practice, but if the operator could give ether as readily as gas, gas would soon be banished from our offices."

Dr. Stockwell agreed with Dr. Morgan. He does not give gas of late once where he formerly used it twenty times. He believes that injury is often the result. The injury may not be suspected at the time, but a train of effects is started which sooner or later may even result fatally. Has had cases where severe headache and even vomiting have followed the administration of gas. * * * Dr. Barrett demonstrated that nitrous oxide gas "kills" nearly, if not quite, as quickly as carbonic acid gas; which proves that the theory of some, that nitrous oxide gas is a "supporter of life," is not well founded. That it so seldom kills instantly is no proof that it is harmless, and that it may not be the unsuspected origin of very serious more or less remote disturbances."

We have been led into these reflections by the recent unfortunate case in New Jersey, in which a patient while having a tooth extracted under the influence of nitrous oxide gas, inhaled a fragment of a tooth, which resulted in the death of the patient and the punishment of the Dentist, who, the Court held was bound to provide against the possibility of such accidents.

We think Dentists are in duty bound to carefully reconsider the question, whether the extraction of a tooth is an operation of sufficient gravity to justify the exposure of the patient to any of the many dangers known to be incident to this practice, and not one of a thousand of which are probably ever brought to the knowledge of the public; a few of which may be enumerated, as having been established by incontrovertible facts.

Asphyxia and death; partial suspension of anima-

tion; persistent shock, lasting several days; temporary insanity and probably, in some cases, permanent insanity; epilepsy; bronchitis; pneumonia; inhalation of fragments of teeth; nausea; headache; wakefulness, etc.

It is true, the graver of these accidents are rare, but the character of the operation does not seem to justify the possibility of their occurrence.

BACTERIA.

The family of bacteria is now known to be very extensive; and probably when other regions have been explored many more will be discovered. They have been found in diphtheria, typhus and typhoid fever, erysipelas, Asiatic cholera, charbon, tubercle, intermittent fever, ophthalmia neonatorum; indeed the catalogue is so extensive that we have no space to enumerate them. They all bear to each other, also, a strong family resemblance; at least we are told this by those who claim to have seen them; but we are also told by those who have become more intimately acquainted with them that in moral character they differ very widely from each other. Some are quite harmless in their nature, and may be permitted to make excursions through, our blood vessels by the thousands without causing a ripple; while others, equally innocent in their general appearance, cannot be admitted within the vessels without creating at once a most dangerous disturbance.

"May it please your excellency, your thief looks

Exactly like the rest, or rather better;

'Tis only at the bar, or in the dungeon

That wise men know your felon by his features."

What we ask, therefore, is that the gentlemen who have seen these things, and know where, how and when to look for them, put on their glasses again, and see if they cannot find some certain mode of distinguishing the good bacteria from the bad.

We feel certain that they will find that vicious bacteria have a hump on the back, or are short of an eye, or of a leg, or that in some other conspicuous way they are providentially marked. As soon as this is ascertained we hope they will have the entire family, including uncles and aunts and cousins photographed, and placed side and side on the same page to serve in some sense as a "rogues gallery," for the purposes of recognition and detection.

In case it shall be decided that it is not the moral character of the bacterium itself which determines its capability for evil (as some now seem to think) but only its associations, and the unwholesome or deadly contagions it carries in its clothes, after a temporary residence with diphtheria and small pox, then however much we may regret the decision, we shall accept the situation, and conclude hereafter to exclude from our association and fellowship all kinds of bacteria, however honest they may look, or whatever certificates of character they may have.

SOCIETY PROCEEDINGS.

STATED MEETING OF THE NEW YORK COUNTY MEDICAL SOCIETY, JAN. 22d, 1883.

The President, Dr. David Webster, presided. The Secretary, Dr. W. M. Carpenter, read the minutes of the last meeting, held Dec. 25th, 1882, and they were approved.

The names of candidates newly admitted to membership in the society were read, and their certificates of membership distributed.

A communication from Dr. Charles Stedman Bull was then read, announcing with regret his resignation as a delegate to the State Medical Society, and nominations to fill the vacancy thus made were called for. Dr. Sturgis nominated Dr. F. V. White, who was elected by a unanimous vote.

The report of the Comitia Minora was read, and the following resolution was proposed: "Resolved, that the delegates of this society to the State Medical Society at Albany, in February next, be instructed to vote for the repeal of the Code of Ethics adopted by the State Society at its last meeting, and to use their best efforts for the procuring of such a repeal." It was then voted to lay this resolution on the table. Dr. Sayre called for an "Aye and Nay" vote so that the position of each voter on this question might be recorded. The roll being called, the vote was as follows: Those in favor of laying this resolution on the table, 31. Those opposed, 9.

The scientific paper of the evening was then read by its author, Dr. A. D. Rockwell.

"THE DIFFERENTIAL INDICATIONS FOR THE USE OF DYNAMIC AND FRANKLINIC OR STATIC ELECTRICITY."

The following is a brief summary of Dr. Rockwell's paper:

It is not sufficient in reporting a case to state merely that the patient was treated by electricity, but in order that a physician's statements may be of value to others, he must also mention the kind of electricity applied and the method of its application. Thus the kinds of electricity are galvanism, faradism and static electricity, and each of these varies in its method of application and its properties and form and in the character of cases to which it is adapted. There are certain pathological conditions which have been found to always require for their cure a certain kind of electricity, and all other kinds are useless, and the indications for each kind should be well understood. In hemiplegia, for instance, where the electro-muscular contractility continues perfect, faradization must be used, but where there is a great diminution of the electro-muscular action galvanism is always indicated. So in paraplegia, where there exists a certain amount of loss of electro-muscular contractility, galvanism is found to improve the condition of the paralyzed muscles. While the interrupted or constant current both may be used for affections of the peripheral nervous system, physical and physiological reasons render the constant current alone applicable to the central nervous system.

Again, peculiar idiosyncrasies of a patient may govern the selection of the current. Each variety may in certain persons possess an advantage over the other; thus in neuralgia, as a rule, the constant current must be used, but faradism will also be found of advantage in some cases. A useful guide to the choice of the current in cases of neuralgia will be found in the effects of pressure on the sensitive nerve. Thus, in cases where firm pressure with the finger made upon the nerve aggravates the pain galvanism is indicated, but when the pain is not increased by such pressure then the faradic current should be chosen. It would therefor be untrue to say broadly that galvanism is indicated for neuralgia and faradism is not, and the same may be said of many other conditions. Yet in

the majority of cases it is true that one form is the best. In cases of general debility the faradic current is generally indicated, because of its tonic effects on the muscles and terminal nerve fibres. The interrupted galvanic current closely resembles the faradic, but it possesses greater power, and for this reason it may be damaging where the faradic would prove beneficial. Much good may be accomplished by the application of electricity in the form of "general faradization," and it should be regarded not merely as a stimulant, but as a powerful tonic to the whole system as well. There is abundant evidence of the truth of this theory.

Concerning the individual conditions where faradism is indicated there is not much to be said. But there are certain symptoms which invariably demand this current in preference to the other. There are only a few organic or functional disorders which require a certain form of electricity. Asthenopia, for instance, where the muscles of accommodation or the ciliary nerves are affected, demands the faradic current alone, and this is a rule almost without exception. In the peculiar forms of paralysis following diphtheria galvanism is of but little service, while faradism is remarkable in its effects, for the duration and force of the paralysis is generally greatly shattered or broken by it.

Among the diseases where galvanism will be found more serviceable than faradism may be mentioned what is now known as spinal irritation, or spinal neuralgia, characterized by tenderness on pressure over well defined and limited areas. Again, galvanism is especially serviceable in some of the sequelæ of cerebro-spinal-meningitis; and exophthalmic goitre is relieved and sometimes cured by electricity generally, but especially by galvanism. In most skin affections, too, if electricity is of any service galvanism is found to be vastly more serviceable than faradism; but especially is this true in what is called herpes zoster. For hastening the absorption of erectile tumors galvanism is exclusively useful. In extra-uterine pregnancy, for the purpose of destroying the fœtus, most experts greatly prefer galvanism. In chorea both the galvanic and faradic current are at times valuable, and it is often difficult to differentiate the indications for each. If the patient's strength is good, and his appetite fair and his color healthy, the galvanic current is indicated; but if, on the other hand, the patient is weak and anæmic and his appetite is lost and nutrition is impaired, then the faradic should be selected. In amenorrhœa galvanism is best if the patient is pale, anæmic, and weak, and faradism if the trouble is due rather to local than to constitutional causes.

Franklinic or static electricity may be administered either by insulation or by sparks taken directly from the machine, or by the use of the roller. The tonic and constitutional effects of this form of electricity are inferior to those of faradism; but in some forms of disease, as an adjuvant to dynamic electricity, it is admirable. In cases of great exhaustion and in nervous disorders where the other forms have begun to fail in power, this method seems to give very satisfactory results, and very often after galvanic and faradic electricity have failed to relieve pain the franklinic will succeed. Muscular rheumatism is one disease which is relieved much quicker by the roller or by the taking of sparks than by any other form. In neuralgia faradisation is not generally so useful as galvanisation, but franklinization is often more efficacious than either. In cases of old contractions and where there is cutaneous anæsthesia franklinism will accomplish most good.

In electro-diagnosis franklinic electricity is of but little value while galvanic and faradic are extremely important. Therefore, valuable as franklinic electricity is in some cases, it must be acknowledged that it has a much more limited application than dynamic.

The differential indications for the three forms of electricity are not very well marked and defined, and the closest scrutiny is often necessary to determine which is especially indicated in each case; yet on our right or wrong choice of them will depend the value of our records. Therefore without a clear knowledge of the chief indications on which a selection should be based we will fail in our results, and if by experience we at last learn wherein we have made our mistakes, yet we will have lost much valuable time in deciding upon and making the appropriate change of treatment.

After the reading of the paper had been finished, Dr. Jacobi was called upon to open the discussion, and spoke as follows:

"I thoroughly appreciate the value of the paper that has just been read, which is so concise and exhaustive that I can add little or nothing to it. As to franklinic electricity I have had no experience personally, and only know what I have read about it. So far as my knowledge of the action of galvanism and faradism goes the remarks of Dr. Rockwell have been very concise, and hit the nail squarely on the head, and he has gone carefully over the whole subject and it would be impossible to find fault with the correctness of his conclusions so far as I know. What he said in reference to that class of nervous diseases with which I am especially familiar, I am positive is correct. For instance, in the paralysis following diphtheria, faradism is particularly valuable, and especially in one very dangerous and fatal class, unless treated very speedily and very successfully. The main danger of diphtheritic paralysis is that the respiratory muscles will become paralyzed. All those cases of paralysis which I have seen prove fatal were those in which the respiratory muscles were paralyzed, except where from paralysis of the muscles of deglutition food has entered the trachea and lungs and so given rise to a pneumonia which has terminated fatally. But those cases which will fatally terminate from paralysis simply will be where there is paralysis of the respiratory muscles. Sometimes this paralysis comes on very suddenly, and unless relief is given very soon the patient will die of apnoea. In this class of cases the strong faradic current frequently repeated is very valuable. You cannot rely on occasional and mild applications in these cases, just as there are times when you cannot administer strychnia in small doses. In cases where you have plenty of time to spare and there is no immediate danger you may accomplish much by using faradism or strychnia at long intervals; but as in some cases of haste you do not have time to stop to give strychnia by the mouth but you administer it subcutaneously, so in some cases strong and frequent applications of faradism are necessary. I agree with all the other statements of the Doctor; but in neuralgic affections he is a better judge of the value of electricity than I. What he has said agrees thoroughly with my experience so far as that goes."

Dr. Sayre being called upon said: "The paper of Dr. Rockwell is so complete, so comprehensive, and so perfect in every respect, that I have not a single word to add. My daily experience fully corroborates all his assertions made in the paper, and it is so exhaustive that I will not mar it by making any additions."

Dr. J. P. Garrish was next called on, and he said: "The paper, I think, is a capital one. I wish to add one remark. In reference to the cases where electricity is applicable, I think that the great error made by the majority of physicians is in using it at too early a period in the disease. I do not think that it is of any value in the acute forms of disease, and only in chronic stages should it be employed. I will state to you my experience in the use of electricity in two cases of supposed death by drowning last summer. In both cases I first resorted to all the well known methods for the restoration of the apparently drowned, but without any effect. I could feel no action of the radial pulse, nor could I hear the pulsation of the heart with my ear applied to the chest. I finally resorted to electricity, and in both instances breathing was restored and recovery was complete. I will state further, that in both these cases I also used hypodermic injections of aqua ammonia, which were very effective. And I believe that in those cases where patients die with a thrombus or clot in the heart we can get great benefit by the use of hypodermics of aqua ammonia, and I believe that this dissolves the clot which has formed in the vessels, and the patient often recovers when he would not without this treatment."

Dr. Jacobi then said: "I would like to make a broad statement which I think is true, namely, that galvanism is mainly, perhaps exclusively, useful in all affections of the vaso-motor and trophic nerves. I think that all those diseases of which the Doctor spoke, and in which he said that galvanism was the most powerful, will come under one of these two heads, and that the vaso-motor system or else the trophic nerves are principally affected. I should like to ask Dr. Rockwell if this statement accords with his views."

Dr. Rockwell replied: "I think that generally this rule will hold, but I cannot say that it is absolutely correct. Take facial paralysis, for instance, due to cold, and rheumatismal in character; this could hardly be called an affection of the vaso-motor nerves, yet I would use galvanism here, while, if Dr. Jacobi's rule were followed, faradism should be preferred. For here galvanism will produce contraction of the palsied muscles while faradism will not generally; but when faradism will produce contractions, if galvanism is alternated with it the best results will be obtained. I think, however, that the law stated is almost general in its application, and this is only an exception to it."

Dr. Jacobi replied: "Even this apparent exception might come under the general law if we knew what this rheumatismal affection really is. It may indeed be only the result of some disturbance in the circulation of the part. I have always thought, however, that the interrupted current did well in most cases of facial paralysis, and I have often used it with marked success, and I supposed that this was the current preferred by Dr. Rockwell. He speaks of the paralysis as rheumatismal in character, but in most cases there will probably be some disorder in the circulation to."

Dr. Rockwell replied: "I suppose that there would be some disorder in the circulation to a certain extent. But in such cases of facial paralysis the intra-muscular nerves are affected principally, and the galvanic current acts altogether on the intra-muscular fibers, and the faradic current causes contractions of the muscles through the intra-muscular nerves which are affected by the rheumatic poison."

Dr. Jacobi answered: "In mild cases of facial paralysis which get well speedily I think we may conclude that the nerve substance is not affected, but the trouble is because the circulation is affected. Just

as in diseases of the brain and spinal cord, where the nerve substance is affected the course of the disease is very tedious, but where the circulation only is affected the patient gets well in a very short time; so I believe that in such rheumatic affections the patient gets well soon because the source of the trouble is in the circulation."

Dr. Lewis then rose and said: "Dr. Jacobi has referred to the use of electricity in diphtheritic paralysis occurring after the disease has run its course, and particularly in paralysis of the respiratory muscles, and this brings up a question which I will ask for information. I have never seen electricity recommended or applied in the acute stages of diphtheria; but if it can be used here, and death can be averted by its use, I should like to know how to apply it."

Dr. Garrish said: "I should like to ask if Dr. Rockwell ever knew any good to follow the use of electricity in acute diseases."

Dr. Rockwell replied: "Good does not follow as a rule."

Dr. Mittendorf remarked: "According to my experience, paralysis of accommodation following diphtheria is generally benefited much more by the faradic than by the galvanic current, and I have also found that the intense pain patients so frequently experience who have weak internal recti muscles may be greatly relieved by the use of the faradic current. On the other hand, I have found that cases depending on malnutrition of the optic nerve, especially cases of amblyopia due to alcohol, tobacco, or loss of blood, are most benefited by the galvanic current, and I suppose by reason of the effect produced on the blood vessels and consequently upon nutrition."

The President added: "I have had very little experience in the treatment of amblyopia with electricity. I have tried it in a few cases, but I never noticed any marked benefit from its use. But in paralysis of the ocular muscles I have obtained good results by the use of the faradic current, contrary to the teachings of the books, and I think to those of Dr. Rockwell. In asthenopia I have tried both kinds of electricity, and neither has shown any beneficial effect. But cases of the paralysis of the external rectus or of the superior oblique muscles have recovered under my care by the persistent use of the faradic current. Yet I cannot say that I use electricity very often in eye affections, and in amblyopia, asthenopia and optic nerve affections I have about abandoned it."

Dr. W. M. Chamberlain remarked: "It is my impression that I have derived very decided advantage by the use of the faradic current in Bell's paralysis or paralysis of the facial nerve, and not feeling that I well understood the differential indications for the choice of the current, I have been led to the use of the faradic from the idea that this is a paralysis which begins on the surface, that is, in the peripheral nervous system; and hence the inference that faradism, which acts chiefly on the peripheral nervous system, is indicated here by reason of the causation of the disease. This idea has always guided me in the use of the faradic current."

The question was asked by a member, whether Dr. Rockwell had ever seen any beneficial impression made in cases of stricture of the urethra by the use of galvanism. He replied that, though he had had some experience in this line, yet he had not much success to record. Another member (Dr. Geo. W. Jacoby) stated, however, that he had used galvanism in several cases of stricture of the urethra and his results had been very unsatisfactory. He had seen some

cases of facial paralysis improve under the use of galvanism and some under faradism, and as a criterion for the selection of the current he was accustomed to take the presence or absence of nerve degeneration. If there was any such, determined by the rules laid down by Erb, he used galvanism, but if not, he chose faradism. In cases of peripheral paralysis, and in paralysis of single muscles or of pairs or small groups of muscles, he preferred the faradic current, but in Paraplegia and in central affections of the cord he had obtained better success by the use of the galvanic current. The question of the probable truth of the theory that paralysis following diphtheria is due to the deposit of the diphtheritic membrane in the cord would naturally come up in this connection, but it was too deep a question to discuss on this occasion, he thought.

Dr. Piffard asked, if Dr. Rockwell or any one else present had had any experience with the new storage battery, in which the electricity could be kept stored up ready for use at any time. Dr. Rockwell had not, but Dr. Chamberlain said that he could direct Dr. Piffard to a source of information on this subject in a paper read by Dr. Elsberg before the Academy of Medicine last year, where he at that time exhibited and described the apparatus. He said that a small loop of wire could be heated to a white heat which could be used as a cautery, or for illuminating the throat for laryngoscopic observations.

It was the opinion of some that the storage battery would in time supersede the present forms for cautery purposes.

The discussion closed and the meeting adjourned.

LECTURES.

CLINICAL REMARKS ON TWO CASES OF TUMORS OF THE THIGH,

BY

HENRY B. SANDS, M. D.,

Professor of Practice of Surgery at the College of Physicians and Surgeons, New York.

I. FEMORAL SARCOMA.—This patient, Mrs. S., 58 years of age, comes to us for a tumor of the left thigh. This swelling began six years ago, and when she first noticed it it was a very small tumor, and it grew slowly for the first three or four years, and only lately has its growth been rapid. Two years ago it was not half as large as now. She sometimes feels shooting pains in it, but they are not constant. At times it interferes a little with her walking, but it does not at present. She has lost only a little flesh. When it first appeared, she thinks she could move it about under the skin, and it felt hard. It has never been an open sore.

On examination, the veins of the leg are seen to be prominent, and the tumor is located principally on the upper and exterior portion of the left thigh, and it appears to be about the size of a large salt bag, and extends down as far as the knee.

Gentlemen: I want you to notice the huge size of this tumor, and its extent and situation. It reaches from the knee-joint to the gluteal region, but it does not involve either joint, for she can walk without difficulty, and it is located on the outer and anterior part rather than on the posterior part of the thigh. Its greatest diameter is about the middle, where it measures thirty-one inches in circumference, but its upper

end is larger than its lower. It is also marked by a number of large cutaneous veins which course over its surface, and this is a condition frequently observed in large tumors anywhere, and by some it is regarded as a sign of malignancy, but it cannot always be so considered.

Now, I can only conjecture the nature of this disease; I cannot be positive about it. I asked her one leading question, you noticed, and that was, whether the swelling was hard in the beginning, and she said it was. At first sight I naturally supposed that I had to deal with an enchondroma, as it usually appears in this region and of this size, and I am not sure yet that it is not this. Enchondromata are usually developed from the bone, and they are firm to the feel and nodular in outline. But this swelling is not very firm, and its surface is even, and so far it is unlike an enchondroma. But another fact to be considered is that after an enchondroma has lasted for a certain time, and its growth has thus far been indolent, it may suddenly become more active and then the firmness of its tissues lessens constantly, till at last it may become quite soft. Still, from the almost uniform surface of this tumor, though it lacks firmness, I think it can hardly be an enchondroma. The other thing that it is likely to be in this situation is a sarcoma. You have already seen many examples of this disease, but you have not yet seen any well-marked examples of sarcoma of the long bones. They are not very likely to occur in such localities, but when they do these tumors may either be periosteal in origin, or they may be developed from the interior of the bone, and in such cases, in the progress of their growth outward, they absorb the bony substance which covers and envelops them.

The features of this case seem to point rather to a sarcoma than to a enchondroma. The patient's age is favorable for a sarcoma. If it is this, it is a periosteal sarcoma, I believe, for I find that the tumor is movable on the subjacent bone, and I fail to find any ridges or sharp bony prominences, such as can usually be felt in the intraosseous variety, nor do I get any crackling sensation, as I might in the latter case, when I press on the tumor. Again, as I feel the bone here, it seems to be quite as firm as natural, while if the sarcoma originated inside the bone, it would have suffered from some loss of tissue, which I could detect by feeling. So I should rather guess that we have to deal here with a periosteal sarcoma than with an enchondroma. It is a very great pity that this case was not treated surgically long ago.

As I press upon the tumor with my fingers I get a sense of fluctuation, and it is so marked that I can almost show you how it raises one hand as I press with the other. You would naturally say from this that it contained fluid, but you cannot be certain of it, for soft solids also often give fluctuation. We can only ascertain the presence of fluid here by exploration, and this would also enable us to determine the character of the swelling if it should prove to be solid, for by means of a barb-pointed needle a large enough piece of the mass could be brought away for examination with the microscope. I cannot discover that any of the inguinal glands are enlarged here.

I cannot give much encouragement to this woman. Medicine is of no avail, and the only question now is whether extirpation of the tumor or amputation of the limb are practicable here. I do not think I should attempt extirpation, for I should fear destroying her life, and so the only question for consideration is whether she might be saved by an amputation at the

hip joint. But I think that this operation, too, would almost certainly destroy her life. If the tumor were an enchondroma, and I could get flap enough to cover the stump, she might recover after an amputation; but if it is a sarcoma, the rapidity of the growth of these tumors would lead me to suspect that it might soon return if the operation were successful; but as the operation itself is attended with the greatest danger, I would myself decline to have it performed if I had such a tumor. This tumor, if left to itself, will grow larger and more broken down, and after a time it will perforate the skin and discharge its contents, and finally the patient will die, exhausted or from septicæmia, or something of that kind.

II. FEMORAL ANEURISM.

This young man is 33 years of age, and he says that a year ago he was employed where he had to do very laborious work such as lifting heavy barrels and carrying them up stairs. He was not aware of having sustained any injury at the time, but seven months ago his attention was called to a swelling on the left thigh which has increased in size since, and he noticed that it was a pulsating tumor. He denies having had syphilis but admits that he had gonorrhœa a year ago, and no evidences of syphilis can be found on examination.

I ask the question whether he has ever had syphilis, because this tumor may be an aneurism, and syphilis might possibly be the cause of it by leading to the destruction of the arterial coats.

On examination I see no marked prominence here, but the left limb is larger than the right, and just below the middle of the thigh there is a swelling, and when I place my hand upon it you see it is raised with every pulsation of the artery beneath.

What can this tumor be? A swelling along the course of the femoral artery and one which pulsates. There are two morbid conditions which may explain it. One is, an aneurism of the femoral artery, and the other is, a pulsating encephaloid or a malignant tumor filled with blood vessels numerous and large enough to produce a pulsation. If an aneurism it is in all probability on the femoral artery. You know an aneurism in this situation is a rare occurrence, but it is usually found at a lower point in the popliteal space or higher up, and the part of the femoral artery which lies in Hunter's canal is very rarely the seat of a swelling because it is protected so well by the tendons and sheaths of the muscles between which it runs. But I have occasionally seen an aneurism here. To complete the examination I must apply my ear to the tumor to see if I can discover a murmur, and then try the effect of pressure to see if there will be any diminution in its size, and then by pressing on its sides see if the tumor itself pulsates or whether the impulse is merely transmitted to it by the artery beneath. I find I can reduce its size considerably by pressure and it increases in size again when the pressure is removed. This is a very strongly confirmatory symptom of an aneurism, and it almost shuts out the possibility of its being an encephaloid tumor, for this can not be very much reduced in size by pressure, nor is it likely to have a murmur. On making lateral pressure I feel that the pulsation is quite as marked at the sides as on top, and therefore it is not a communicated pulsation but is in the artery itself. When I put my ear firmly over the tumor, and listen, I think I can appreciate a double murmur, the first, a soft blowing sound, and the second very faint. So this too looks like aneurism. There is still another test I can apply and that is, by pressing

on the main artery so as to stop the circulation above the tumor. I can stop the pulsation of the aneurism ; and this you see I can do here, and when I raise my fingers off the artery the pulsation returns.

Here then is a case in which there can be no doubt about the swelling being an aneurism, and it is a very marked one. I think that the proper operation here is to tie the superficial femoral artery, and this operation will answer as well for the cure of this aneurism as for one in the popliteal space. There are other plans of treatment which might be tried such as pressure by an elastic bandage or an Esmarch's bandage, but I prefer the simple catgut ligature on the femoral artery, and after this operation I think that the chances for his recovery will be very great.

CLINICAL REMARKS ON A CASE OF HÆMORRHOIDS,

BY

J. W. WRIGHT, M. D.,

Professor of Surgery at the University Medical College. N. Y.

GENTLEMEN :—This patient's name is J. M.; he is 61 years of age, a native of the United States, and a mason by occupation. He complains of having bloody passages from the bowels every time he goes to stool, and of pain and itching about the anus, which is worse at night after he has gone to bed. He first suffered in this way twenty-five years ago, but this last attack has only troubled him for the past two or three weeks.

From the patient's story I infer that he has hemorrhoids of some variety, and the itching which he describes to us as being very agonizing, especially at night after he has undressed for bed, is one of the characteristic features of pruritus ani from any cause. The surface seems to be very irritable in such cases, and as soon as the patient begins to undress so that the fresh air comes in contact with his skin the sudden change in the atmosphere seems to irritate the surface and cause this great itching.

Now in regard to the hemorrhoids we have two principal varieties : one called internal piles, and this bleeds much oftener than the other variety and forms a red and roughened mass upon the surface of the rectal portion of the intestine ; the other, called external piles, which consists of a small tumor at the margin of the anus and varying in size from a small pea to the end of a man's thumb, and it is very painful for the patient to sit down or to stand on his feet for any length of time. It consists usually of one of the hemorrhoidal veins distended with blood, which, after a while, becomes coagulated in the vein, and, if not relieved, this clot at last becomes absorbed generally. But instead of this it may break down and suppurate and discharge pus through an opening, and finally leave only a sort of fungus excrescence which is very tender. So when a man has such external piles you will find one or more of these excrescences of the skin or of tissue composed partly of skin and partly of mucous membrane from the rectum, and these will remain there as long as he lives if they are not removed by an operation. It is said by some surgeons that these little excrescences ought always to be removed when found, because the patient is liable to have hemorrhoids form again in the same locality otherwise. I used to believe this too, and followed out the idea in my practice ; but lately I have abandoned it, and I have never known of a case where the pile returned in one of these excrescences, so I am now inclined to think there is some

error about this belief, and the main reason for their removal is that they are troublesome and always more or less in the way.

On examining this patient it is evident that he has had external piles, and you can see here three or four of these cutaneous excrescences of which I have just spoken, and you can take hold of them with the forceps and pull them down three-quarters of an inch or more. However, they do not seem to be the source of any irritation and they probably do not annoy him very much, but the difficulty which produces the bleeding of which he speaks is probably higher up in the rectum. Now on exposing the rectum to view as he bears down you can see a fiery looking, very red and vascular body, and blood can be seen oozing out of its upper part. This constitutes an internal hæmorrhoid.

The treatment for this kind of pile is either to expose it with a rectal speculum and then dry it off thoroughly and sear it over with a powerful escharotic, such as nitric acid, for instance; or, a better plan, I think, is to transfix the base of the tumor with a double ligature and tie each half off separately, and then cut it off at the base so as to leave a very small surface to granulate. You can use a curved cervix needle or a pile needle to transfix the tumor and draw through the ligature and to draw down the pile you can use a pile forceps, fenestrated, so that you can see through the blades and know just what part you have got hold of. These forceps have a snap-catch on the handles to secure the blades tightly in place after the pile has been seized.

Operation.—I now tell the patient to strain down, and as he does so I grasp the pile in the blades of the pile clamp. I was about to transfix it with the pile needle, but I find the situation of this pile is such that I think I can get along better with a shorter instrument, so I will try a simple curved needle. I choose a needle which is curved nearly in a half circle, and I place it transversely in the blades of the needle-holder and then pass it through the base of the hæmorrhoid with a double silk ligature attached. Now this front ligature, which includes the half of the base attached nearest the junction of the mucous membrane with the skin; before I tie I shall divide with the point of the scissors the muco-cutaneous covering, and this will give the patient a good deal less pain from the operation, and the ligature will slough off from this narrow pedicle in about half the time it would otherwise. The next ligature I will tie as far up in the rectum as possible, so that I will get in it about all of this red and unhealthy-looking tissue. The surface covering of this will not need to be divided with the scissors because it has a more or less granular surface, and the ligature will soon cut through that by itself.

If I was dealing with a very large pile I would cut off with the scissors all that portion which is in front of the ligature in order to get it out of the way more quickly than by letting it slough off, but this one is so small that it will soon drop off by itself and the base will then heal by granulation.

This patient may still have more of these piles higher up in the rectum, but if so we will leave them to be removed at another operation. I do not believe it is well to irritate the rectum too much at one time, and though two or three piles if near together may safely be removed at one sitting, yet it would not be well to treat a dozen in the same way.

The constitutional treatment after such an operation as this should be, to give a laxative so that the patient may have soft and easy movements for the next two or three days ; and the best laxative I know of for this

purpose is a mixture of equal parts of the sulphate and the citrate of magnesia, and bitartrate of potash and sulphur. These powders should be well mixed together in a mortar, and then one or two teaspoonfuls in a wine-glass of syrup or sweetened water should be given occasionally before breakfast in the morning, and this will generally cause the patient to have a soft, easy movement of the bowels every day. This very neglect of people to have a movement of the bowels every day is one of the commonest causes of hæmorrhoids, for these hæmorrhoidal veins, from their peculiar character and position, have a natural tendency to become over distended, and this is increased by the pressure of fecal matter impacted in the rectum, which at the same time contuses and injures them and so gives rise to a hæmorrhoid. But if a person of such habits will take pains to secure a movement from the bowels at a certain time regularly every day, he will probably be able to go through the rest of his life without another attack, just as most other people do who keep their bowels open.

SELECTIONS FROM JOURNALS.

CRANIAL FISSURES IN INFANCY.

Prof. J. Weinlechner, of Vienna, has published a carefully prepared paper in the *Jahrbucher für Kinderheilkunde*, presenting his investigations on the results following blows on the head during infancy, and entitled Subcutaneous Cranial Fissures, Cranial Openings with adherent Cerebrum, and False Meningocele. His deductions are made from his experience with thirteen cases, and may be summarized as follows, as already published in the *American Journal of Obstetrics*: Intra-uterine cranial fissures are extremely rare. Those occurring during delivery, and occasioned by forceps or narrow pelvic straits, are more frequent, while in a certain number of cases subcutaneous fissures are caused post partum by various traumatic causes. Here belong the falls upon the head in rapid or "street" births, and later on blows of all sorts on the cranium. Such accidents may lead to two different forms of disease: (1.) Extension of the fissure to a cranial opening with apposition of the brain, or (2) false meningocele, the fissures here also widening. The cases show clearly that large cranial openings may develop from even slight subcutaneous fissures occurring traumatically in infancy. It is probable that most of the cases reported as congenital are really caused in this way. In twelve of the thirteen cases the trouble could be traced to trauma. Thus there were, —

- (1.) Fall on head.
- (2.) Fall on a footstool, and loss of consciousness.
- (3.) Fall from arm to ground, followed by vomiting.
- (4.) No traumatic cause could be demonstrated either by the history of the case or at the autopsy.
- (5.) Found at the autopsy: several fissures with the remnants of a hæmorrhage.
- (6.) Ditto.
- (7.) Fall on the head.
- (8.) Forceps delivery; at autopsy extensive pigmented fibrinous deposit.
- (9, 10, 11.) Fall on the head.
- (12.) Blow on head by a windmill.

Two different clinical conditions were found sometimes combined with one another.

A. An opening in the bone, generally irregular, in the form of a weaver's shuttle or an egg, and usually in the parietal bones. There may be extension from

this to the neighboring sutures. The edges and often the whole parietal bone are bulged outward like a crater. The brain presses against the coverings of the opening, pulsates clearly, but does not project much. It cannot therefore be called cerebral hernia. Seven of the thirteen cases belonged to this class.

B. There is a soft, fluctuating, sometimes transparent, tumor, which becomes smaller on pressure, or pulsates more or less, but never so clearly as in the first class of cases. The edges of the opening are clearly felt only after the fluid, which has the color and chemical nature of the cerebro-spinal, is removed. The opening is only partially closed by the dura, which is closely adherent to the edges, but which has numerous openings communicating with the subdural space. The inner wall of the cyst is not formed of dura, but of connective tissue, hence it is to be considered a secondary cyst or false meningocele, having the contents of a true meningocele, but not the walls. They are larger than those of the first class of cases, sometimes reaching the size of two fists. They have a constant growth, while in the first class of cases there comes, after a time, a pause.

C. A combination of both forms. This was seen in Case 5, which is unique. The professor devotes some space to the manner in which these two forms may arise from a fissure. In both the motive power is the pressure of the cerebrum. In both the dura is probably torn, but in Class A the dura, with the, perhaps, injured brain, is pressed against the fissure, and becomes firmly adherent, and then the whole bone is arched outward, while in the B class some fluid escapes through the torn dura, and the pressure is thus partially exerted on the walls of the cyst. All the cases reported occurred at a very early period of life. The prognosis is different in the two classes. The first class reaches a point where the enlargement ceases. There is, however, always the danger of injury from without to the so slightly protected brain. The meningoceles, on the other hand, continue to grow. What size they might reach cannot be stated because in the cases reported death has occurred from meningitis following puncture. The largest tumor on record reached the size of two fists at the age of two and a half years. If they are not punctured spontaneous rupture is apt to occur. The largest fissure on record (Bardak's case) measured nine by six centimetres in the twenty-eighth year. The principal growth takes place in the early years, but even after the bones are firm the fissure may increase by resorption of the bone. This process is of course slow, but in one case amounted to an increase of two centimetres. In the first class of cases we can do nothing except to protect the brain by a well-fitting plate. Attempts at pressure exercised on the whole cranium have proved failures, and puncture is dangerous. In the second class puncture is not very dangerous even if repeated, but the sac rapidly refills. The best treatment, perhaps, is to puncture, and then, under the same precautions as in spina fluida, to inject iodine. This, however, is much more dangerous than simple puncture.—*Bost. Med. Jour.*

INTUSSUSCEPTION.

In view of the varied opinions which exist concerning the advisability of abdominal section in cases of infantile intussusception it is well to carefully note all cases that are treated by this method, in order that a more precise knowledge of the dangerous results

which may follow may be arrived at. Mr. Rickman Godlee has lately reported three cases before the Clinical Society of London.

Case I., aged nine months, was admitted into University College Hospital with well-marked symptoms of intussusception, from which it had been suffering for four days. The infant was very ill and weak, and it was doubted whether it was justifiable to perform any operation. It was not thought wise to spend much time in inflation, and accordingly abdominal section was performed without delay. Antiseptic precautions were adopted throughout, the child being protected as much as possible from the chilling influence of the spray by using as small a volume of it as possible, and wrapping up the greater part of the trunk and legs in cotton-wool. No great difficulty was experienced in finding the point of involution, nor in reducing the intussuscepted part; the wound was secured as in an ovariectomy, and a dressing of iodoform wool was applied, and secured by a flannel roller. The temperature rose the day after the operation to 105° F., but soon fell to about 100° F. It was necessary to give small quantities of brandy after the operation, and for some few days minim doses of laudanum were given to check restlessness and a slight diarrhoea, which ensued. A little suppuration occurred along the course of the sutures, but the wound healed well, and by the eleventh day it had completely closed, the infant apparently being in perfect health.

Case II. was a somewhat younger infant, who had been seized with sudden pain two days previously. The symptoms of intussusception were clear, and a sausage-shaped tumor was felt to the right of the umbilicus, easily movable, especially from above downward. In the intervals between the spasms the infant was apparently free from pain. Abdominal section was made under the influence of chloroform, and reduction was effected by grasping the end of the ileum, and drawing it towards the wound. Next morning the infant seemed pretty well, but peritonitis set in rapidly, and death occurred the following night. The spray used in this case was remarkably small. At the autopsy the last two inches of the ileum and the first two of the cæcum were found much congested and thickened, and some slight ulceration had occurred in the ileum; the rest of the intestines were almost empty. There were marked appearances of peritonitis.

Case III. An infant aged fourteen months was admitted into the North Eastern Hospital for children, with symptoms of intussusception that had lasted several days. The infant was very ill, and the abdomen much distended and tender. The bowel protruded at the anus. Abdominal section was performed. It was very difficult to find the joint of involution, which was seated deeply in the splenic region, and correspondingly difficult to effect the reduction. After about four inches had been drawn out the cæcum and vermiform appendix appeared, and Mr. Godlee, thinking that the reduction was complete, drew the cæcum towards the iliac fossa, and closed the wound in the abdominal wall. The infant never rallied, and died eight hours after the operation. At the autopsy it was found that seven inches of large intestine still remained unreduced. It was clear that the involution had begun, not, as is usual, at the ileo-cæcal valve, but at some point in the course of the transverse or perhaps the ascending colon; some sloughing had already occurred in the cæcum.

Mr. G. Brown related the case of a boy two years and nine months old, in which he had been unable to

reduce the intussusception by manipulation after abdominal section. The attempt at the formation of an artificial anus was made as a last resource, and it was then discovered that the volvulus had become adherent, probably throughout its whole extent, to the outer layer of the intussusception, a condition which fully explained the inability to effect reduction. Vomiting set in after the operation, and death ensued in six hours.

Mr. Bryant thought that there was much analogy between the course of hernia and that of intussusception; in the early stage of each temporary measures were more likely to do good. Taxis was of value in reducing a hernia of recent date, but later it did harm, and much the same view might be held of insufflation in the treatment of intussusception.

Mr. Godlee remarked that great exhaustion was more likely to follow inflation in very young infants than in older children.—*Bost. Med. Jour.*

CONGENITAL INTESTINAL OBSTRUCTION.

In the report of the Clinical Society for April 28, 1882, Mr. A. Pearce Gould reports the following case of congenital obstruction: A female, age three days, was brought to the Westminster Hospital, because in spite of several doses of castor oil it had not passed any meconium or fæces. It had vomited several times. The child was thin, but showed no outward deformity. The anus was normal, and the last joint of the little finger could be passed into the rectum, which seemed to be closed above. No fullness or tumor could be felt in the pelvis per rectum. A catheter and probe were each stopped about one inch from the anus. The abdomen was distended, and its walls œdematous; there was a little ascites. On the following day Mr. Gould opened the abdomen above the left Poupart's ligament. A coil of distended small intestine presented, and no coil of large intestine could be brought into the wound. So the former was carefully stitched to the edges of the incision and then opened, allowing a large quantity of meconium to escape. The child died twenty-one hours afterwards. At the autopsy no trace of peritonitis was found. The cæcum, the lower four inches of the ileum, and four inches of the colon, were filled with a firm, whitish substance, of the consistence of cheese, firmly applied to but not united with the intestinal mucous membrane. In the colon, beyond this plug, were found several masses of milk-white, firm mucus. Below this the colon and rectum were empty and firmly contracted to the size of a pipe-stem. Above it the small intestine was distended with meconium and gas. There seemed to be no fault of development but obstruction from a plug, and from the white color of the plug it was assumed that it was deposited in the third month of foetal life, as bile appears to pass into the duodenum at the third month. Mr. Gould thought that the plug was inspissated mucus, showing that the glands of the large intestine must be acting some time before birth. Three cases of congenital obstruction referred to by Mr. Holmes, and the case of obstruction from a croupous membrane recorded in the Clinical Society's Transactions, by Dr. Skerritt, were also spoken of.—*Bost. Med. Jour.*

CASE OF RUPTURE OF FEMALE BLADDER ASSOCIATED WITH ABORTION. By T. LAWRIE GENTLES, L. F. P. S. G.,

On October 13th, I was requested, at 3 A.M., to visit a woman in a neighboring street, who was said by the messenger (her husband) "to have had a mishap."

On reaching the house I found a well made woman of 36 lying on her left side, in bed, vomiting large quantities of a dark brown pungent-smelling liquid. The pillows were drenched with the fluid; so also was the carpet in front of the bed; and on the walls opposite to the patient were stains of a similar nature. There was also half a pint of vomit in the chamber-vessel. The woman was in a state of collapse; a cold clammy perspiration stood on her face; her hands and feet were like ice; and her pulse was imperceptible. There was no one in the house except the husband and two little children, the latter occupying the same bed as the patient; while to add still more to the ghastliness of the scene, the younger of the children (a babe of nine months) was vainly endeavoring to reach its dying mother's breast in order to obtain its usual nourishment.

I made a rapid examination by the vagina, but found a closed os uteri, and no marked traces of hæmorrhage. I observed however, that the abdomen was greatly distended. I tried to administer some ammonia, but the patient was unable to swallow; she gave one agonizing look of dread, moved her lips as if to speak, and then died, the death taken place within a quarter of an hour after my arrival at the house.

My first impression was that the woman had died of internal hæmorrhage; the only things which seemed to militate against this being the redness of the lips and the copious vomiting. This idea of hæmorrhage seemed also confirmed by what the husband said at the bedside—viz, that "his wife had had a good many clots come from her, and that her linen was very much stained."

I refused, of course, to give any certificate, and communicated with the coroner. In collecting evidence for the inquest, the following facts were clearly brought out; first, that the woman was a drinker; secondly, that she had had a drinking bout for some days; and thirdly, that she had occasional difficulty in passing urine. In regard to the two first points, the husband's evidence was most conclusive, and showed clearly that when the poor woman had one of her drinking fits on, she would not only consume large quantities of beer (her favorite drink), but also all the spirituous liquors she could lay her hands on. In regard to the third point, the husband also made clear the fact that his wife had often suffered from retention of urine, but, "so far, had always got over it." At the inquest, further details of evidence brought to light the fact that the woman had complained of pain in her belly for two or three days previous to death. She had, however, been "up and downstairs" until 1 P.M. of the day preceding her death; but when her husband came home at 6 P.M., he found her in great pain, and was told by his wife that "she had been losing blood." A good many clots were in the chamber vessel, and these he threw away into the ash-pit. The pain getting no better, and finding that his wife was "altering for the worse," he came for a medical man as already stated.

The coroner having ordered a *post mortem* examination, I made one the same afternoon, and in this I was assisted by my brother and son.

There were no external signs of violence, except a slight abrasion on the forehead, another on the lower

lip, and a small bruise on the inner side of the right thigh, none of which were of recent date. On cutting through the abdominal walls, the great depth of fat and its extreme "wateriness" arrested our attention, the knife going through the tissue with a distinct "swish." Suspecting an accumulation of fluid in the abdominal cavity, a small incision was made at first. No sooner was this done, than a reddish-brown liquid began to well up. Some of this was drawn off, and the opening enlarged, when nearly six pints of fluid were removed. The stomach and intestines having been carefully examined, were then taken out, in order to facilitate further search for the lesion. The first thing which we noticed was a pint of blood lying in the pelvic basin; and, on making more minute search, a rent was discovered in the posterior wall of the bladder—a rent large enough to admit four fingers. Here, then, was the cause of death. There were some fresh adhesions on each side of the bladder and the pelvic walls; there were also similar adhesions between the bladder and uterus. All these adhesions, however, were extremely soft, and broke with the slightest pressure. The walls of the bladder itself also seemed much thinner than usual. No flakes of lymph could be discovered in the fluid removed from the abdominal cavity, and neither did the peritoneum exhibit any great degree of vascularity. It may, however, be, I think, safely affirmed that a large portion of the fluid found was effused from an irritated peritoneum—the other portion of the fluid being, of course, urine from the ruptured bladder.

On opening the uterus, signs of recent delivery presented themselves; on observing which, I asked my son to tell the husband to take up "the clots" from the ash-pit. The husband did so, and one of the "clots" was found to be a foetus, three inches in length.

Now come the questions: When did the rupture of the bladder occur? and, Had uterine action anything to do with it? Supposing that "the pains in the belly," of which the woman complained for two or three days before death, were the commencement of the abortion, it is reasonable to infer that, when true expulsive efforts on the part of the uterus began, these efforts would be aided by the action of the abdominal muscles; and, supposing still further, that the bladder was at that time distended to its fullest capacity, it is perfectly possible that the pressure of the abdominal muscles would be the "last straw" necessary to produce the fatal lesion. I am, therefore, inclined to think that the rupture took place in the afternoon of the 12th. I ought to have stated that, although, when the husband came home at 6 P.M. on that day, he found his wife in bed, she, nevertheless, "kept getting out of bed, trying to pass urine, but could not." There can be but little doubt that the alcoholic condition of the patient would rob her of her sense of attending to the calls of nature; and it is melancholy to think that, if she had only been seen earlier, a simple catheterism might have saved her.

As a piece of concurrent evidence of the habits of the patient, it may be stated that the liver was a genuine "nutmeg"; that the kidneys were thoroughly disorganized (the cortical substance being barely distinguishable); and that the spleen was exceedingly soft. The heart was small and fatty. The lungs were fairly healthy, but there were extensive adhesions in the right pleural cavity. The head was not examined—*Brit. Med. Jour.*

TRoublesome FREQUENCY OF MICTURITION. BY W. E. STEAVENSON, M.B.

The question of troublesome frequency of micturition has lately been the subject of many questions and suggestions in the *British Medical Journal*, chiefly with regard to its treatment. This condition exists in others besides hysterical women; many cases have been quoted of children of various ages, and men; with no other urinary trouble, stone, diabetes, or any other recognized or ascertainable cause, who are constantly troubled by the necessity of frequently passing urine. If this desire is not satisfied, it results in an uncomfortable wetting of the clothes. Many of these cases in young children can be cured by proper training, and are only the result of a careless and dirty habit. Again, they may be caused by a long and irritated foreskin, or by reflex action due to worms; sometimes by the presence of oxalic acid in the urine. In the somewhat numerous cases which came under my observation when resident at the Hospital for Sick Children, Great Ormond Street, it was found that they, as a rule, readily yielded to treatment when the cause was obvious, but were most intractable when no cause could be ascertained. We never tried the effect of electricity upon them; but many of the cases were due, I think, to an abnormal condition of the nervous supply of the bladder, or an increase of reflex excitability of the spinal cord. When we consider that the micturition centre is in the lumbar region of the cord, the stimulation of it by electricity seems to be a rational mode of treatment, if in any way it does not perform its proper functions. On the continent, for some time past, and lately in this country, these cases of frequent micturition have been treated by electricity, with the most beneficial results. One electrode, in the form of a spinal disc, connected with the positive pole of the battery, has been applied to the lumbar region, and the other electrode above the pubes or to the perinæum, and a weak current passed for a few minutes daily, followed by a relief of the symptoms, from the commencement of the treatment, and complete cure usually within a fortnight.

In the first case described in the *Journal*, which has called forth these remarks, oxalate of lime was discovered in the urine. In the letter from "M.D.," who mentioned the case of an officer from India troubled in this way, reference is made to the effective treatment of these cases by a blister to the back of the neck. Probably, a blister so applied, acts somewhat in the same way as electricity, by its effect on the spinal cord, and, through it, on the micturition centre in the lumbar region. The known action of strychnine on the cord also, points out its use as a rational mode of treatment, as mentioned by "L.R.C.P." in the recent correspondence. But, of all remedies, the passage of a weak galvanic current from the lumbar region to the region of the bladder, or its neck, appears to be the most efficacious in those cases where no reason can be ascertained for this frequent desire to pass urine.—*British Medical Journal*.

ANTISEPTICS IN ENTERIC FEVER.

In the *Gazette Hebdomadaire de Médecine et de Chirurgie* of Nov. 3 last, M. Dreyfus-Brissac says that carbolic acid, carbolate of soda, salicylate of soda, and bismuth, have no specific action like to that of mercury in syphilis, in enteric fever. This is the testimony of almost all the advocates of these means of treatment, and it is easy, M. Dreyfus-Brissac says, to understand how this should be so. Whether the source of the

poisoning of the body be the intestine, the blood, or the nervous system, owing to the insidious nature of its earlier manifestations the whole body must be affected before medicinal treatment could begin. "It is not only in the intestine, but still more in the blood, in all the fluids, in all the tissues, that it would be necessary to neutralise the virulent substance or infective agent. It is not thus possible, as some have tried in recent times, to liken enteric fever, from the therapeutic point of view, to an intestinal wound, and to see in washing out the digestive passages the essential element of treatment. It would be necessary to infiltrate all the tissues and all the fluids with the antidote, not merely to cleanse the intestinal ulcers with it. Moreover, owing to the poisonous action of the substances mentioned in relatively feeble doses, and to the rapidity with which they are eliminated by the kidneys, they do not fulfill in any way the conditions of an anti-infectious treatment, a statement which has received striking confirmation from clinical experience. It is quite true, as we shall see later on, that by means of carbolic acid or salicylate of soda certain distressing phenomena of fever may be moderated, or even for a time be made to disappear, and thus a better face, so to speak, be given to the disease; but the disease itself continues unmodified. In spite of the treatment, it runs its course, not only without interruption, but without appreciable change of form. If the fever be characterized by great debility, or by great irregularity, both remain unaffected by the antiseptic treatment. Les parasitocides sont impuissants à conjurer les complications qui dérivent directement de l'infection, à prévenir les déterminations anormales du germe typhoïdique sur le système nerveux et les viscères, comme les poumons ou le cœur."

Whilst, however, M. Dreyfus-Brissac does not think that antiseptics modify in any material degree the course of an enteric fever, he does not think that they are wholly useless. He points out that they have a decided influence on the febrile condition, usually the most prominent feature of the disease, and the one which most frequently determines the result. He tells us that until quite recently digitalis and cold baths were almost the only means at our disposal for the reduction of temperature, and that the one was dangerous in cases attended by great heart-weakness, and the other in cases complicated by affections of the lungs. He thinks, therefore, that remedial measures which would fulfill the antipyretic indications without incurring these risks would be a decided advantage. He selects two for consideration—carbolic acid and salicylate of soda—because it is of these only that precise information exists.

Carbolic acid has been given in the form of a potion, in pills, by hypodermic injection, and by injection into the rectum in doses of about 8, 12 and 16 grains. The last mode of administration is the only practical mode; "C'est le seul que nous ayons expérimenté d'une manière suivie." An enema containing 8 to 12 grains of carbolic acid (50 to 75 centigrammes) produces a rapid fall of temperature of about 2° or 3° Fahr., which may be maintained several days and nights by giving daily two or three enemata. But the risk is very great. "Not to speak of idiosyncrasy, in virtue of which useful doses are borne badly, or of collapse, of which one has perhaps exaggerated the frequency and the severity, can we be quite sure that we have not contributed to the reaction which follows, often very closely, bringing with it more or less violent shivering, rapid rise of temperature to its former height, and congestion of deep-seated organs, particularly the lungs? For another

reason, the carbolic acid treatment is objectionable. It requires an amount of supervision unattainable outside of a hospital. Among some patients, who, at the commencement, bear the acid treatment well, it produces after some days a very unusual fall of temperature, $5\frac{1}{2}^{\circ}$ or 7° Fahr., and as the reaction is in proportion to the fall, the temperature rises in some hours to a greater height than before."

From this, M. Dreyfus-Brissac concludes that carbolic acid is useful only in exceptional cases. He recommends it in the form of a cold enema in doses of about $4\frac{1}{2}$ grains (30 centigrammes), in which form its action is chiefly that of a disinfectant on the intestinal contents. As an antiputrid, he prefers charcoal, which may be given in large doses (not mentioned) and which is preferable both because of its absorbing properties and of its action on abdominal meteorism.

Salicylate of soda is much less active, but also less violent, and it admits of much easier management. Employed daily in doses of about 90 or 100 grains (6 or 8 grammes), it determines in from twenty-four to forty-eight hours an appreciable fall of temperature, and consequent marked feeling of comfort. It is always well borne, better even in enteric than in rheumatic fever, and it may be administered for some days without inconvenience. It is indicated in cases of enteric fever, in which the temperature is slowly but continuously rising, when one has not to deal at once with a very high temperature, which is an immediate source of danger. When it is necessary to act quickly and vigorously, it should not be used. In every case the urine should be examined first, because if there be appreciable kidney-change it is contra-indicated. M. Dreyfus-Brissac concludes that it is as moderators of the fever that the salicylates are useful, and he doubts if they be preferable to sulphate of quinine. In doses of from 20 to 30 grains divided into three, given at intervals of ten minutes, sulphate of quinine produces as rapid a fall of temperature and a relative defervescence, which continues for from twenty-four to thirty-six hours, as carbolic acid, without the reaction which carbolic poisoning produces. In cases of gastric intolerance, injections of hydrobromate of quinine may give better results than enemata of sulphate of quinine.

M. Dreyfus-Brissac has apparently little faith in the antipyretic treatment. "If," he says, "we have dwelt upon the antipyretic treatment, it is because it is the order of the day, not because we think it generally applicable. To see in fever, however moderate it may

be, an enemy which it is necessary to fight without intermission; to direct against it all one's efforts; to wish to modify the natural course of the pyrexia at any price, is a tendency which cannot be too much discouraged. By treatment of this kind one is liable to neglect all the other indications, and to be led by slight and transient remissions of temperature into the belief in a real, when there is only an apparent, convalescence. Perhaps the abuse of these strongly acting medicines, absolutely irrational in cases of moderate intensity, explains the well-known frequency during the present epidemic of relapses; relapses, too, which, contrary to rule, are often really serious."

M. Dreyfus-Brissac believes that the characteristic feature of enteric fever is debility (presumably in severe cases), and that this is to be met by tonics and nourishment. The waste products which accumulate in the body, whether from parasitic impregnation or from febrile action, should be eliminated; and for this purpose there are two organs to be acted upon—the kidney and the intestine. Laxatives and purgatives should, therefore, be used (presumably cautiously), but, above all, diuretics. The kidney is, *par excellence* the excremental organ. The urine, said Vieussens, is the purifier of the blood, and biological chemistry confirms daily the accuracy of the definition. "L'expérience montre que, plus un typhoïdique urine, moins il est exposé aux complications secondaires, moins sa convalescence sera lente et torpide."

Nothing is easier to fulfill than this indication by giving abundance of milk, which is nourishing, readily assimilative, and diuretic. To this may be added enemata of cold water, which are useful in cleansing the intestine, in lowering, if slightly, the temperature, and in favoring the diuresis.

There is nothing new in this; but when one sees from so many different sides modes of treatment extolled which are directed to but one of the factors of the morbid process, one fears that, in attaching too absolute a value to these, practitioners may lose sight of the dietetic rules which should govern the treatment, or, better, the hygiene of enteric fever. To support the patient by furnishing his tissues with the materials for their repair, and to favor the elimination of the products of denutrition, are the principles which ought to guide the treatment of enteric fever. Active medical treatment is only necessary when the disease puts on an anomalous form, or when some serious complication arises.—*London Med. Rec.*

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PROTECTION AGAINST FIRE.

We shall hardly stop to enquire whether it is the duty of Medical journals to suggest means for the protection of life against fire. We have at least, in common with others, an interest in the matter, and may therefore be permitted to speak.

In the city of New York the danger to life from fire in private dwellings is exceedingly small, so small indeed that it may be said not to exist. We cannot trace more than one death from this cause in a private dwelling for many years.

The buildings which have proved most destructive to human life in this city, are large factories, and especially those in which women and children are employed; in the majority of which cases the persons employed are crowded into the upper apartments.

Next to this class of buildings, tenement houses rank as the most dangerous; or certain large buildings in the lower parts of the city, occupied by offices and used also for a great variety of business, mechanical and perhaps manufacturing purposes.

Hotels, or houses used for the entertainment of travelers have, considering their number, size and structure, escaped serious conflagrations and disasters to an extent which could hardly have been anticipated: but we recall sadly the suffocation and cremation of the servant girls at the Fifth avenue hotel only a few years since.

Apartment houses, or what are usually, but improperly, called "French Flats," have thus far escaped destructive and fatal fires, and it is to be hoped that most of them are so carefully constructed that the danger from fire is small: but they have not been subjected to a very long trial, and from our personal knowledge of some of them we cannot see why they ought to be regarded as any more safe than tenement houses.

What we have to suggest, in addition to what has already been suggested, and reduced to practice by others, is:—

That all of that class of buildings which are known

to be extra hazardous, shall have substantial iron balconies opposite each story above the first, enclosing completely at least two sides of the building. So that the occupants, escaping from the windows may seek refuge on that side of the building which is most remote from the fire; when they will be in no danger of immediate suffocation from the smoke. Nearly all of those who loose their lives at these fires are first suffocated: and those who are not familiar with this subject, cannot appreciate how suddenly and completely one is asphyxiated by smoke. This is why they do not seem to make any effort to escape. They "lose their presence of mind," as we often hear it said, because they lose their breath, and then instantly fall in a state of more or less complete asphyxia. At the Milwaukee holocaust the proprietor said there was a way of escape for the poor girls in the loft of the building, but they "seemed to lose their presence of mind." It is hardly probable that he would have done any better if he had been in the same situation.

Let it be understood then, that it is the smoke and not the fire which renders these poor beings helpless, and is the immediate cause of death in most cases; and with this understanding we shall see the value of the balconies, especially if they be connected with one another by substantial fire-escapes, or regular stairways.

By these means the occupants may find a temporary retreat from the smoke, and devise modes of escape for themselves before the fire reaches them; or they may wait in comparative safety until the fireman's ladder can reach them; or they may descend the fire-escapes; or they may re-enter the building at some other point and descend safely.

Such a structure as we have described should be rendered obligatory, in the class of houses which we have mentioned as especially exposed to danger from fire; and it would be well if all large hotels and apartment houses were at least furnished with balconies opposite the windows of the upper stories, including of course the servants apartments.

It will not do to say that in Europe such precautions are not thought necessary. In Europe buildings of the kind mentioned are usually made fire-proof, inside and out, while in this country, they are generally filled with wood and drapery of the most combustible kind from top to bottom. From without they may look solid and substantial, but within the walls there is little that may not be regarded as fuel.

We have omitted to speak of theatres and other public places of amusement, not because they are any more safe than the classes of buildings of which we have spoken, but because each demands for itself a construction, mode of egress and measures of precaution peculiar to itself. Very few of them are in any sense safe, or even tolerably safe, and ought never to be occupied, except for cock fights or prize fights, in which case a fire could do no harm.

The Cartwright Lectures of the Alumni Association of the College of Physicians and Surgeons for the present year will be delivered at the hall of the Young Men's Christian Association, corner of Fourth Avenue and Twenty-third Street, by Dr. W. T. Belfield, of Chicago, on the evenings of February 19th, 21st, 24th, and 27th, at eight o'clock. Subject: "The Relations of Micro-organisms to Disease."

LECTURES.

THE DIAGNOSIS AND TREATMENT OF
OVARIAN TUMORS.A LECTURE DELIVERED AT BELLEVUE MEDICAL COL-
LEGE

BY

WM. T. LUSK, M. D.,

Professor of Obstetrics and Diseases of Women and Children.

GENTLEMEN :—While the recent case of ovariectomy, which some of you witnessed, is fresh in your minds, it seems to me to be a good plan to take up this subject right here, and to go over with you the chief points relating to the diagnosis and treatment of ovarian tumors.

Diagnosis.—Suppose a patient comes to you complaining of an abdominal enlargement, the first question for consideration is : Is the tumor abdominal, or is the distension due to fluid, gas, or other source ? You therefore should endeavor first to make out the boundaries of the swelling. In doing this you will sometimes find that, owing to hyperæsthesia or nervous irritability the patient will contract her abdominal muscles so that it will be difficult to determine whether the tumor circumscribed is or not, and, if you are not very careful, you may be led into error from this cause.

Now bear in mind all the various conditions which may cause abdominal distension. Thus simple tympanitic distension of the abdomen has been mistaken for an ovarian tumor by surgeons in high repute. But if you will stick strictly to the objective signs and symptoms, ignoring the objective ones, you will not be liable to be led astray. Where the muscles of the abdomen are contracted, it is not always easy to determine the presence of gas by the tympanitic resonance, and the real condition may pass unobserved. Sometimes, too, isolated muscles contract and produce the sensation of a distinct tumor. Again, the different divisions of the recti muscles may by their rigidity furnish a nodular feel to the hand, and may hence be taken for irregular fibroid growths or even for multilocular cysts. As a rule, it is possible to avoid error and make sure of the absence of a tumor by pressing the abdominal wall inward with the superimposed hands until they come in contact with the spine or posterior walls. If this can be done over all parts of the abdomen, there cannot possibly be a tumor in the abdominal cavity. This can best be effected by the method which I have already taught you. It consists, you remember, in first placing the left hand on the abdomen and then placing the fingers of the right hand upon those of the left. Then asking the patient to take a deep inspiration and follow it up by a prolonged expiration, you should press during the latter firmly downward with the right hand so as to make the left approach the spinal column. After the expiration is over, wait a moment, keeping the hands persistently in the position they have gained. Then ask the patient again to take a deep inspiration, and again press firmly during expiration. Thus after two or three prolonged expirations you will generally find that you can reach the spinal column, provided there is no tumor intervening between it and the abdominal wall, and in this way you can exclude an abdominal tumor. But there are some cases in which the struggles of the patient or her refusal to take a deep inspiration, interferes with this

method of examination. If still in doubt as to the real condition, put the patient under an anæsthetic, so as to relax the abdominal walls, the examination thus becomes very simple. Sometimes an enormous amount of adipose tissue, forming a thick layer in the abdominal wall, will give rise to sensations very closely resembling an ovarian tumor. Thus where there are from two to four inches of fat in the abdominal wall the attempt at palpation will sometimes elicit a sensation nearly resembling fluctuation. To detect the true condition in such cases by seizing the abdominal walls between the two hands, you will be able to lift the entire layer of fat upward and determine its extra-peritoneal situation. Moreover, by an examination of the lower abdomen, neighborhood of Poupart's ligament, where there is comparatively very little fat, by conjoined manipulation, with one or two fingers in the vagina or rectum, it is generally possible to determine whether the tumor is in the pelvis or not. In still other cases you will have to ascertain whether the distension is due to an ovarian tumor or to ascites. Generally the diagnosis is simple. Thus if you ask the woman to lie on her back the abdomen will become flattened and bulges at the side if it contains ascitical fluid, and as the intestines float upon the fluid, you will get tympanitic resonance near the navel while dulness is produced by percussion at the level of the fluid. If the patient changes her position, the areas of tympanitis and dulness will change accordingly. In the case of a large ovarian tumor on the other hand, the abdomen will not be flattened ; there will be dulness in the region of the navel, which will change to tympanitic resonance at the sides, where the intestines have been forced ; and it is usually easy to map out the shape and outline of the tumor by palpation through the abdominal walls.

There are indeed rare sources of error. Thus one of the most important signs of ascites is dulness on percussion upon the sides of the abdomen. But owing to the shortness of its mesentery the cæcum is sometimes attached so closely to the right side of the abdominal walls that in place of dulness from the presence of fluid, you may get tympanitic resonance, just as in cases of ovarian tumor. You can however distinguish this condition from an ovarian tumor because in the latter the sense of fluctuation ceases where the tympanites begins, while in dropsy when you get tympanitic resonance below the level of the fluid, you will still get fluctuation. Again there are certain cases where an excessive amount of dropsical fluid has collected and has so filled the abdominal cavity and distended its walls that it loses the peculiar flattened shape of which I spoke, and the fluid has risen above the level of the intestines, you get a flat sound on percussion over the most prominent portion of the abdomen. Here the true condition is often very difficult to determine, because an ovarian tumor may be so large as to completely fill the abdominal cavity and so crowd the intestines to the rear, and in some cases the cyst may be stretched to such an enormous extent and that its thinned walls may furnish the same sense of fluctuation that is obtainable in ascites. Where there is a doubt as to whether there is an excessive amount of fluid in an ovarian cyst or whether the fluid is ascitic, you may have to resort to puncturing the abdomen and withdrawing a portion of the fluid for examination, when a sufficient amount is drawn off the partially emptied sac and open ovarian cyst can generally be grasped through the abdominal walls, and by bimanual manipulation it may become possible to determine its pelvic origin. If you desire to examine the fluid for further

information as to its character, you must in the first place allow a portion of it to stand awhile. If ascitic it should coagulate, which is not the case if from an ovarian cyst. On boiling the fluid from an ovarian tumor the albumen coagulates and in typical cases ovarian fluid is of a viscid tenacious consistence.

Ovarian fluid is usually turbid and often colored and looked at in mass varies from a dark brown to a whitish green and amber, while ascitic fluid is generally light colored and transparent. Cysts of the broad ligament are often mistaken for ovarian cysts, though the fluid they contain very closely resembles ascitic fluid, when boiled with acetic acid the fluid is found to contain only a trace of albumen. The diagnosis between cysts of the broad ligament and ovarian cyst, is in practice of not much importance, for the treatment is the same in both. The microscope furnishes valuable aid in differentiating an ovarian cyst from ascites, thus in ascites as the fluid comes from the peritoneal cavity, it will be found to contain the polygonal nucleated cells characteristic of serous membranes as well as white corpuscles with amœboid movements, while in the fluid from ovarian cysts are found in a greater or less degree of preservation cylindrical cells such as exist normally on the outer surface of the ovary, and the corpuscles of Drysdale, granular pus-like corpuscles which, unlike pus corpuscles, do not clear up upon the addition of acetic acid. In doubtful cases it is well to examine the fluid for paralbumen, substance found only in ovarian cysts. The following means for detecting its presence may be employed. The fluid should be allowed to stand in a vessel until the formed elements have settled to the bottom, then the supernatant fluid should be poured off and carbonic acid gas be passed through it by means of which the paralbumen is precipitated. Another method of obtaining paralbumen consists in adding to the fluid an equal amount of alcohol, allowing the precipitate to stand in a vessel for three days; then pour off the clear fluid redissolving the precipitate in water, and on adding acetic acid, the paralbumen will be precipitated. An excess of acetic acid redissolves paralbumen thereby distinguishing it from mucin. It is not necessary however to make these chemical tests as a rule, for the microscopical and clinical evidences generally suffice to determine the differential diagnosis.

After establishing the existence of a tumor it is necessary to determine its origin, and especially to make certain that it starts from the pelvic cavity. Within the cavity of the pelvis cystic tumors of the ovary may originate from the broad ligament, or may be due to cystic dilatation of a fallopian tube. In all, however, the symptoms are so similar that it is not easy to distinguish them from each other. In fact, the differentiation is not very important, as the treatment is essentially the same in all. But sometimes a fibro-cystic tumor starting from the pelvis, is not always easy to distinguish from an ovarian cyst and requires a careful examination. In such cases it is absolutely necessary to know the origin of the tumor to ascertain whether or not it is connected with the uterus. You can generally acquire this information by conjoined manipulation without resorting to tapping, but not always. At the beginning, an ovarian tumor usually lies behind the uterus in Douglas' cul de sac, while later, if it grows very large, it moves forward to the front. If it finally becomes so large as to press down upon the organs in the pelvic cavity, the uterus and the tumor may become so firmly compressed together that it is impossible to distinguish them from one another until the cyst has been made smaller by tapping.

If you do not succeed in obtaining the desired information by the sound and by conjoined manipulation, it may be possible to obtain exact data by introducing the whole or a portion of the hand into the rectum. To do this pass one finger slowly through the anus, then the second and then the third and the fourth; press steadily upward until the sphincters yield and the hand passes as far as the thumb. See if you cannot with the half-hand obtain all the information you require. It is possible to reach above the pelvic brim and to detect any malposition of the pelvic organs. If the case is still obscure, introduce the whole hand; to make this easier of accomplishment, some advise dividing the sphincter ani with a knife in a number of places, but this I have never found necessary. After the whole hand has passed into the rectum you can feel all the pelvic organs through the thin rectal walls. If you then distinguish an abnormal growth, it is well to begin with your fingers at a determined point, and then palpate the entire surface to ascertain whether the tumor is attached to the uterus or whether it is separate and distinct, and whether it is fibrous or cystic in character. It is said that you can distinguish between a fibro-cystic tumor of the uterus and an ovarian cyst by the fact that the fluid obtained from a fibro-cystic uterine tumor coagulates spontaneously, while that from an ovarian tumor does not. After determining that a tumor is not uterine, you must next decide whether it possesses a pelvic attachment. Sometimes an ovarian tumor has such a long pedicle and rises so high in the abdominal cavity that it is difficult to make sure of its origin without introducing the hand into the rectum. Sometimes cystic tumors of the kidneys descend into the pelvis, and then it may be difficult to determine whether the tumor felt starts from the pelvis or whether it has descended into the pelvis from above; and so with any visceral cysts.

In all doubtful cases it is allowable to make an incision through the abdominal walls, and then if the tumor is found not to be an ovarian, or one that can be safely removed, the incision can be closed again. These exploratory incisions are allowable in cases not otherwise determinable, and the liability to peritonitis, provided the precautions of Listerism are carried out, adding but little to the dangers to which the patient is already subjected. I have seen a case of cysto-sarcoma of the mesentery made out by an exploratory incision which could not have been recognized by other means, unless perhaps it might have been done by a rectal examination.

Now when we come to consider the treatment of ovarian cysts, there are only two measures worthy of consideration—one palliative, the other curative. The palliative consists in aspirating the tumor, while the radical treatment consists in the removal of the entire cyst. We sometimes aspirate the tumor for the purpose of diagnosis and to give temporary relief. In performing this operation, it is not advisable to use a large-sized trocar, for the dangers of tapping with a large trocar are almost as great as ovariectomy itself. The reasons why it is dangerous are that in the first place you may perforate a large vein, which would be followed by profuse hæmorrhage, and, in the second place, air entering the sac through the large opening, decomposition of the cyst contents may be set up, and the patient dies from septicæmia. I frequently resort to aspiration, because patients often come into the hospital very much reduced from inability to retain nourishment, and it becomes necessary to remove the pressure from the stomach exerted by the cyst, in order

that the patient may have, preliminary to operation, the benefit derived from taking a sufficient amount of food. In tapping one of these tumors, you should always be careful to use a needle which has never been employed for any other purpose, owing to the danger of infecting the tumor. The objections to frequent tapping are that a slight amount of peritonitis and adhesions of the cyst to the abdominal walls is likely to follow, and that after the cyst has once been emptied it usually fills again very rapidly. This rapid filling of the sac, within two or three weeks from the tapping, is a source of exhaustion to the patient, because the refilling of the sac can only take place from materials derived from the circulation, so that repeated tapings are inexpedient.

II. Now it may be that you physicians in general practice may never wish to perform ovariectomy; still the interest felt in the removal of ovarian tumors is such at the present time that you will need to know the different steps in the operation as a preparation for following it intelligently when you may have the opportunity of being present at its performance.

Preparatory to the operation, you should see that the patient is put in the best possible condition, by taking daily baths, by having mild laxatives administered every morning for a week in advance. The day before the operation the food should consist of milk only, or of fluids, because at the time of the operation the intestines should be empty and void of solid fæces. The day before I propose to operate, I prepare myself by taking a turkish bath, having my hair shampooed by a barber, to make sure that I carry no poison about me that could cause contagion. If I should find that I had a cold at the time appointed, I would put off the operation, because in catarrhal affections bacteria swarm upon the mucous membrane of the mouth, the fauces, and tongue, some of which might, in coughing, gain access to the abdominal wound. For the same reason you do not wish assistants or near spectators suffering from colds.

If I am to operate here in the hospital, the day before I have the room thoroughly fumigated, and in the morning of the same day I have the spray started and kept working till the operation is completed. The room should not be kept too hot, and I prefer that the temperature should not be above 75° to 80°.

If the patient can have a good night's sleep preceding the operation all the better. But this cannot always be obtained, for the day before all the hysterical women in the ward seem to take delight in getting around the patient to tell her that she will certainly not recover. If she seems very much excited, it is a good plan to give her an opiate the night before to induce sleep.

The morning of the operation it is well to take a list of all the instruments you may need and see that they are ready at hand. Instruments with keen edges should not be left over night in a solution of carbolic acid, one or two hours before you are ready to use them, will suffice for their disinfection. If they are left too long in the acid they will lose their temper and will not cut well. If they are not perfectly bright, or contain any rust upon them you should send them to the instrument maker to be polished. Instruments which do not have sharp edges should be left in a two per cent. solution of carbolic acid for at least five or six hours before the operation.

You will need at least three assistants. One to administer the ether, a second to attend to sponging the parts and keeping them clean, and a third to hand you the instruments as they are needed and to look after the ligatures. If you have plenty of men who are will-

ing to assist, it will be well to have one to look after the spray, another to handle the thermo-cautery, and it is also very convenient to have one who does nothing but look after the ligatures. The ligatures should be soaked for two or three hours beforehand in a five per cent. solution of carbolic acid. They should be made out of strong twisted silk. It has been proposed to soak them in boiling carbolic oil, but boiled silk becomes brittle and the breaking of a ligature is very annoying.

When all is prepared the assistant begins to administer the ether very cautiously. Now I consider the man who gives the ether next in importance to the operator. He should be experienced and one on whom you can rely to attend strictly to his business. The proper way of administering the anæsthetic is to give only just enough to keep the patient under its influence, so that she will recover from its effects within a few minutes after it is withdrawn. The usual manner of giving it in enormous quantities so as to completely overwhelm the patient does much to keep up, intensify the nausea which follows the operation, and you know that prolonged nausea and vomiting is in itself very devitalizing under any circumstances. Hence it is best to give the smallest amount of ether possible to keep the patient unconscious. Another way in which you will sometimes see it administered is, to press the ether cone tightly over the patient's face while the administrator stretches his head forward and gives all his attention to the operation, until one of the bystanders perhaps suddenly notices that the patient is becoming cyanotic, when he tells you that she is suffering from shock or that her pulse is very rapid and feeble, and then suggests that you had better hurry up the operation. If you listen to volunteer advice of this kind after all is over though the patient may come nicely out from the ether, a little later she may suddenly die, and you discover too late that she has perished from internal hæmorrhage from vessels which you had imperfectly ligated or left bleeding in your haste to complete the operation.

I still make use of the spray throughout the operation. It is said by some to be deleterious, and that it had better be abandoned in operations within the peritoneum. A short time ago it was used by everybody in such cases, because three or four years ago Keith of Edinburg, showed that in seventy odd consecutive successful operations, he had performed the operations with the spray, and in most of them there had been little or no rise in temperature.

Four years pass by however and he then announces that he has abandoned the spray because he has found that it invariably produces a temperature in all cases where the long incision was employed. But it seems to me that, if after using it in seventy cases with little or no rise of temperature following, and then afterwards, finding that there was a rise of temperature, in most cases it is at least supposable that there were other conditions rather than the spray to account for the temperature. In using it I do not direct the current so that the spray will pass into the abdominal cavity, but that it may pass across the abdomen of the patient and in the direction of the bystanders, so as to produce a current to waft from the patient any germs which they may carry with them in their clothing, for you can never be certain that proper precautions as to cleanliness have been taken by them.

The sponges you are to use should be carefully cleansed. You should get them all new three days at least before the operation, they should be put in a five per cent. solution of carbolic acid and left to soak for

two days. The morning of the day of the operation they should be squeezed out and placed in a two per cent. solution, where they are to stay until used. There should be a number of small soft sponges thus prepared to clean the parts during the operation, and a large flat one the use of which I will explain later.

When everything is ready for the operation the patient should be brought in and placed upon the table and the administration of the anæsthetic should be begun. During ætherization you should make a last careful examination of the tumor, and this is also a good time to draw off the urine, if it has not already been passed, for the bladder should be empty in order that it may not be in the way of the incision. After sponging the abdomen with a solution of carbolic acid, it will be found convenient to have a sheet of thin rubber to cover the whole abdomen, prepared for use by cutting in the centre an oval shaped opening six or seven inches in length, and applying to this a square piece of adhesive plaster with a smaller opening of the same shape, leaving the adhesive plaster to overlap the opening in the rubber by a margin of nearly an inch. When applied to the abdomen the opening should come just over the part in which the incision is to be made, the adhesive plaster fixing the rubber cloth firmly in place. This prevents the patient from getting wet with the fluids that escape during the operation, an important precaution, because any evaporation from the peritoneal and abdominal surface abstracts heat from the body, and tends to add to the shock of the operation and aids in depressing the vital powers of the patient. But the rubber sheet by keeping the abdomen dry helps to prevent this cause of depression. After again sponging the skin through the opening in the rubber sheet, make, with a sharp scalpel, an incision extending from two inches below the navel to two inches above the symphysis pubis. In most cases you will find that an incision five inches in length will be sufficient, though at times you may find it necessary to begin above the navel and carry the incision to the symphysis. At one time there was a sharp discussion as to whether it was better to make a large or a small incision, but now the short one where practicable is preferred, and the long one is rarely used. It is best not to make the opening too high, for it is necessary to get as near as possible to the pedicle which is situated in the pelvis. Do not try, however, to work through too small an incision. Some operators are satisfied with one only two inches long, but you will generally find four or five inches preferable and less dangerous.

First cut through the skin and subcutaneous areolar tissue, then through the deep fascia to the muscles, closing all bleeding points with pressure forceps as you proceed. When you see one of the recti muscles, cut directly through it no matter whether you are exactly in the linea alba or not. In Dr. Peaslee's excellent work you will see minute descriptions of how to avoid cutting the recti muscles, and to cut only in the linea alba; but this is pure pedantry. Cut directly through the muscle in a straight line to the subperitoneal layer. Then stop a moment for examination, because the layer resembles the mesentery somewhat in appearance and you need to feel sure of what you have to deal with before proceeding further. When you get therefore to the subperitoneal layer raise a portion of it with a tenaculum or a pair of tissue forceps and snip it with scissors. The tumor lying beneath the peritoneum can be recognized by its glistening appearance and bluish color. Introduce next a grooved director to guide the knife and protect the

tumor while incising the peritoneum. Before proceeding further find out the condition of the tumor and its relations to the abdominal viscera. A large heavy sound may be used to pass around the sac to ascertain if there are any adhesions. Do not, however, try to break adhesions with the sound, on account of the danger of tearing the intestines. Adhesions should be broken up under the guidance of the eye. The opening in the peritoneum should be large enough to allow the hand to be introduced if necessary. The adhesions between the sac and the abdominal wall should be stripped slowly and carefully with the fingers, care being taken not to break the sac, which would allow the fluid to escape into the peritoneal cavity. If there are no adhesions other than such as can be easily reached and torn away with the hand the case is to be regarded as a simple one. If you find that there are adhesions connecting the sac with the intestines or any of the abdominal viscera, it is well to wait before separating them until you can see what you are doing. To get a better view and more room to work in, empty the sac of its contents. Take a trocar—the one invented by Spencer Wells is most commonly employed—plunge it into the tumor, draw back the point so that its cutting edge does not protrude, and then allow the spring clamps with which it is furnished to catch the walls of the sac to secure the instrument firmly in place; a rubber tube attached to the trocar carries away the fluid into a vessel placed beneath the table. As the tumor collapses, seize it with vulsellum forceps, drawing a portion of the sac outside the opening in the abdominal wall, until with the strong forceps of Spencer Wells' you get a firm grasp which will neither slip nor tear. As you draw the sac out of the wound, search carefully for adhesions. Slight ones can be torn away with the finger; extensive bands connecting the sac with the neighboring viscera should be ligated with carbolized silk, divided, or they may be severed with the thermocautery knife. Avoid leaving any bleeding points, so that at last, after sponging the cavity, you will leave a perfectly dry peritoneal surface. Continue to divide all adhesions until the tumor lies free outside the abdominal cavity. It is not often necessary to put the hand into the abdominal cavity. Adhesions between it and the abdominal viscera can generally be divided during the withdrawal. The thickening of the peritoneum in case of extensive adhesions makes it capable of standing a good deal of rather rude manipulation without suffering much harm. When the sac is about half emptied it is often convenient to turn the patient over on her side that the fluid may flow out more readily. When the main cyst is emptied, pass the hand into the sac and search for smaller cysts. These can be ruptured with the fingers and emptied through the main opening without any of the fluid escaping into the abdominal cavity.

As soon as the tumor is withdrawn from the abdomen take care that the intestines do not protrude, which can be accomplished best of all by introducing into the abdomen a large flat sponge, so as to cover the inner surface of the wound. If the sponge be slipped under the abdominal wall it can be made to cover all the space left open by the withdrawal of the tumor. A good sponge will prevent air from getting into the peritoneal cavity; holds the intestines in place, and prevents blood from oozing into the abdominal cavity.

After withdrawing the tumor, hold the pedicle up to the light to avoid transfixing large vessels, then pass a Peaslee's needle through the pedicle, by means of

which a double ligature can be withdrawn. Tie the separate portions of the pedicle tightly, so as to constrict the portions included within them. The pedicle tied, cut above the ligatures with strong scissors and sear the cut surface with the thermo-cautery, partly by way of disinfecting and partly to prevent all oozing of blood. Finally, for further security, a single ligature may be placed around the entire pedicle. The pedicle may then be allowed to drop back into the abdominal cavity; but the threads should be left outside. The clamp is now a thing of the past. Before the plan of dropping the pedicle was adopted the mortality ranged from twenty to twenty-five per cent., but since discarding the clamp not more than ten per cent. of deaths have been recorded by the best operators.

After securing the pedicle take out the flat sponge and pass soft sponges held by the long sponge-holders behind the uterus down into the cul de sac of Douglas, and notice on withdrawing them if they absorb any fluid or blood. If so, repeat the process until the sponges return nearly dry. Then you can close up the wound without any risk to the patient. But if you find a considerable amount of blood each time you draw the sponge out you may be certain that bleeding points to which you have failed to secure, exist somewhere, and if you attempt to sew up the abdomen before all bleeding is checked you will incur great risk of losing your patient. Always, therefore, be careful not to leave any bleeding points behind, but search until you find them, and arrest oozing by ligation or the cautery. If the bleeding comes from the mesentery tie the bleeding points. Sometimes you will find it better to ligate off a large mass from the mesentery at once, an act which ordinarily is followed by very little constitutional disturbance. If, however, the blood comes from the abdominal walls, it usually is better to touch the bleeding points lightly with the thermo-cautery.

In closing the wound pass the needle a half inch from the cut border obliquely downward, but so as to include a portion of the peritoneum, and then upon the other side, upward from the peritoneum to the surface of the skin, and draw the thread through. Continue placing the sutures at an interval of an inch from one another until all are in place. I have been accustomed to use silver sutures in preference to silk, but it does not make much difference which you choose. During the passage of the sutures you should leave a flat sponge beneath the abdominal walls to absorb the blood which may ooze from the needle punctures. When the sutures have been inserted to the lower angle of the wound this sponge should be removed and the edges of the wound be brought together. If you have not put in the sutures so that the cut borders are evenly adjusted and gaping in places remains, put in superficial sutures to remedy the defect. It is astonishing how soon the opposing edges of the abdominal wall will adhere together. Thus if the patient dies only two or three days after the operation, and you then examine the wound, you will see that union more or less close has already taken place.

After the wound is closed wash the whole abdominal surface with a solution of carbolic acid, and then cover the wound with a piece of protective silk four inches wide. On top of this lay several (six to eight) folds of carbolized gauze, and then a piece of rubber cloth. Finally pad the abdominal wall carefully with borated cotton and bandage the dressing tightly, which will help greatly to prevent an excessive amount of intestinal distension.

The operation finished, place the patient in bed

and apply hot bottles to the feet and body, because it is necessary to guard against a certain amount of shock following the operation. The ether vomiting which is likely to ensue disappears most quickly if you avoid putting anything in the patient's stomach. On account of her feeble condition there is always a great temptation to use brandy or some other stimulant in liberal quantities, but the resulting nausea more than counterbalances the benefit derivable from prematurely forcing the stomach. I know of nothing which depresses a patient more than persistent vomiting. The food for two or three days should consist of such fluids as the stomach will easily bear, and in small quantities. To relieve thirst you may give small pieces of ice. If the pulse is very feeble and you think stimulants are required, whiskey or ether may be given hypodermically, or brandy may be administered by the rectum. If possible, however, it is important to keep the intestines entirely at rest for at least twenty-four hours to avoid the danger of peritonitis. Keep the patient flat on her back and very quiet. It is necessary to be very careful of the stomach for the first three or four days after the operation. Dr. Jenks supports his patients for nearly a week by rectal injections, and only gives ice water and tea in small quantities by the mouth to relieve the thirst. This part of the treatment is one against which patients most rebel, and they will sometimes take extraordinary means to obtain a good drink of water. This was illustrated by one of my patients a number of years ago. One evening, four or five days after the operation, on going into the room where she was lying, she asked me if she could not send for the priest to come and see her, for she said she could not die until she had received from him the last unction. To satisfy her I told her I would ask him to come, and went myself to one who lived in the neighborhood. When he arrived, she asked me to leave the room. After the priestly ministrations were completed, she quietly asked the Father if he would not hand her a glass of water. He unsuspectingly gave it to her, she drank its contents with great delight, and the priest took his departure. Within ten minutes persistent vomiting set in, so that she rapidly grew weak. I had to stay with her the rest of that night, and she barely escaped with her life. It is possible to relieve the thirst to a great extent by injecting 4 to 6 ounces of water with the albumen of an egg into the rectum every four hours.

It is a good sign when your patient is able to pass gas from the rectum the first day after the operation. Often, however, it is four or five days before she can do this; but even then the voluntary passage of gas is a favorable omen. The urine should be drawn by a catheter for two or three days, as it is desirable that the patient should avoid using the abdominal muscles. If you notice that the urine passes quite freely it is a good sign, but if the urine is scanty and the vomiting is severe and of a greenish color, it is probable that septic poisoning has set in, and the outlook becomes grave.

A slight fever during the latter part of the first twenty-four hours following the operation is quite common, and in favorable cases falls spontaneously. Sometimes fever appears two or three days after, and then speedily falls. If with the fever there is tenderness over the lower portion of the abdomen, look out for peritonitis; but though this is a serious complication, you need not necessarily regard the case as hopeless. Everything depends upon whether the peritonitis is limited to the lower portion of the abdomen

and to the pelvic cavity, or whether it becomes diffuse. If it is confined to the pelvic region adhesions form, which form a boundary to the inflammation, shutting it from the abdominal cavity above.

Usually, after the stomach has remained quiet for a day or two, the patient can begin to take milk and light food in small quantities. A tablespoonful of milk every half hour will be enough at first. This will give her twenty-four ounces, or a pint and a half of milk a day.

If there has been no special reason for disturbing the dressings, do not disturb them till the seventh or eighth day. On then examining the wound, you will often see the entire line of the incision perfectly healed without a break, or point suppurating; or at most, only a little suppuration at the lower end of the incision.

On the eighth or ninth day the bowels may be moved: after which, you can take out the sutures and replace them by strips of adhesive plaster. At the same time keep the abdomen well bandaged to support the wound. After three weeks the temporary bandage may be dispensed with, and if the patient is doing well she can sit up a portion of the day; but a permanent bandage, made by a skilled person, should be worn for at least a year.

I will add that I sometimes use drainage-tubes, but very rarely, sometimes perhaps, because I fear the operation has been a slovenly one, in which case the drainage-tube may serve to neutralize the evils resulting from poor work. Where the operation is neatly and thoroughly done drainage-tubes are very rarely necessary.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, JANUARY 24TH, 1883.

Dr. Geo. F. Shrady presided. The minutes of the preceding meeting were read and approved.

Dr. Birdsall reported that the tumor of the uterus of the seal presented by Dr. Liautard, and referred to the Microscopical Committee, was a myo-fibroma.

Dr. Janeway presented a specimen of

"PRIMARY CARCINOMA OF THE LUNG."

The specimen was one of considerable interest. It had been removed from a patient aged 56, who gave no family history of malignant disease, except one relative who had had epithelioma of the lip. The patient commenced to complain about a year before he died of pain in the side. There was slight febrile movement, and progressive failure of strength, and gradual emaciation, but no acute symptoms. He suffered also from dyspnoea on exertion. Dr. Janeway had seen him several weeks before death, when he complained principally of pain in the side. There was flatness over the region of the right lung, and the liver was somewhat lower than normal; in the lower part of the right lung breathing was feeble or absent, and in upper part there was bronchial breathing. A hypodermic was introduced and bloody serum drawn off. There was no renal trouble, and Dr. Janeway thought it probable that there was malignant trouble back of the evident pleurisy. There was some disgust for food, expectoration of mucus, but no bloody sputa. The patient

gradually failed and died from exhaustion. Dr. Janeway had diagnosed cancer of the lung ante-mortem, and this was confirmed by post-mortem examination. The left lung was normal, as were all the other organs, except the right lung and liver. A malignant growth occupied the lower and middle lobe of the right lung and the mediastinum, projecting from within outwards. The liver was morbidly congested, and showed a small spot of deposit, size of pin head. The lung was separated from the diaphragm by a layer of fluid one and one-half inches in depth. The glands at the root of the trachea were involved in the new growth, and had undergone fatty degeneration. There was protrusion of the growth into the bronchi from within outwards. Dr. Janeway thought primary cancer of the lung very rare; he had only seen four cases. These cases of malignant disease were often regarded as pleurisy, or malaria, or Bright's disease.

Dr. Heineman inquired if note of percussion over region of the growth differed from that of fluid in the chest, and if the feeling was different. Dr. Janeway replied that the percussion sound was not different from that of fluid, but resistance was greater.

Dr. Heineman remarked that he had presented a case of this kind, and reading up the literature of the subject, he found that it was claimed that percussion sound and resistance was different from that of fluid, but he had not found this so in his case.

Dr. Van Giesen thought it remarkable that the patient had not suffered from cough. Dr. Janeway said the lung was not soft, but doubtless would have gone on to the stage of disorganization, when cough would have been a marked symptom.

Dr. Shrady recalled a case presented by Dr. Ripley, in which the symptoms were so obscure that diagnosis was not made till post mortem. Dr. Heineman thought the negative symptoms characteristic of these cases, and therefore ante mortem diagnosis was the more to be commended.

Dr. Heineman presented a specimen illustrating "pigmentation of chronic gastritis;" Also the

"BRAIN AND HEART,"

removed from a girl *æt.* 16, who had died from acute chorea. There were no symptoms during life pointing to heart lesion, no history of rheumatism. Post mortem there was congestion of the pia mater, as shown in the specimen, and the mitral valve was studded with bead-like vegetations. He had been much interested in the study of these cases, and had frequently found these vegetations in cases of chorea.

Dr. Heineman also presented a specimen exhibiting very prettily the lesion of "chronic military tuberculosis."

Regarding the case of chorea, Dr. Janeway asked if Dr. Heineman had noticed a prolongation of the first sound of the heart. It was an additional sign to presystolic murmur to characterize mitral stenosis, and he had frequently found it in cases of chorea. There was always a thrill accompanying mitral stenosis which was regarded by Neimeyer to be pathognomonic, and by which alone he (Dr. Janeway) had often been enabled to make his diagnosis.

Dr. Heineman replied that he had often recognized this thrill and made a diagnosis from it; it was rather a wave impulse in the precordial region than a thrill. It was not present in the case he had presented and there was no prolongation of the first sound. He had notes of nearly a hundred cases in which this thrill was present, made up from cases presented at Dr. Clark's clinic.

Dr. Garrigues presented three specimens of
**"TUMORS EXPELLED FROM THE UTERUS
 AFTER DELIVERY."**

The first was expelled by a girl of 18, thirteen days after delivery. It was a cylindrical body 6 centimetres long by $2\frac{1}{2}$ wide.

The second specimen was also expelled by a girl of 18, on the 18th day after delivery. It was 6 centimetres long by $3\frac{1}{2}$ wide. The temperature in neither of these cases had risen above $102\frac{1}{2}^{\circ}$.

The third specimen was from a multipara, æt. 39, who had had retention of the placenta. The tumor was expelled on the 17th day after delivery, and was 20 centimetres long by 13 wide and 1c. in thickness. There was no indication in any of these tumors that they had resulted from a sloughing process, there was no bad smell about them, and they looked like pieces of beefsteak. He had prepared specimens for microscopic examination.

Dr. Shradly said he had presented such a specimen as these for a candidate some time ago. The tumor was thought to be the heart of a monstrosity, as it looked like heart muscle. It was subsequently presented to the Obstetrical Society. The patient had developed a high temperature, but had recovered.

Dr. Bozeman recalled a case of the same nature. He thought Dr. Janeway's explanation of them, viz: "that they were fibroma," was probably the correct view.

Dr. Garrigues thought this explanation might perhaps apply to two of the specimens, but not to all. The apparent cause was diphtheritic infection.

Dr. Janeway alluded to cases he had seen in which complete casts of the bladder had been expelled. Dr. Peabody had seen such a cast expelled by a horse. Dr. Bozeman had met with a similar case many years ago in which he had made an artificial opening into the bladder the size of a silver dollar until the wall of the bladder had resumed its normal condition. The patient entirely recovered.

Dr. Peabody presented in behalf of a candidate lungs showing chronic tuberculosis and slides showing secondary infection of the liver, thymus gland, intestines and pancreas, and negative slide from suprarenal capsule.

Dr. Peabody also presented a section from a

"SARCOMA OF RIGHT OPTIC NERVE."

The patient had suffered from obscure symptoms, general malaise, apathy, etc., for ten days, when he developed symptoms of cerebral disturbance and meningitis, to which he succumbed. The meninges were congested. A tumor the size of half a French pea was found on the right optic nerve. There had been no visual disturbance. He wished to inquire of the society what was the cause of meningitis in this case. If so small a tumor could give rise to a meningitis though it did not even disturb vision. Dr. Janeway thought the meningitis might have been intercurrent. He had seen slightly larger tumors cause trouble.

Dr. Satterthwaite presented a series of specimens taken from a gentleman that afternoon, who had died from what the history proved to be

"EMBOLIC PNEUMONIA."

He was taken ill on Thursday last with neuralgia from alveolar abscess. A free opening was established for the exit of pus, but the patient had developed a severe chill lasting an hour and followed by a temperature of 104° . Symptoms of pluro-pneumonia were subse-

quently developed and he died on the 6th day of his illness.

In the upper portion of upper lobe of right lung was a large yellowish infarction, the lower portion showing stage of red hepatization. The lung was free. The lower lobe of left lung had undergone a process of disorganization, and was the seat of hypostatic congestion. It contained a cicatrix showing calcareous degeneration. The kidney was parenchymatous. There was a blood clot of pulmonary valve. Over the right lobe of liver was a wedge-shaped infarction which looked like an infarction from pyæmia. The lobar pneumonia might have been secondary to the embolic pneumonia or concomitant.

Dr. Beverly Robinson presented a specimen of

"GENERALIZED SARCOMA"

of the viscera—man aged 33, admitted to St. Luke's Hospital. Had been well until 6 weeks before admission when he was attacked with acute pain in region of kidneys—urine contained blood but nothing else abnormal.

On examination a tumor was found in the region of left kidney which proved to be sarcoma. It was attached to the kidney but did not implicate. Metastatic deposits were found in the other abdominal viscera.

The Society then went into executive session.

SELECTIONS FROM JOURNALS.

COW'S AND HUMAN MILK.

Having undertaken his experimental investigations in view of verifying Biedert's statements concerning the differences between human and cow's milk, Dr. T. Schmidt (*Moscow Inaug. Dissertation*, 1882) obtained highly remarkable results, which, if true, will occupy an important place in the literature of the subject, on account of both their theoretical and their practical significance. According to the generally accepted teachings of Biedert, the main difference between human and cow's milk consists in different qualities of their respective caseins, their quantitative composition playing only a very subordinate part. Dr. Schmidt asserts that this view is radically incorrect, and points out, as a source of Biedert's errors, the fact that this observer operated on mixtures of various albuminous substances entering into the composition both of human and of cow's milk, but not on the pure casein. As the authors experiments and analysis show, there exists no qualitative difference whatever between the casein (as well as other proteinic bodies) of human milk and that of cow's milk; the difference in their respective behavior to reagents, and in the properties of their coagula, is caused exclusively by the difference in the percentage of albuminous ingredients. Both human and cow's milk contain casein, albumen, and, as Dr. Schmidt has proved, a third albuminoid, which was first discovered by Bence-Jones in the urine of osteo-malacic patients, and received from Kuehne the name of "hemialbumose." The author gives the following average figures: 1. Human milk contains: casein, 0.6573 (49.8 per cent.); albumen, 0.3382 (25.7 per cent.); hemialbumose, 0.3224 (24.5 per cent.); total of albuminoids, 1.3179. 2. Cow's milk contains: casein, 3.1666 (87.3 per cent.); albumen, 0.2970 (8.2 per cent.); hemialbumose, 0.1672 (4.5 per cent.); total, 3.6715. That is, the total amount of proteids in human milk is nearly three times less

than in cow's milk; the quantity of casein in the former being nearly five times less than that in the latter, while the amount of hemialbumose in human milk is nearly double of that in cow's milk. On comparing the percentages, the quantitative difference between two species of milk becomes still more striking; we see that in cow's milk there are present casein in twice greater, and albumen and hemialbumose in three and six times less amounts than in human milk. And this is all the difference between the two kinds of milk; it is, therefore, entirely quantitative and not qualitative, as Biedert teaches. The author thinks that the knowledge of the individual properties of various albuminoid matters of milk enables us to *à priori* assert that the greater the amount of casein, and the less that of albumen and hemialbumose, the more easily and markedly the process of coagulation must proceed, and the less soluble the deposit must be; on the contrary, coagulation must be more difficult and less complete, and the coagulum must be finer, more mucous, and more soluble, the less the relative (to the other two albuminoids) amount of casein. As experiments show, when to a specimen of cow's milk there are added five times its volume of a 2 per cent. solution of hemialbumose, rennet extract does not produce any coagulation at least for twenty-four hours, if the reaction of the mixture be neutral; when the reaction is acid, or when the proportions of hemialbumose added is less considerable, the mixture coagulates, but the deposit has the appearance of extremely fine mucus-like flocks, having no tendency to agglutination and shrinking, while the serum remains milky, exactly as in the case of human milk coagulated through the agency of the rennet extract.

Equally interesting is another series of the experiments undertaken by the author to throw some light on the changes taking place in cow's milk under the influence of boiling. The result of these experiments is as follows. The process of boiling transforms nearly the whole amount of the albumen and a considerable part of the casein into hemialbumose, and so brings the composition of cow's milk nearer to that of woman's milk, and therefore makes the former more assimilable for an infant. This transformation may be heightened by diluting cow's milk and adding to it a solution of carbonate of soda; for, as again a special series of Dr. Schmidt's experiments proves, dilution and alkalisation of cow's milk likewise diminishes the amounts of the casein and albumen and increases that of the hemialbumose; the metamorphosis of the two former proteinic bodies into the latter proceeds under the influence of a special ferment, the existence of which in milk was discovered by Dähnhardt, and which acts more energetically in the presence of carbonates of alkalies.—*London Medical Record.*

MEDICO-LEGAL ASPECTS OF THE PELTZER TRIAL.

In November and December 1882 the celebrated trial of the brothers Peltzer took place for the murder in Brussels of M. Bernays. At this trial several important questions relative to hæmorrhage from gunshot wounds, the position of the assailant, and the production of cadaveric lividities, were raised.

M. Bernays was a well-known barrister in Antwerp, and was on very intimate terms with Armand, the elder of the two brothers Peltzer, and was also known to the younger brother Léon. Either on account of a *liaison* between Armand and Madame Bernays, or

because M. Bernays was in the possession of a secret affecting the character of Armand, the latter resolved to get rid of Bernays, and employed for this purpose his brother Léon. Bernays was accordingly inveigled into a room in a house in Brussels, specially prepared for the purpose; and as he crossed the threshold it is supposed that the disguised Léon presented a pistol near the nape of the neck, and shot his victim dead. The body was no doubt subsequently disposed of by the brothers in the following manner. All traces of the blood were removed from the room except in one spot, where there was a pool of blood weighing about nine ounces; the body was placed in an arm-chair, so that it might be supposed that death was the result of either suicide or accident. About a week later information was conveyed to the authorities by letter that Bernays had been shot accidentally by one Vaughan—an assumed name of Léon—during an altercation, and this letter led to the discovery of the deceased's body. A judicial and medical examination of the body was made on the 18th, eleven days after the death on Jan. 7, 1881. Stienon, who made the medical examination, said there were two wounds, one on the right temple, of a simple nature, the other in the nape of the neck, which had been the cause of death. This was a perfectly clean wound, without any burn. The ball had gone through the neck from left to right, slightly ascending, and perforating the skull. The principal part of the projectile was found in the right temporal (middle) lobe of the brain. On the body were stains of blood and cadaveric lividities. The blood-stains were in the nape of the neck and on the right side of the head. On the nostrils and moustache were streaks of blood. There were lividities on the right leg and forearm. No blood was found in the pharynx. The wound in the nape of the neck could not have bled much externally. The bleeding had been internal, and through the nose. There was little blood on the clothes of the deceased. A spot on the carpet contained nine ounces of blood. There was a footprint, as he alleged, in this spot, not produced by the deceased. Experiments made for the purpose showed that the footprints could not have been produced earlier than two hours and a half after the blood had flowed on to the carpet, and probably it was twenty or twenty-five hours afterwards. It was certain that the footprint was not produced on Jan. 18, the day of the first investigation at the house, and eleven days after the death experiments showed that cadaveric lividities could no longer be displaced when the body had remained in the same position for twenty-eight or thirty hours; therefore, the body could not have become cold in the same position as that in which it was found. It might have been moved after twenty-eight or thirty hours, but the cadaveric rigidity must be taken into consideration. The body must have been rigid after twenty-four hours. Destruction of this rigidity was possible only by tearing the muscles, and no muscles were torn; therefore it was probable that the moving of the body had been effected after cadaveric rigidity had disappeared, which would happen after sixty or seventy hours. It followed that the body must have been moved five days after the crime. The blood-clot on the carpet was irregular in shape, there being no blood in the centre; and the footprint was at the side. Death had doubtless been instantaneous, and experiments showed that the shot had been fired at a distance of four inches from the wound, though there was no blackening. The clothes of the deceased were in perfect order, and there was no evidence of a struggle having taken place.

Léon had indicated a spot where the shot was fired, but it was impossible that his victim could have been on that spot as in that case the blood would have flowed all over his clothes, which was not the case. Bernays had evidently fallen against the corner of a writing table, as was indicated by the wound on the temple, and had then rolled on to the floor. Probably the deceased was shot whilst stooping his head, as many people instinctively do on entering a room. Inside on the door were some drops of blood, spurted on it when the wound was inflicted. The victim had bled through the nose for five or ten minutes after death. If the assassin had raised the head of Bernays, the blood would have flowed on to the clothes, which were free from blood. The footprint on the blood-clot on the carpet had probably been made by a boot of Armand's with which the mark corresponded. The body had not been moved sooner than from forty to sixty hours after death. This was the summary of Stienon's evidence, and he was confirmed by Vleminella. For the defence, Guillery stated that what had been described as a footprint on the blood on the carpet, had been produced by a knee, not a boot; and the impress might have been made ten or fifteen minutes after the blood had flowed. Hence it might have been produced, as Léon stated, when he knelt to raise the head of the deceased, and to render him assistance. Cadaveric lividities, he asserted, permitted no conclusions to be drawn, as twelve days after death they were accompanied by putrefaction. The blood, he contended, had flowed from the nape, not from the nose. Schönfeld confirmed this evidence. The brothers Peltzer were both convicted.—*London Med. Record.*

THE MORTALITY REFERABLE TO ALCOHOL.

At the end of a long and carefully-prepared report recently drawn up by a Committee of the Harveian Society, it is concluded: that there is, upon the whole, reason to think that, in the metropolis, the mortality among any considerable group of intemperate persons will differ from that generally prevailing among adults in the following important particulars, viz., a fourfold increase in the deaths from diseases of the liver and chylipoietic viscera; a two-fold increase in the deaths from disease of the kidney, a decrease of half as much again in those from heart disease, a marked increase in those from pneumonia and pleurisy, a considerable increase and an earlier occurrence of those from disease of the central nervous system; a marked decrease in those from bronchitis, asthma, emphysema, and congestion of the lungs, a decrease nearly as great in those from phthisis, and a later occurrence, or at least termination, of the disease; a very large decrease in those from old age, with an increase in those referred to atrophy, debility, etc., and the addition of a considerable group referred in general terms to alcoholism or chronic alcoholism, or resulting from accidents.—*British Medical Journal.*

INDIAN ENTERIC FEVER.

Dr. R. H. Quill, Surgeon to the Army Medical Department, gives the result of an examination of the annual returns of the sick and wounded troops at Assirgarh, Central India, from 1875 to 1881. The station is completely isolated and the conservancy carried out by the "dry earth system," the contents of

the latrines are emptied into a ravine two hundred yards from the station, twice daily. The drinking water is carefully filtered. Every precaution is taken to avoid exposure to faecal impurity. During the period just mentioned, not one single case of enteric fever occurred among the troops. The believers in the climatic origin of cases of enteric fever in India very correctly point out that the principal victims of this fever are young soldiers, with little Indian service; and that the older men, with an Indian service of four or more years, are rarely sufferers from it. Without gainsaying this observation, or attempting to account for it, Dr. Quill would simply say that, for a space of five years, Assirgarh has been occupied by successive batches of young and unseasoned soldiers without the occurrence among them of any type of fever, other than the mildest form of ague. The climate of Assirgarh is no better than that of many other stations in the Bombay Presidency, where enteric fever is of only too frequent occurrence; but its isolated situation, and the nature of its surroundings, lessen to a very great extent its liability to faecal contamination of any sort; and herein lies the reason for the immunity it enjoys from the presence of enteric fever.—*British Medical Journal.*

NOCTURNAL ENEURESIS, TREATED BY VOLTAIC ALTERNATIVES.

Dr. Althaus writes: "In June 1882, I was consulted in the case of a boy, aged 15, who had suffered from incontinence of urine during sleep, ever since he was nine years of age. He had been treated with belladonna and other medicines without relief; and as he was about to enter a public school, where a continuance of this trouble might have been particularly annoying, the parents were very anxious that something more should be done. The boy's general health was good, but he was considered a nervous child, and highly sensitive. There were no ascarides, but he had a very long prepuce which could only with difficulty be retracted. There was, however, no suspicion of masturbation. Treatment by electricity having been recommended, I applied the middle-sized circular cathode over the region of the bladder, and the large oblong anode (five inches by two) to the lumbar portion of the spine. The current-strength 2.50 milliamperes for five minutes at a time. As after a few such applications no material benefit appeared to have been gained, I then added fifty voltaic alternatives produced in the metallic circuit. The night after this was free from the usual annoyance, and the boy has made an apparently uninterrupted recovery." Dr. Althaus prefers this method of treatment to injections of nitrate of silver, as recommended by Sir Henry Thompson. He believes that belladonna is of value when eneuresis is distinctly caused by undue excitability of the bladder.—*British Medical Journal.*

COMPOUND FRACTURE OF THE FEMUR, ERYSIPELAS, PYÆMIA: AMPUTATION OF THE THIGH: SUBSEQUENT EXARTICULATION AT THE HIP: COMPLETE RECOVERY.

Arthur E. Barker F.R.C.S. Eng., Assistant Professor of Clinical Surgery, and Assistant-Surgeon at the University Hospital, describes a case, under this title, at great length; the patient was a rivetter, aged 29,

who fell from a roof and fractured his femur. The case illustrates, in the first place, what is, however, unfortunately rare in experience namely, the possibility of recovery from pyæmia, even in a patient weakened by a most severe injury, prolonged suppuration and an attack of erysipelas. Secondly, it illustrates the feasibility in some cases of amputating with the best results through the thigh for compound fracture, leaving a second compound fracture in the neighborhood of the hip-joint to be treated otherwise later on, when the first amputation wound is healed. Thirdly, it shows that, in such a case, it is possible to exarticulate the whole of the remaining bone up to the hip-joint without re-amputation through the soft parts, but through a moderate opening in the outer side of the stump.—*British Medical Journal*.

TREATMENT OF DYSENTERY.

Mr. F. Rawle, M. R. C. S., observes that, at the present time, when dysentery is very prevalent, especially amongst those who have returned from the Egyptian war, any suggestion that may mitigate the suffering of so fatal a malady will be hailed with gratitude. The plan he has used with most success is the following. First, having placed the patient between warm blankets, a pint and a half of warm water, at a temperature of 90° Fahr. is injected. This is seldom retained longer than a few minutes, but is pronounced very grateful to the patient. When the water has soothed the mucous membrane of the colon and rectum, and brought away any *effete* matter, two ounces, by measure, of the following enema is administered with a gum-elastic bottle. \mathcal{R} Quinine sulphate ten grains; compound tincture of camphor four drachms; decoctum amyli to two ounces. Mix, and when about milk-warm inject, which is generally retained; but, if ejected, it may be repeated after an hour or two. This has been found of great service, and very grateful to the patient, the effect is like magic. If griping pains be felt over the region of the epigastrium, half-drachm doses of chlorodyne, in some aromatic water, mint, carraway, or aniseed should be given. The diet, of course, should be of the most soothing kind: jellies, isinglass, linseed, toast and barley water *ad libitum*. Ipecacuanha appears of little service, and Mr. Rawle has discarded it from his treatment. Warm turpentine stupes on warm flannels, over the hypogastrium prove very beneficial.—*British Medical Journal*.

HYDATIDIFORM DISEASE OF THE CHORION.

Mr. Edward Stephens, M. R. C. S., of Ilminster, writes: "On September 7th, I was sent for by a midwife to attend Mrs. C., who was flooding. On my arrival, the hemorrhage had stopped. On making an examination, the uterine sheath was not sufficiently dilated to be able to ascertain its contents. On passing my hand over the abdomen, I remarked to the midwife, how unusually circular it was. On the following afternoon, I was again hastily summoned, and found the woman had lost much blood. On making an examination, I found that, by a little manoeuvring, I could insert my hand into the uterus; and I vividly remember how astonished the midwife and Mrs. C., looked, when I informed them that it contained no child. In fact, Mrs. C., stoutly declared that she had

felt the child many times; and that, being the mother of thirteen children, all living, she ought not to have been mistaken. After administering a full dose of ergot, some uterine pains followed—soon expelling a mass, which, when collected, filled three ordinary-sized chamber-utensils. After this jelly-like mass had been expelled, she rapidly recovered, and made an uninterrupted recovery."—*British Medical Journal*.

THE USE OF THE MULLEIN PLANT IN THE TREATMENT OF PULMONARY CONSUMPTION.

F. J. B. Quinlan, M.D., M.R.I.A., F.K.Q.C.P., Physician to St. Vincent's Hospital, Dublin, observes that, "from time immemorial the *Verbascum Thapsus*, or Great Mullein has been a trusted popular remedy, in Ireland, for the treatment of phthisis." After relating seven cases where it proved of benefit, he concludes, "I have set down the above cases simply in the order in which they occurred, and with no view of supporting any preconceived idea. These cases, although too few to justify any general conclusion, appear to establish some useful facts. The mullein plant boiled in milk is liked by the patients; in watery effusion it is disagreeable, and the succus is still more so. The hot milk decoction causes a comfortable (what our Gallic neighbors call *pectorate*) sensation, and when once patients take it they experience a physiological want, and when the supply was once or twice interrupted, complained much in consequence. That it eases phthisical cough, there can be no doubt; in fact, some of the patients scarcely took their cough mixtures at all—an unmixed boon to phthisical sufferers with delicate stomachs. Its power of checking phthisical looseness of the bowels was very marked, and experiment proved that this was not merely due to the well known astringent properties of boiled milk. It also gave great relief to the dyspnoea. For phthisical night-sweats it is utterly useless; but these can be completely checked by the hypodermic use of, from the one-eightieth to one-fiftieth of a grain of the atropia sulphate; the smaller dose, if it will answer, being preferable, as the larger causes dryness of the pharynx, and interferes with ocular accommodation. In advanced cases, it does not prevent loss of weight, nor am I aware of anything that will, except koumiss. Dr. Carrick, in his interesting work on the koumiss treatment of Southern Russia (page 213) says: 'I have seen a consumptive invalid gain largely in weight, while the disease was making rapid progress in her lungs, and the evening temperature rarely fell below 101° Fahr. Until then, I considered that an increase of weight in phthisis pulmonalis was a proof of the arrest of the malady.' If koumiss possessed this power, mullein clearly does not; but unfortunately, as real koumiss can be made from the milk of the mare only, and as it does not bear traveling, the consumptive invalid must go at least to Samara, or Southern Russia. In pretubercular and early cases of pulmonary consumption, mullein appears to have a distinct weight-increasing power; and I have observed this in several private cases also. Having no weighings of this latter, however, makes this statement merely an expression of opinion. In early cases, the mullein milk appears to act very much in the same manner as cod-liver oil; and when we consider that it is at once cheap and palatable, it is certainly worth a trial. I

will continue the research by careful weighings of early cases; and will further endeavor to ascertain whether the addition of mullein to the cultivating solution prevents the propagation of the phthisical bacillus."—*British Medical Journal*.

MEDICAL NOTES AND NEWS.

A manufacturer of a patent medicine advertised for agents to undertake its sale, affirming that it would prove very profitable to the *undertaker*.

"The stomach is not a chemical laboratory, or a kitchen for cooking food, as Abernethy wisely remarked. Food should not be subjected to the ordeal of chemists, as the fashion is." *Dr. Squibb*.

Lord Chesterfield says in one of his letters to his son who was suffering from chronic rheumatism; "you will find both ass's and mare's milk enough in the south of France, where it was much drank when I was there. Guy Patin recommends to a patient to have no doctor but a horse; and no apothecary but an ass."

Turnipseed formulæ.—"The following," says Dr. Turnipseed "are some of my formula.

R.	Potass. bromid.....	℥ ijss.
	Quin. sulph.....	℥ ss.
	Morph. sulph.....	gr. ss.
	Tinct. hyoscyami.....	gtt. lxxx.
	Tinct. zingib.	
	Tinct. calamus.....	āā ℥ ss.
	Syr. pruni virg.....	℥ ij.
	Ess. frag. virg.....	℥ ss.
	Glycerine.....	q. s.
	Aquæ.....	q. s. ad. ℥ ij.
R.	Potass. bromid.....	℥ ijss.
	Quin. sulph.....	℥ ss.
	Morph. sulph.	
	Strychnia sulph.....	āā gr. ss.
	Chloral hyd.....	℥ ijss.
	Tinct. hyoscyami.....	gtt. lxxx.
	Tinct. zingib.	
	Tinct. calamus.....	āā ℥ ss.
	Syr. zingib.....	℥ ij.
	Ess. vanilla.....	℥ ss.
	Glycerine.....	q. s.
	Aquæ.....	q. s. ad. ℥ ij.

One will see at a glance the advantage which these formulæ possess over any yet published, in that the great number and variety of ingredients render them suitable to a great variety of diseases, while their mutual antagonism render it certain that the evil intentions or effects of one ingredient, will be met and overcome by the good intentions and effects of others.

"When womb, kidney, or bladder trouble exists, I have" says Dr. Turnipseed, "combined with the base of the formula first given fid. ext." etc., etc., * * "In fact, almost any of the medicines derived from the vegetable kingdom may be combined," and considering the great variety of "troubles" to which the womb, kidney and bladder are subject, we do not see

why all of them should not be added to the formula, always including the bromine and the ext. fid. etc. to constitute the base.

We have omitted to mention that Dr. Turnipseed resides in Columbia, S. C. and that he is the inventor of a syringe and a gunshot probe, both of which are quite as remarkable for the variety of purposes which they subserve as are the above formulæ.

Government Health Protection in France.—

Before entering upon the great works of canalization now under headway in France, the Minister of Commerce addressed a communication to the Academy requesting a report as to the best measures for protecting the health of the workmen employed upon the excavations. The report of the Academy shows the long-continued existence of malarial fevers in various parts of the country, and attributes the physical degeneracy of the population there found in great part to them. It is a notable fact that the appearance of these fevers is not necessarily associated with the neighborhood of miasmatic swamps.

Virgin soil, freshly turned, is equally productive of the deadly germs, and the sea coast furnishes even more infected districts than the interior.

Without entering, however, into a consideration of the origin and conditions of these fevers as set forth in the report, we will simply enumerate the proposed sanitary regulations for their avoidance:

1st. The excavation should be completed as the canal progresses. More than one point should not be attacked at a time. Work should not be commenced in advance, until that already begun is terminated.

2d. The workmen should preferably be chosen from the local population.

3d. Work should be suspended in seasons known to be dangerous (as in August and September), and in extreme hours of the morning and evening. The danger from night vapors is great in the level country and lowlands. Large fires should be built in the vicinity of the works during the night.

4th. The workmen should be housed during the night in the neighboring villages or cities upon elevated portions of the same, or if the vicinity of the sea permits it, upon rafts anchored some distance from the shore. It is a well established fact that malaria makes much less ravages among workmen who regain their lodgings at night, than among those who remain at the works.

5th. The fare of the workmen should be warm and substantial. Medicinal preventatives, such as arsenic, extract of nux vomica, sulphate of quinine, etc., have not given results which permit of their recommendation.

6th. The contractors should be obliged to remove the excavated soil promptly. In case of urgency the work should be for the time carried on at less infected points. Soil freshly turned should be brought under cultivation.—*Hydraulic and Sanitary Plumber*.

[We call the reader's especial attention to the 5th recommendation or statement of the Academy (French Academy of Medicine), since there is in this country a somewhat extensive popular belief that quinine may be used successfully as a preventative of intermittent fever; a belief, however, which has been challenged before by medical men, but perhaps not by so responsible and authoritative a body.—ED.]

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CLERGYMEN AS PRACTITIONERS.

There are a good many otherwise sensible people, who think themselves quite as capable of giving medical advice and of administering medicines as the Doctor. This remark applies especially to clergymen, who are very prone to append their certificate to nostrums, to give medical advice and medicines to their friends and parishioners, and in many other ways to assume responsibilities which properly only belong to medical men.

Recently a case of this kind has occurred in England which has brought the reverend gentleman into trouble. The Rev. John Henry Tims, vicar of the parish at West Malling, Kent, administered to Sarah Ann Wright, the young daughter of one of his parishioners, a teaspoonful of the oil of bitter almonds, which caused her death in about two hours.

The reverend gentleman has been arrested and examined before a coroner's jury, which after a full hearing of the case returned a verdict of manslaughter, although the jury declared that in its opinion the medicine was not administered with a criminal intent. He was committed for trial, under bail.

It is certainly a matter for regret that a clergyman, whose intentions were not only pure but actually humane, should be placed in the position of an enemy to law and to society; but then, he was a man of intelligence, and if he did not know the full extent of the responsibilities he was assuming, he should have known. He should have known that it required as much skill to minister to a body diseased as it did to minister to a mind diseased; and that if many years of special study and training were necessary in order to qualify him for the performance of the duties of a priest, an equal amount of study and training would be necessary to perform safely and successfully the duties of a physician.

Perhaps clergymen have peculiar temptations to this kind of interference, in the quasi paternal relations

which they sustain to their parishioners, and in the humane and charitable nature of their calling; but this will not justify the frequency with which some of them append their signatures to dangerous nostrums, whatever their intentions may be, if in so doing they mislead the public and plainly enough cause death, we cannot say that they do not deserve punishment. If a physician who is educated and regularly licensed to practice commits an inexcusable blunder, and a life or a limb is sacrificed in consequence, he is justly held liable in a civil action for damages; and if he is not licensed, a similar act renders him liable in both a civil and criminal suit. This is as it should be, and we see no reason why clergymen should claim or hope for exemption from the just restraints and penalties of these wholesome laws.

LECTURES.

CARCINOMATOUS DEGENERATION OF A LACERATED CERVIX.

A CLINICAL LECTURE, DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS.

BY

PROF. T. GAILLARD THOMAS, M.D.

This patient's name is Mrs. S. B., 33 years of age, born in the United States. She has been married 18 years, and has had seven children and two miscarriages. Her last child was born five years ago. Her present trouble began three years ago, but she has suffered most during the past year. Three times during the year, at intervals of three weeks, she has had attacks of cramps in the abdomen. Besides she has had constant pain in the pelvic region, and lately has suffered from pain in her head and palpitation of the heart, and has become excessively pallid. Her monthly periods have been very irregular, and usually she has lost very little blood, but at the last period the flow was profuse and for two weeks she has lost blood steadily. It seemed to her as if a gathering, something like a boil, would form in the uterus, and that then it would suddenly break and a profuse watery and bloody discharge would follow.

This then, is the history. The patient, whose last pregnancy was five years ago, has been suffering for the past year from symptoms which we are forced to trace to a very bad laceration of the cervix uteri. She has had attacks of very severe pain, which she styles as cramps or a uterine colic, consisting of very violent and severe pains coming on suddenly, and passing off and recurring again without any apparent cause. These pains she experienced three times during the past year, and at intervals of three weeks between them. The menstrual discharge, which was formerly very small in quantity, is now very large and watery, and for the past two weeks she has had a menorrhagia. It is this menstrual discharge which she thinks feels like an abscess breaking and emptying itself through the uterus. She also complains of pain in the lower part of the abdomen in front, and of palpitation of the heart, and headache, which, as well as her pallor, no doubt come from her recent great loss of blood. These latter symptoms, Gentlemen, point to something more than a simple laceration of the cervix. I refer to the recurrence of paroxysmal pains, and the recent great depletion in her general strength, shown by her pallor,

headache, palpitation, and profuse menstruation, and this too in a woman between thirty and forty years of age.

Now, this is what I found on examination. As my finger passed up the vagina and came against the cervix uteri, I found that the anterior lip was hard and resisting, and it felt to me as if it was brittle and would easily break off, though it would not really; then I felt of the posterior lip and found that it presented the same hard brittle feeling as the anterior. The cervix felt lacerated and gaping. On introducing a speculum and a uterine sound I found that the cavity of the uterus was no longer than it should be, and the only thing to be seen was this broad lacerated cervix covered over by granulations, giving it the appearance of an immense raspberry, and out of the cervix was pouring away red blood.

Now, what is this condition? I believe that it is not a carcinoma of the uterus which causes this hard, bleeding, granular surface, but a condition just on the border line between a carcinoma and an ordinary laceration of the cervix. After an ordinary laceration there is usually a mass of cicatricial tissue deposited in the cervix, but here there is more of this than there ought to be, and I should be willing to assert positively that if this case is not treated radically, within six months from now a true carcinoma will develop here. I could not conscientiously leave this case without treatment for six months, as I feel certain what the result would be. Sometimes three or four competent men are called in to give an opinion on just such a case, and two of them while admitting that it is just on the border line between a simple laceration and a carcinoma will advise to let it alone, while one perhaps says to let her return in six months and then examine into her condition again, and only one, with me, advises an immediate and radical operation; and I have found that if the patient goes on for six months without treatment, when she returns the involvement of the uterus is generally so great that the disease cannot be removed. Suppose, however, I am mistaken and the radical operation is not called for, yet if I perform this operation I do not think I would be likely to do more harm than would be done by leaving the cervix in its present condition, or by doing the operation for restoring it to its natural state.

If I should simply put the wire of a galvano-cautery about the neck of this uterus and cut it off, with the wire at a red heat, I think I might do this patient a good deal of good, and I think it might put a stop to the progress of the disease altogether, because it is now simple and limited in extent. Yet I think that even more than this ought to be done to make sure of eradicating all the diseased tissue, and this is the operation which I am talking about as the radical one.

The operation of cutting through the neck of the uterus with the thermo-cautery wire is an easy one, but it is objectionable for two reasons, 1st, because it is often difficult to get a battery that can be relied upon to work effectually when needed, and 2nd, though the cutting off of the cervix with a red hot wire may seem a safe operation as regards the danger of hæmorrhage, yet it is in fact very dangerous, and hæmorrhage does often follow even though a red heat has been used, and not a white heat, which is generally supposed to be the cause of the hæmorrhage. I have had a violent hæmorrhage follow where I was sure that the wire was maintained at a red heat all the time of the cutting.

I think a very much better operation is this radical one:—Put the patient on her side, and introduce a

large sized Sims' speculum, and then hook a tenaculum in the cervix and grasp it with a vulsellum forceps and pull it down as far as possible, and then with the sharp points of a pair of scissors snip or gnaw carefully through the vaginal mucous membrane and other tissues anterior to the neck of the cervix, and cut away till the bladder has been completely separated from the neck of the uterus. Then repeat the same process posteriorly till the connections between the uterus and rectum have been severed. Then a curved needle can be passed up and about the broad ligament on either side and each be encircled by a ligature, which is then to be tied and the ligament cut off next to the uterus, and thus the whole uterus will be released from any connection with the neighboring organs. The peritoneum may sometimes be accidentally cut, but this is not a serious trouble. The uterus being now loosened can be pulled down out of its sheath, and then the whole cervix can be cut away by an incision about the uterine neck directed from without inward and from below upward and surrounding the neck. By this means it will look as if nearly the whole uterus had been removed, and a pyramidal cavity will be left with its apex directed upwards and in the centre of the uterine canal. If the broad ligaments have been tied well there need not be much fear of hæmorrhage in this operation. Do not sew up the wound but leave it open to heal by granulation, and avoid the danger of septicæmia by frequent warm vaginal douches to keep the wound clean. The healing is generally admirable, and it is often so well done that you can scarcely tell that there has been any operation performed, except from the disappearance of the cervix. I have frequently shown such a case to eminent gynecologists after the process of healing was complete, and they have found it difficult to determine whether the condition they saw was simply a deformity of the parts, or whether an operation had been performed. Immediately after the operation, if you fear hæmorrhage, it is often well to put an astringent tampon in the vagina and leave it till the danger has passed.

Laceration of the cervix is a very common cause of carcinoma or epithelioma, so much so that some think that this disease never occurs in a woman who has never been pregnant. But this is not quite true, for I have known women who were positively virgins to have it. Yet I agree with them to this extent, that 95 out of every 100 cases of carcinoma will be found to have had at some time a laceration of the cervix which acts as an apparent cause, and a cervix that has been lacerated is very apt to take on a cancerous character.

You know, Gentlemen, the ratio of the occurrence of malignant disease in the different organs of the body, and that its most frequent seat is in the mammae, and second in the uterus, etc., etc., The reason of this tendency in these organs is, that there is a great deal of glandular tissue in both of them, and the cervix is the seat of very many small glands. So in performing the operation here for the removal of cervical tissue showing a tendency to malignancy, the further you pass up above the cervix, so as to take away a portion of the endometrium also, the more glands you will remove, and the few that remain will be very much less likely to take on a carcinomatous character.

A CASE OF CHRONIC LESIONS IN THE LUNGS, HEART AND KIDNEYS.

A CLINICAL LECTURE DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS,

BY

PROF. FRANCIS DELAFIELD, M. D.

The patient is a man 58 years of age. He says that except for an attack of rheumatism in 1867 he always enjoyed good health until about a year ago, and he was always able to work till then. At that time he noticed first that he was becoming very restless and uneasy, especially at night, and often upon going to bed he found that he could not lie down and quietly go to sleep, but would first have to get up and walk about the room for half an hour, and then on returning to bed he would sometimes be able to lie quiet and go to sleep; but sometimes he could not; and would have to get up again and repeat this expedient. Lying down made him feel oppressed for breath sometimes, and this difficulty has been growing worse from week to week until now he has to sit up most of the time when he sleeps. He also complains of a pain in the back of the neck, which is increased when he tries to lie down. He sometimes has peculiar feelings in the head, with a sensation as if he had a cold and was all stopped up about the forehead, and occasionally he experiences a feeling of faintness though he does not feel exactly dizzy. He has a slight cough that has not troubled him much. His appetite has not been very good of late, but he never is troubled with nausea or vomiting. Twice he has noticed that his feet were a little swollen, but they are not at present. When he noticed the swelling in his feet he also remarked that he had to pass his water more frequently than usual, and to do this he would often get up five or six times during the night.

Gentlemen, now that we have heard this man's history we come to the physical examination. As you look at him you observe in the first place that he is a good deal emaciated, though he says that he has only been sick for about a year; and there is a good deal of falling in not only above but also below the clavicles on both sides of the chest. There is visible a very distinct epigastric pulsation, and you can see the apex beat quite plainly. You observe too that he breathes with some effort, and with each inspiration he moves the ribs considerably, and the whole thorax rises and falls at each respiration to a much greater extent than ordinary. You can also see a distinct pulsation in the larger vessels of the neck, especially marked in the subclavians on both sides, but not noticeable in the carotids.

When I percuss his chest I get on both sides a resonance which is loud enough, but it has a little higher pitch and a slightly different quality than is natural. In other words it is the sort of resonance that you will get in a certain number of cases of emphysema.

On auscultation I get in front the ordinary changes in breathing over emphysematous lungs, that is, a feeble respiratory murmur with a prolongation of the expiratory sound, and this is especially marked on the right side of the chest.

Now, as you look at his chest from behind, you see that it is not symmetrical on the two sides, but the right side is larger and fuller than the left. Yet the vertebral column remains very nearly straight up and down in the median line.

On percussing his back you notice that on the left side I get a good enough pulmonary resonance, but the

quality is a little different from ordinary. On the right side however, I get dulness above a line at the level of the angle of the scapula, and below this I get complete flatness.

On applying my ear to his back over the left side of the chest I get a short but exaggerated pulmonary breathing. At about the middle of the scapula on the right side I get bronchial breathing, and over the lower portion of the same side I get complete absence of breathing. The voice sounds also cease at the angle of the scapula on the right, and below this point they cannot be heard at all. So much for the pulmonary signs.

Now as I place my hand over the region of the heart I find that it is beating too rapidly and also quite irregularly, and the contractions of the ventricles do not succeed each other in a regular rhythm, and in fact the whole cardiac action is quite irregular. This irregularity of action is even more marked in the radial pulse than over the heart itself. So there are probably some contractions of the ventricles that are strong enough to be felt over the region of the heart itself but not in the radial pulse. The heart is also evidently enlarged, and the apex can be felt beating a little to the left of the nipple. As I listen with the stethoscope I do not find any murmur, but at the apex I do not get the first sound of the heart as clear and loud and distinct as it should be. There is therefore no actual murmur here but there is not a natural first sound. When I listen at the base of the heart and compare the two sides of the sternum I find that both sounds of the heart are louder on the right side than on the left. These then make the physical signs of the lungs and the heart.

On examining the man's urine you observe that its color is about natural, and I find the specific gravity 1021. On adding nitric acid alone I get no change in its appearance. On boiling it alone, however, I get a slight cloudiness in the upper part of the tube where the heat was applied, which does not altogether disappear on the addition of a little nitric acid, though it does after a considerable amount has been added. The urine therefore may be said to contain a mere trace of albumen.

Now with the history that this man gives and the physical signs we have elicited, what is the trouble with him? "Pleurisy with effusion" you say. Yes, that is a part of the trouble, for he undoubtedly has an exudation into the pleural cavity on the right side which fills it half full and the lung is compressed in the space above its level. He has, too, a compensatory emphysema in both lungs. How long this condition has existed we do not know, but it may perhaps have been there for a year past. Another adds that "he has an hypertrophied heart." His heart is enlarged and this enlargement is probably due to hypertrophy and dilatation of the left ventricle both. But there is certainly something more the matter with this man's heart than a mere dilatation and hypertrophy of the left ventricle. Now what is it? "A valvular lesion without a murmur." Yes. You can be just as certain where a man gives such symptoms as this, that he has a valvular lesion without a murmur being present as when there is one. Now what is this lesion? "An aortic regurgitant." No, it is not that, for you will almost always get a murmur with this lesion. Neither is it an aortic insufficiency, nor a mitral regurgitation, for the murmur is very rarely absent in these. But what the man almost certainly has is a mitral stenosis. Whenever you find a heart acting as this does, and you learn that the patient's general health has depreciated

rapidly, and the first sound of the heart is heard only feebly, even if there is no murmur, you can be almost certain that you have to deal with a mitral stenosis. It is just barely possible that this lesion might be an aortic stenosis, but the probabilities are all in favor of its being a mitral stenosis, and with this is an accompanying hypertrophy and dilatation of the left ventricle.

We now come to the consideration of his kidneys, and this is a much more uncertain condition to determine. In this case the diagnosis lies between two possible conditions, namely, a chronic congestion of the kidneys and atrophied kidneys, and I cannot be certain which of these two he has. It is a mere balancing of probabilities. On the one hand, the specific gravity of the urine is rather high and its color is somewhat dark for the atrophied kidney, but, on the other hand, the fact of his getting up at night to pass his water and the increase in its quantity, at the same time that he has oedema of the feet, is more like a case of atrophied kidney than of chronic congestion; and, too, in a man of this age with a chronic emphysema and a cardiac lesion you are more apt to find atrophied kidneys. So though there is no certainty as to which is the true diagnosis here, yet if you had to bet on it, you would rather bet on its being a case of atrophied kidney.

We have found then that he has trouble with his heart, lungs, and kidneys, and now the question arises, what is the probable relation between these different affections and which was the first. I should suppose that the mitral stenosis had existed for a considerable time, but he experienced no marked trouble from it till last year, and the emphysema also has probably been present for a long while. After a time, however, the mitral stenosis became bad enough to give symptoms, and to cause pleurisy with effusion a year ago. But this I think is really more a hydrothorax than a pleurisy, and this dropsy is due to the venous congestion which has resulted from the lack of heart power to carry on the circulation. The lack of nutrition here is also that which we often get with heart lesions that are fairly marked and where there is congestion of the viscera.

Having decided upon his troubles, then the question comes up, what can we do to relieve him. We may, perhaps, do something to make him more comfortable and sleep better and digest his food better, but we can not change the condition of the organs affected by a chronic disease. I would be disposed to put him, in the first place, on the iodide of potassium and digitalis together, giving the former in doses of five grains, and the fluid extract of digitalis in five drop doses, for the purpose of rendering the heart's action more regular and forcible. That, I think, is probably the best plan of treatment for him.

BOOK REVIEWS.

A Treatise on Fractures; by Lewis A. Stimson, B. A., M. D., Professor of Surgical Pathology in the Medical Faculty of the University of the city of New York; Attending Surgeon to the Bellevue and Presbyterian Hospitals, New York; Member of the New York Surgical Society. With three hundred and sixty illustrations on wood. Published by Henry C. Lea's Son & Co. Philadelphia. 1883.

In the present treatise we suspect the author of having omitted a preface and the usual apology for writing a book, in order that readers and reviewers

may be induced to read the book and judge it on its merits, rather than on the skeleton of its purpose and arrangement usually outlined in a preface. Or perhaps he thought it savored too much of theory in a practical book to speculate in the preface on what was to be found in the contents. Seeing nothing in the form of a prologue we turned to the back of the book, thinking the usual order of things had been reversed and we would find at least an epilogue in which the *raison d'être* would be stated, but in vain.

Looking through the book casually the reader is at once impressed with the simplicity, though general excellence, of the illustrations.

No attempt seems to have been made to attain literary excellence, and in reading the book we at once relegated the author to the class of "plain blunt men." But after all, this method of simple narration of facts is perhaps better subservient to the general purpose of the book, its practical character, than any more elaborate one would be, and in these practical times of book writing padding is rather the author's bane than the blessing it used to be.

Had the general divisions of the book, the symptomatology, treatment, etc., been more clearly defined by conspicuous headings it would have rendered it more available for purposes of study and hasty reference.

It seems to us unfortunate that in practical treatises on fractures authors do not seem able to depart from the stereotyped method of describing appropriate dressings and treatment by which a conglomeration of the opinions of most eminent authorities are presented in a confusing panorama, so that the student fails to find in the various views expressed that clear cut definiteness of statement which would enable him to quickly grasp the features of the case under discussion, its indications, and the best means of meeting them. Perhaps we do not make ourselves clear; but why should not Stimson, for instance, or any author who ostensibly confines himself to the practical aspects of the subject, content himself with a statement of what he individually believes to be, from his experience, the best means of treating the fracture under consideration, without reproducing what may be better found in standard text books. Given a man of sufficient experience to warrant him to write a book on fractures, this would seem to us the only *practical* way to develop the subject, and we doubt not would be far more acceptable to the student and practitioner than the method in vogue.

Perhaps the subject of fractures admits of little originality. At any rate we find very little in the present volume, which, perhaps more tersely than most others, states the views of various authors, but fails to impress us as a book that is a valuable addition, least of all a necessity, to the libraries of those who have Hamilton, or even some other works we might mention, of less reputation.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, FEBRUARY 14, 1883.

The President, Dr. Shrady, presided. The minutes of the preceding meeting were read and approved.

Dr Gerster presented for a candidate a specimen of malignant

TUMOR OF LOWER JAW

which had been removed from a patient aged 57, a

native of Ireland, a farmer by occupation. The tumor had increased in size rapidly. It was circular in shape, one and a half inches in diameter, and ulcerated. There was no involvement of the general health, which had always been good. Three years before the appearance of this growth his family physician had removed an epithelial growth of the patient's lip, the wound from which healed kindly. There was no heart trouble, and operation was determined upon. The common carotid and internal jugular were ligatured, an incision made, and the tumor detached from the inferior maxilla, which was involved. The diseased portion of this bone was also removed, as well as the adjacent glands, and the wound washed with a solution of carbolic acid. There was considerable hæmorrhage, but the patient rallied well. There was much difficulty in inducing him to take nourishment, and beef and brandy were injected into the stomach through a tube. Sloughing of the wound took place, and before it was discovered the patient suffered a loss of fully a pint of blood. This was on the fifteenth day. He died on the twenty-fifth day after operation. Dr. Gerster thought the tumor removed had been originally a sub-maxillary lymphatic gland, which had been secondarily involved from the epitheloma of the lip removed three years before.

Dr. Watson presented a specimen of

ATRESIA OF THE PULMONARY ARTERY, WITH AN OPENING INTO THE VENTRI- CULAR SEPTUM.

The patient was 13 years old. He had been admitted to the Jersey City Hospital suffering from extreme cyanosis and coma, pupils dilated and insensible to light, temperature 100, pulse 120. No history of a previous attack could be obtained. He rallied from this, but had several subsequent attacks, preceded by severe headache and pain in the præcordial region, during one of which he died. The præcordial area of dulness was not increased. Two murmurs at the base and two at the apex of the heart were detected. On autopsy, the lungs were found to be deeply congested. The heart was abnormally large, the aortic valve atheromatous, and a condition of stenosis and atresia of the pulmonary artery, with opening into the ventricular septum. The left common carotid arose from the innominate. Dr. Watson thought the valvular lesions might have some relation to the obstruction of the pulmonary artery. He presented a second specimen of

COMPOUND FRACTURE OF TIBIA,

for which resection and ultimately amputation had been done. The patient was 26 years old. He had suffered an oblique fracture in the middle of the tibia, which had failed to unite, one fragment projecting through the soft tissues. He was admitted to the hospital August 26, 1882, and reduction under anæsthesia attempted, but in vain. The upper and lower segments were then sawn off, and the fractured ends placed in apposition and sutured, and a drainage tube introduced, all being done under strict antiseptic precautions. The wound healed readily and the patient left the hospital, and for the four succeeding months there is a complete break in the history. He then returned, and amputation had to be done, for progressive necrosis was taking place. The chief interest of the specimen was the practical question suggested, as to what should be done in such cases. If the contact of pus with the fragments could be avoided, union would probably take place. Shall we amputate or

exsect, and if the latter, the tibia alone, or the corresponding portion of fibula also?

Dr. Putnam Jacobi, inquired apropos of the first specimen if there had been no history of rheumatism. She thought it improbable that the stenosis of the pulmonary artery should have given rise to the valvular lesions.

In the second case presented by Dr. Watson the non-septic traumatic fever described by Dr. Watson in which the patient, though having a temperature of 103 or 104, is apparently well, eating and sleeping well, and walking about, Volkmann, had been the first to report.

Dr. Gerster presented a specimen showing lesions of ACUTE CENTRAL OSTEO-MYELITIS OF FEMUR,

taken from a child 10 years old. Her family physician had supposed it a case of cerebro-spinal meningitis and many of the symptoms were those of meningitis. The child had high fever, convulsions and coma. At the end of the second week the case had been brought to him and he had diagnosed the condition afterwards proven to exist. Subsequently a large abscess of the thigh developed, the integument was thickened and œdematous. Incision was made and pus evacuated and child began at once to improve, but contraction of the knee joint took place finally to an angle of 25°. Effusion into the joint could not be made out. The contraction was thought to be due to disease of the cheesy matter of the epiphyses and in November an incision was made to the centre of the epiphyses, the lacunæ was reached and a large amount of necrosed bone scraped away. In the specimen it was seen that the normal layer of the femur was covered with a new growth of bone. I expected to see the child improve after this operation but the contraction persisted, the abdominal glands became enlarged, albumen appeared in the urine and it was thought best to amputate. This was accordingly done, the joint did not contain any inflammatory effusion but was filled with clear synovial fluid. There was perforation and communication of the cheesy matter of the condyle with the joint. It was suggested before amputation to overcome the contraction by stretching, had this been attempted, as the sequel proved, acute inflammation of the joint would have been set up. The external condyle was the original seat of the disease. There was a condition of osteo-mylitis of the condyle and chronic periostitis of the entire shaft of the bone.

Dr. Gerster also presented specimens of VENEREAL GROWTHS

removed from the anus of a patient æt. 32, who gave no history of specific disease. They were venereal warts of large size and occupied a semilunar space on each side of the anus leaving the median line free, which was an unusual way of developing. Their origin was doubtful. Dr. Gerster had seen similar growths removed from a patient at Mt. Sinai Hospital, by the galvano-cautery which recurred three times and had finally to be removed by a severe cutting operation. In view of this he had given his patient the best security against recurrence by early and thorough excision.

Dr. White inquired as to how the child operated upon was now progressing. Dr. Gerster replied that she was doing very well. He had not attempted primary union but had left the wound open and it was now cicatrizing; the temperature had not risen above 100. He recalled three cases of osteo-mylitis which

had been mistaken for some systemic disease as typhoid fever and in this case cerebro-spinal meningitis, and this enforced the necessity for making examinations thorough. The physician should not be content with examining the heart and lungs, but should examine the legs as well.

Dr. Putnam Jacobi, called to mind a case of osteomyelitis she had met with in dispensary practice, in which unfortunately the opening of the abscess had been delayed too long and the case had terminated fatally.

Dr. Ferguson presented a specimen of

DISSECTING ANEURISM OF THE ARCH OF THE AORTA.

The patient was admitted to the hospital in an unconscious condition. Subsequently it was ascertained that he had had a similar attack ten years before, remaining unconscious two days and being ill six weeks, when he recovered, and had been well up to this attack.

The urine contained albumen, and hyaline and granular casts. After death the lungs were found to be markedly oedematous, the vessels of the brain atheromatous, the arch of the aorta ascendens was dilated and the outer and middle coats were slit.

Dr. ——— presented specimens of

CYST OF TESTICLE, PERICARDITIS, DILATATION OF HEART PNEUMONIA AND PLEURISY.

The organs showing these lesions were removed from a patient *æt.* 40 who had been in the U. S. Army and well up to 1876, when, after a strain, he developed a swelling in region of left testicle. He was admitted to the hospital in Dec. 1882, when he was suffering from general dropsy. The heart was hypertrophied, there was fluid in both pleural cavities, extreme dyspnoea and an oblong swelling of left testicle. When placed under the influence of rest and digitalis he improved somewhat. On a thorough examination Jan. 6, I found the liver extending 3 inches below the free border of the ribs, there was bronchophony, and bronchial resonance, a slight systolic murmur and marked reduplication of the first sound of the heart. There being no considerable valvular murmurs, disease of the cardiac muscles was suspected. Aspiration was indicated and I drew off 23 ozs. of clear serum from the left side, natural breathing being then restored. I then drew off 13 ozs. of fluid from the right side when by an error of an orderly the aspirator was interfered with and air entered the pleural sac. The patient died 24 hours afterward.

On autopsy the brain was found to be normal. On opening the thorax air escaped from the right pleura the right lung had completely collapsed, the left lung showed the lesions of recent pleurisy and commencing pneumonia of lower lobe and old adhesions over upper lobe. The heart was dilated, the pericardium and endocardium markedly thickened, valves normal, aorta atheromatous, liver enlarged and congested, kidneys normal but imbedded in a thick mass of fibrous tissue separated from the body of the organ by a cheesy mass, the tumor of the testicle proved to be a cyst containing bloody fluid, the testicle was atrophied to half the size of its fellow. Microscopic examination of the muscular fibres of the heart showed a marked tendency to long striation, and on the right side commencing fatty degeneration.

Dr. Gerster inquired as to the nature of the symptoms developed by the entrance of air to the pleural sac, he asked because it had been proven that in a healthy person this accident was not necessarily fatal, and in a recent case a surgeon, in removing a tumor of the sternum, had opened both pleural sacs without a fatal result. Dr. ——— replied that the symptoms were those of oedema of the lungs and collapse.

Dr. Putnam Jacobi presented a specimen of sup-
posed

"ULCERATIVE ENDOCARDITIS."

Patient, *æt.* 13. She had only seen once during life on the twenty-first day of his illness. He had friction sound over base of left lung, bronchial breathing, dyspnoea, pain over præcardium; temperature 102, pulse 120, respiration 40, face pallid, spleen and liver enlarged, systolic murmur at apex. On careful examination no fluid was found in pericardium. Did this child have an intermittent fever with a pneumonia complicating it, or was it acute pericarditis with pleuro-pneumonia? Fifteen hours after examination alluded to respirations went up to 60, and pericardial effusion was considerable; it must have set in soon after examination. Child died comatose 2½ days later.

At autopsy a considerable amount of fluid was found in both pleural cavities; internal surface of pericardium presented no fibrinous exudation while the external surface did. There were points of lobar pneumonia, the heart showed endocarditis of right and left ventricles, though it was difficult to distinguish how recent this might have been. The mitral valves were much thickened, the pleura was adherent to the pericardium, the kidneys were abnormally large, the urine had been examined with negative results, the cause of death was arrest of the heart from the pressure of the effusion. The questions suggested by Dr. Jacobi were—Was it ulcerative endocarditis? If the pericarditis depended upon rheumatism would not the administration of the salicylate of soda have been appropriate treatment?

Dr. Beverly Robinson presented a specimen showing

"TUBERCULAR DISEASE OF THE LARYNX."

The patient gave no specific history and no history of hereditary phthisis. Five years before admission to St. Luke's had begun to fail in health. At time of admission laryngeal obstruction and dyspnoea was severe. Tracheotomy was had recourse to but patient succumbed. Dr. Ferguson had kindly made the pathological and microscopical examination and found the lungs and larynx the seat of tubercular disease. Dr. Robinson had before presented two cases having all the symptoms of tubercular laryngitis. He thought it a comparatively infrequent disease. Some distinguished gentlemen affirmed that they could cure laryngeal phthisis, but such curable cases he did not accept as tubercular. Tracheotomy should be done early as it gave rest to the larynx, which was the first indication to be met.

SELECTIONS FROM JOURNALS.

THE VALUE OF GRADUATED PRESSURE IN THE TREATMENT OF DISEASES OF THE VAGINA, UTERUS, OVARIES AND OTHER APPENDAGES. BY NATHAN BOZEMAN, M. D.

The following is a summary of the conclusions arrived at by Dr. Bozeman in an interesting paper on the above subject published in the *Atlanta Medical Register*.

1. That cicatricial contractions of the vagina (Kolpostenosis) and fixation of the uterus by pelvic exudations and adhesions following protracted labor constitute the prime and often insurmountable obstacles to the cure of urinary and fecal fistules, and also of displacements of the uterus and ovaries.

2. That previous to the year 1855, notwithstanding the fact that unopposed or passive vaginal dilatation by the pubo-sacral or univalve-acting speculum in the knee-elbow and exaggerated knee-elbow positions had been for nearly a quarter of a century thoroughly understood in Europe, and in this country, and some success had been reached in the closure of simple and small fistules, little or no attention had been given to the stretching treatment of vaginal contractions and pelvic adhesions as the real obstacles to vaginal dilatation and the restoring of uterine mobility, further than to divide simple cicatricial bridges as they happened to appear in the way of immediate exposure of co-existing fistules.

3. That during the year above indicated graduated vaginal and uterine pressure with pieces of sponge compressed in oil-silk bags of graded sizes in the form of vulvo-vaginal and intra-vaginal dilators, was first associated with immediate division of cicatricial bands as a systematic mode of gradual preparatory treatment; and that it was done with the idea, not only of overcoming such obstacles in and around the vagina as prevented exposure of the co-existing fistule, but of carrying vaginal dilatation and uterine elevation beyond the limits of cicatricial resiliency and fibro-pelvic restraint.

4. That with this forward step in the utilization of graduated pressure, together with the aid afforded to the closure of large fistulous openings by drawing down the uterus and fixing it with the button suture in the knee-elbow and knee-chest positions, unprecedented success was attained with preservation of the functions of the organs involved, in an average proportion of complicated cases including retroflexion of the uterus with fixation and with displacement of the ovaries.

5. That the pubo-sacral or univalve acting speculum with assistant always to hold it, while adapted in simple cases to the elevation and support of the perineo-rectal wall in all the anterior positions of the patient, it failed in a large proportion of cases with relaxed vaginal walls because it exerted no controlling influence over the vesico-vaginal septum and the lateral walls when they were the seat of outstretched cicatricial bands. For the latter reason the instrument did not favor the highest aims of graduated vaginal and uterine pressure in the procedure of gradual preparatory treatment with incisions, rendered kolpoplekosis and kolpoplekosis necessary expedients sometimes for the relief of ordinary and fecal fistules, the shutting up of the vagina entirely or the folding in of its walls separately.

6. That the intra-ischial or bilateral acting speculum, self-acting and self-sustaining, requiring no assistant to hold it (1867), was found not only to dilate the

vulva to the fullest extent and give steadiness to all the walls of the vagina, but to develop hitherto concealed cicatricial contractions and far-reaching flattened inodular masses, which, with the univalve speculum, had before passed unnoticed. For these reasons the highest limit of success was attained, through incisions and graduated vaginal and uterine pressure as preparatory treatment, which is essential to absolute cure of urinary and fecal fistules, and the avoidance of kolpoplekosis and kolpoplekosis.

That with the intra-ischial or bilateral-acting speculum, columnning the vagina with dry cotton for the relief of prolapsus, and ante-retro-displacements of the uterus, simple or complicated with adhesions and prolapse of the ovaries was the natural outgrowth of columnning the same organ with sponges in oil silk bags, as pointed out in connection with cicatricial contractions and that the system as now employed can only be regarded as a modification or extension of sponge columnning under another form of graduated pressure.

By graduated pressure thus made to the walls of the vagina and to the uterus and its appendages the large class of cases indicated can be treated on rational and scientific principles and it is now possible with it to reduce to very exceptional cases the necessity of bloody operations for superficial lacerations of the cervix uteri, or for prolapse of the anterior and posterior walls of the vagina.

8. That, however successful columnning the vagina may be in relieving the class of cases indicated, it is still necessary in a large proportion of them to maintain the cure for a time by strengthening the counter-acting forces residing in the vaginal walls and uterine ligaments with some mechanical appliance introduced into the vagina, either manageable or not by the patient. In short the support of the uterus and ovaries in an elevated position after elongation of the walls of the vagina requires Hodge's pessary or the elastic vaginal support before described (1878). When the preparatory treatment is properly carried out, this latter support fulfills all the indications better than the former or any other instrument hitherto devised, in a large proportion of cases, it being entirely managed by the patient herself.

9. That distortions of the vagina due to prolapsus and ante- and retro-displacements of the uterus, associated or not with prolapse of the ovaries as results of endometritis, metritis or peri-metritis or all three together, coupled with plastic exudation and adhesions, cannot be overcome by cutting operations upon the infra-vaginal portion of the cervix uteri, or either, or both of the walls of the vagina, or all three structures together, as first insisted upon in 1878, and that such operations have no surgical importance in the mechanics of the pelvic organs; the distortions of the vagina remaining the same after their performance as before.

10. That lacerations of the cervix uteri within the last few years, as factors concerned in the causation of neurological complications and malignant developments, have been greatly over-estimated and that the most of the schematic illustrations of these so-called lesions to be found in the gynæcological literature of the day, whether transversely unilateral or bi-lateral or transversely and antero-posteriorly trilateral or quadrilateral, are over drawn and have no foundation in a true study of uterine pathology.

11. That the recognition of the frequent existence of prolapse of the ovaries in relationship with ante- and retro-displacements of the uterus with and without fixation was a most important step as regards scientific

treatment (1874), and that it is now only by a clear understanding of this relationship of the parts in such abnormal conditions further advances are to be made in the line of successful practice.

12. That the disposition of writers to misapply the designating term knee-chest position of the exaggerated knee-elbow (genu-cephalic or knee-head) position is unwarranted, and opposed to true scientific progress in the treatment of the complications of urinary and fecal fistules, an important class of cases which are the most difficult to manage and the least understood by the profession at large than any other within the whole range of vaginal surgery.

SIR WILLIAM GULL ON SCIENTIFIC MEDICINE IN GENERAL PRACTICE.

In the course of an Address delivered on January 17th, before the Metropolitan Counties Branch of the British Medical Association, on the subject of the Collective Investigation of Disease, Sir W. Gull, observed. "It will be admitted that, had we leisure, proper means at our disposal, and from previous training a fitness for exact observation, we should find in general practice one of the most valuable fields of pathology, as here and here only we have before us the earliest signs of departure from health, and the only opportunities for tracing the course of a disease from its beginning to its end. Having passed many years in hospital and private practice, I have come to see that experience gained in the latter is necessary for the correction of that acquired in the former, especially as helping towards a truer pathology. It will perhaps, and naturally, be objected, that it is almost impossible to organise for any useful purpose the labors of men already overburdened by the cares and fatigue of practice; and that there is neither time nor fitness for delicate inquiries on their part. Admitting that this objection is valid, it may be urged in reply, that it need not be insuperable. It cannot be denied that when we see the meaning of the apparent trifles which in practice would otherwise oppress and worry us, our burden is thereby much lightened, and that nothing could encourage us more than to feel that even one daily observation recorded was adding to our general store of knowledge, and making the path of practice more easy. There is no tonic to the mind greater than the sense of the work done; and our journey is likely to be made shorter, as it certainly will be easier, if the way is illuminated. We, indeed, owe it to those members of our profession, who are admittedly overwhelmed by the apparently senseless details of their work, to promote a movement like collective investigation, the object of which is to bring order into chaos, and to help them to stamp a scientific value upon facts hitherto only burdensome. If we compare the unflagging interest of any pursuit where the aim is high and clear with the tediousness and wearisomeness felt when working in the dark, we shall readily admit that we are actually lightening the burdens of practice by thus adding to them, and by giving some portion of them a sense and meaning. It is the spirit of a man which enables him to do his work lightly and cheerfully, and he will certainly be helped in this by a combination with fellow-workers on the same subject."—*British Medical Journal*.

A CLINICAL LECTURE ON FIXATION OF MOVABLE KIDNEY. Delivered at the New York Hospital. By ROBERT F. WEIR., M. D.

GENTLEMEN: To-day I have something to show you which is out of the ordinary course, and which will present some notable points of interest. It is a condition which is not often seen, namely, a kidney that has been dislocated from its proper position, and has become so loosely attached that it now presses upon the neighboring abdominal organs in such a way as to interfere with their functions, and produce constant pain of such severity that the patient has been unable to perform the ordinary duties of life with any comfort, and has hence been obliged to give up work. The patient is a woman, thirty-three years of age, married, who has had several children, the last being now eleven years old. About five years since she was caught between two cars which were being pushed together by hand, so that they did not come together with very great force, and she then received quite a severe concussion of the abdomen in an antero-posterior direction. She was confined to her bed for only a brief period, and then resumed her ordinary work. But about five weeks after getting about again she began to complain of pain in the right side of the abdomen, which also ran down the thigh, and up toward the shoulders. Not long after this pain commenced, she, or the physician who attended her, she is not sure which, noticed a tumor appearing on the right side of the abdomen, and this seemed to be located at about the seat of her pain, which was increased by handling the tumor. Occasionally hæmaturia would result for a while, and sometimes a uterine hæmorrhage would come on after an attack of severe pain. She has also had repeated attacks of vomiting and nausea. She has tried a variety of things to relieve herself, which have not succeeded, and, therefore, she has now come here a distance of over one hundred miles in order to seek a means of permanent relief.

This tumor of which she complains is a dislocated kidney, and it is a condition of affairs which is shown by statistics derived from autopsies, by those who are constantly making them, to exist in about one out of every seven hundred and fifty cases. But I think that the proportion of cases in which it occurs is really greater, for I myself have seen four such cases within the last year and a half. One very remarkable patient came in here some time since, with a movable kidney on the left side of the abdomen, and she said that some time previously a surgeon had tried to fix this lump to the abdominal wall by running a seton through it, and the only result caused by this operation was a little bloody urine. This kidney was subsequently removed in New Orleans, by Dr. Snyth, by an incision through the anterior abdominal walls. It is a curious fact that these floating kidneys are more frequently found on the right side than on the left, and they occur mostly in women. I have copied a few figures from the statistics compiled by Landau,* who has given a good deal of attention to this subject. Out of 314 cases of movable kidney, he found 273 of them were in women, and of these, 152 were situated on the right side of the abdomen. This is not strange, for there are anatomical reasons for this increased frequency of the abnormality on the right side. One of the more important of these is that the renal vessels upon the right side are much longer than those on the left, and hence there is greater mobility possible on this side; and, again, the left kidney, besides having

* "Die Wanderniere der Frauen," 1881.

shorter vessels to sustain it, is pressed upon and held more snugly in position by the pancreas. Besides these, there are other lesser reasons which I have not now time to mention. Pregnancy, by elongating the mesocolon, and tight lacing have also been assigned as causes. It has been lately demonstrated that, aside from the pain caused by the pressure of the kidney on adjacent parts, the stretching and twisting, or kinking, of the long ureter will often cause a congestion and a damming up of the urine behind the point of obstruction, resulting in unpleasant symptoms. Some experiments of Kehrer, however, throw some doubt on this. There is another symptom of some value to us because of its medical aspect in some cases. From the pressure or dragging of the kidney upon the middle portion of the duodenum, certain obstinate dyspeptic symptoms and nausea or vomiting sometimes occur.

To relieve this condition of a displaced kidney, the first thing naturally thought of is to replace it, and this can easily be done by manipulation and pressure, the patient being in a recumbent position, and usually the kidney slips back into place with little or no pain, but in the present case considerable pain is then experienced. But the kidney can not easily be held *in situ*. A rubber bandage about the waist, or a large pad of adhesive plaster secured by a strap of the same material or a specially constructed truss, is, however, sometimes successful. In the severer forms of this disorder, where these palliative means have failed, the question arises, Should this condition be relieved surgically? and, if so, then how can it be best treated?

Of late years a great deal has been said and written about the surgery of the kidney, and statistics of quite numerous operations have now been gathered. It has been shown that the mortality from nephrectomies is nearly fifty per cent. From a list of 100 cases recently presented by Dr. Harris, of Philadelphia, and from other sources, I find there have been eighteen nephrectomies, or extirpations of the kidney, performed for the relief of symptoms due to such displaced kidneys as this. Of these, two extirpations were made by the lumbar incision, and both patients recovered; sixteen were extracted by the abdominal incision, and seven recovered, while nine died. So the results of this operation are not very encouraging. Besides the danger from the operation directly, there is that incurred by the fact that in the majority of cases you are taking away a healthy kidney, which is only doing damage by its abnormal pressure, and hence an additional amount of work is suddenly thrown upon the remaining kidney. Again, you may, in your nephrectomy, be removing the only source for the elimination of urine. For in one case of operation of nephrectomy recently performed in this city, at the autopsy it was found that the patient had had only one kidney, and in another case, where a diseased kidney was removed, the remaining one existed only as a small cyst, the relics of a previous disease. This operation of nephrectomy is performed not only for displaced kidneys, but more frequently and justly for diseases of the kidneys, such as pyelo-hydronephritis, renal calculi, neoplasms, etc.

But only very recently in Berlin the question of the surgical treatment of a movable kidney has taken a different aspect. It is, according to Hahn, whether you can not relieve the patient by a safer operation than nephrectomy, namely, by cutting down in the loin upon the kidney, thereby avoiding the opening of the peritonæum, and, after reaching the capsule of the kidney, attaching its fatty and fibrous layers by sutures to the edges of the incision, and thus to hold or anchor the kidney in a new position, a little lower, perhaps,

than normal, which will relieve the previous trouble; and this, too, by a comparatively harmless operation. This region is also selected for the incision because it is the safest one for the removal of the kidney, should it, in the course of the exploration, be found to be advisable. But, *en passant*, let me add that the lumbar incision for nephrectomy has one serious disadvantage, which is that you can not by it determine the existence of the other kidney. This can readily be done by the abdominal incision. What we yet need is a method to separate the secretion of one kidney from its fellow, and thus determine its condition. And in this connection I take pleasure in calling your attention to Dr. Sands's device of putting the hand into the rectum and pressing with two or three fingers over the region of one ureter, after emptying and washing out the bladder, and then collecting and examining the urine, presumably from the other kidney. There is yet another simpler plan which may be tried. You remember in the operation for amputation at the hip joint last week I used Davy's rod for pressing upon the common iliac artery to control the hæmorrhage. A similar instrument, with a larger flattened bulb at its extremity, might be employed for compressing the ureters. Both methods are, however, somewhat blind, as one can not be certain of recognizing the ureter, even by the fingers.

Another objection which has been offered to the major operation is, even if you remove one of the kidneys and the other is left still sound, are you not, as a consequence of the operation, exposing the patient to additional risks to which she should not otherwise be exposed? For when only one kidney is left to do all the work, there is danger of its suffering damage thereby. Thus, out of fourteen cases of solitary kidney which have been examined by Rayer and Mosler, calculi were found in the kidney in nine instances, and in seven of these death was caused by reason of these calculi. From interference with the circulation there is sometimes an increase in the amount of phosphates excreted, and these are liable to form stones, which may in cases of single kidney ultimately kill the patient.

In the *Centralblatt für Chirurgie*, of July 23, 1881, and July 22, 1882, there are reported five cases of fixation, or anchoring of the kidney, three of which were performed by Hahn and one each by Esmarch and Küster. In one of these cases there was a displacement of both kidneys, and two operations were resorted to, one four months subsequent to the other, and five months after the second one the patient was exhibited to the German Congress, cured. In the second case, great relief followed the operation, and in the third case the patient passed from under observation. In the two latter cases of Esmarch and Küster the relief was great, but not complete. Though this operation has not been fully tested, yet I feel encouraged to attempt it, with good hopes of success, in the present case, rather than recommend or attempt nephrectomy.

I propose to cut along the border of the quadratus lumborum muscle, not going too close to the twelfth rib, to avoid the pleura, as Holl directs, and divide all the tissues down to the mass of fat which should surround the kidney, and then stitch this to the edges of the wound, and so secure the kidney in a permanent position if possible. I will then leave the wound open and let it fill up with granulations, and finally cicatricial tissues will form in sufficient quantities to close the opening and support the kidney.

In this operation I shall use strictly antiseptic precautions throughout. For the spray, however, I will

use the bichloride of mercury solution instead of carbolic acid, of the strength, say, of four grains of the bichloride to the pint. Under the spray the operation is comparatively safe, and although by mistake the peritonæum is opened slightly every now and then, yet I do not think this of much importance if proper care is taken to keep the air about it pure, for in these accidents the gravity of the operation is, I think, not very much increased. Before proceeding to the operation, let me demonstrate the case to you.

As the patient's abdomen is exposed, you can see the manœuvre employed to cause the displacement to appear. I crowd the ribs inward, and the kidney is forced downward and toward the median line, and you can see its outline as it is grasped between the fingers. Its shape is distinct, of the size of a normal kidney, and it is felt lying with its long diameter across the right side of the abdomen, at about the level of the umbilicus, with its hilum looking upward; slight upward pressure causes it to slip into place.

Operation.—[The patient was turned over on her chest, with her face down, so that the right side of her back was most exposed, and over this the spray was kept playing. The back was then sponged off with a bichloride solution, and, after marking off a point three inches from the spinal column, Dr. Weir made an incision with a scalpel, passing vertically through this point and along the outer border of the quadratus lumborum muscle and extending from just below the lower border of the twelfth rib downward to the crest of the ilium. The first cut passed through the integument and subcutaneous areolar tissue and fat, and then by lighter incisions the sheath of the muscle was speedily exposed and it and the superstructures were divided on a director until the region of the kidney was reached. A few bleeding vessel were meanwhile secured by forcipressure forceps or torsion, and the parts kept clean by frequent sponging. The hæmorrhage was insignificant in amount. After all the intervening structures had been divided, the edges of the wound were held apart by retractors, and, while the operator introduced his fingers to explore the cavity, the kidney was pushed into place by the hand of an assistant pressing upward through the anterior abdominal wall. By this manipulation the lower border of the kidney was first grasped, and then it was turned so as to expose the long diameter of the organ through the long diameter of the wound, and thus it was made visible to all in the room. Its mobility up and down amounted to nearly four inches. A portion of the capsule was next seized with the dressing-forceps, and held fast, while a needle armed with a piece of carbolized catgut suture was passed through it and the areolar or fatty tissue investing the kidney, and then through the integument and deeper tissues near the edge of the wound, and the two parts were drawn tightly together and held in coaptation. Another similar suture was placed at about a distance of three-fourths of an inch from the first, and so the fat capsule was united, by six or eight sutures, to the edges of the wound on all sides. But before all the sutures were passed, a drainage tube was inserted deeply into the lowest portion of the wound and secured there, and the redundant tissue investing the capsule was trimmed off by scissors, so that the body of the kidney might be held low down toward the crest of the ilium and snugly against the mouth of the wound. After all the sutures had been secured and the parts cleansed, a complete impermeable dressing of bichloride gauze, Macintosh, and bandages, was applied, without closing the wound, which was intended should be closed by granulation tissue, and it

was hoped that a sufficient amount of inflammation would ensue to throw out plastic material in such quantity as to ultimately hold the kidney securely in its new position. The operation and the dressing were completed in thirty minutes after the first incision was made.]

NOTE.—The patient did well. The wound closed in five weeks; and at this date, January 26, 1883, she is much improved in condition. The kidney is fixed in its new position, and she only has some hyperæsthesia along the course of the ilio-hypogastric nerve, due to damage done at the operation.]—*New York Med. Jour.*

MEDICAL NOTES AND NEWS.

The Frontiers of Madness.—Such is the title of an interesting lecture recently delivered by Dr. Ball in his course at the Paris Faculty of Medicine. The generally received opinion that folly and reason are separated by a strictly drawn mathematical line is, according to Dr. Ball, quite erroneous. There is a broad frontier, he says, between sanity and insanity, which is peopled by millions of inhabitants. Damaspis, in Horace, laid down the doctrine that all men are mad—"insanus et tu, stultique prope omnes." Dr. Ball, without going quite so far as this, holds that the number of persons perfectly reasonable on all points throughout the entire period of their existence form but a minority of mankind. The world abounds with people, he tells us, whom a strict scientific diagnosis would condemn as mad, or more or less "touched"; yet at no time of their life would it be permissible to put them under restraint. Such people are to be seen occupying honorably and successfully every position in life and society; we brush against them when we take our daily walks abroad; we see them in the mirror which reflects ourselves.

Dr. Ball having stated the thesis of his discourse, proceeds to a classification of these "sane madmen," and assigns the first place "in the order of merit" (from what point of view he does not specify) to those who suffer from unreasonable and in most cases irresistible impulses.—Naturally enough, the lecturer referred to the case of Dr. Johnson and the curious impulse which prompted him to touch each post as he walked along the streets—an impulse so strong that if he accidentally passed one by without the usual tribute of a touch, he felt irresistibly compelled to return and repair the omission. The overpowering impulse to laugh on occasions of peculiar solemnity is one which even the most serious persons have experienced. A still more morbid impulse is that which sometimes urges pious people to indulge in blasphemous or profane language. A great English divine, Bishop Butler, was tormented all his life long by this temptation, which he only mastered by strong and sustained efforts of the will. The impulse sometimes assumes a suicidal form.

Dr. Ball was recently consulted by a young man who was engaged to be married but who found it impossible to visit his intended bride because it would involve a journey of some length in a railway carriage, and he could never enter one without feeling a desire to jump out as soon as the train was in motion. He was advised to accustom himself gradually to this mode of travelling by taking short journeys on the suburban line, but he could never get beyond Auteuil: there he had to leave the carriage for fear of accident. Homicidal impulse is likewise met with. Thouviot's case is one

of the oftenest quoted. For years this unpleasant person was tortured with a burning desire to kill some woman or other, but he never felt the slightest wish to take the life of a man. He battled with the impulse for years, but at length it got the better of him. One day he murdered a young girl, a perfect stranger to him, whom unfortunate chance threw in his way in the kitchen of a restaurant. Dr. Ball was consulted some time ago by a painter of considerable talent who was a prey to these murderous impulses. He had married early in life, his family was large and his cares and anxieties large in proportion. At about eight-and-thirty, without physical ailment of any kind or any especially unfavorable turn in his affairs, his mind began to be affected. If he saw a mirror he experienced a desire to smash it; near a window he felt a temptation to jump out; he never got a bank-note in his hand that he did not feel inclined to tear it in pieces. These morbid promptings presently assumed a more formidable shape: he began to be assailed with a temptation to strangle his children. His little daughter was dying of croup, and he spent night after night by her bedside nursing her with the utmost tenderness. "Yet," said he to the physician, "at the moment when I was praying, with tears in my eyes, that the child's life might be spared, I was tormented with a horrible desire to take her out of the cradle and throw her into the fire." "Even now," he added, "as I speak to you I feel a most intense desire to strangle you; but I check myself." The doctor never saw this patient again; a circumstance which he has perhaps no reason to regret, for as he was a man of powerful build he would have been an exceedingly "ugly customer" had his sanguinary impulses proved beyond his control. But up to that time, as the doctor remarks, he had kept them successfully in check. His nearest friends did not even suspect that he was subject to them. He fulfilled all the duties of life in a correct and exemplary manner. No doctor could have certified to his being insane. Yet assuredly he was on the "borderland" of insanity.

The Spirit of the Age.—Mr. Quinn of this city, apparently encouraged by the recent vote of the State Medical Society, has already introduced in the Assembly a bill allowing everybody in the State to practice medicine. Meanwhile the Society aforesaid with "a narrow-minded bigotry," instructs a committee to present a bill to the Legislature, regulating and throwing additional safe-guards about the practice of medicine.

Tight Lacing.—Mr. Richard A. Proctor, the well-known lecturer on astronomy, once tried the experiment of wearing a corset, and thus describes the result: "When the subject of corset wearing was under discussion in the pages of *The English Mechanic*, I was struck," he says, "with the apparent weight of evidence in favor of tight lacing. I was in particular struck by the evidence of some as to its use in reducing corpulence. I was corpulent. I also was disposed, as I am still, to take an interest in scientific experiment. I thought I would give this matter a fair trial. I read all the instructions, carefully followed them, and varied the time of applying pressure with that 'perfectly stiff busk' about which correspondents were so enthusiastic. I was foolish enough to try the thing for a matter of four weeks. Then I laughed at myself as a

hopeless idiot, and determined to give up the attempt to reduce by artificial means that superabundance of fat on which only starvation and much exercise, or the air of America, has ever had any real reducing influence. But I was reckoning without my host. As the Chinese lady suffers, I am told, when her feet-bindings are taking off, and as the flat-head baby howls when his head-boards are removed, so for a while was it with me. I found myself manifestly better in stays. I laughed at myself no longer. I was too angry with myself to laugh. I would as soon have condemned myself to using crutches all the time, as to wearing always a busk. But for my one month of folly I had to endure three months of discomfort. At the end of about that time I was my own man again."

Dr. Quain, one of the most popular physicians in London, has just issued his long-promised "Dictionary of Medicine." Dr. Quain is an indefatigable worker from morning to night, but contrives to dine out very frequently, to the great delight of his friends. He is a universal favorite, and his thick Irish brogue gives additional unctuousness to his excellent stories. As a *raconteur* he is hardly of the severe school of Mr. Abraham Hayward, although he is never "lengthy." The rich tone of the voice is accompanied by a merry twinkle of the eye, inexpressibly diverting. With all these social qualities he is in the very first rank of his profession, and attended Lord Beaconsfield and the late Lord Stamford.

The "Hammond Prize" of the American Neurological Association.—No essay of sufficient originality having been sent to the committee, this prize is again offered to universal competition.

E. C. SEGUIN, Secretary.

The American Neurological Association offers a prize of five hundred dollars, to be known as the "William A. Hammond Prize," and to be awarded at the meeting in June, 1884, to the author of the best essay on the *Functions of the Thalamus in Man*.

The conditions under which this prize is to be awarded are as follows:

1. The prize is open to competitors of all nationalities.

2. The essays are to be based upon original observations and experiments on man and the lower animals.

3. The competing essays must be written in the English, French, or German language: if in the last, the manuscript is to be in the Italian handwriting.

4. Essays are to be sent (postage prepaid) to the Secretary of the Prize Committee, Dr. E. C. Seguin, 41 West 20th street, New York City, on or before February 1, 1884; each essay to be marked by a distinctive device or motto, and accompanied by a sealed envelope bearing the same device or motto, and containing the author's visiting card.

5. The successful essay will be the property of the Association, which will assume the care of its publication.

6. Any intimation tending to reveal the authorship of any of the essays submitted, whether directly or indirectly conveyed to the committee or to any member thereof, shall exclude the essay from competition.

7. The award of the prize will be announced by the undersigned committee; and will be publicly declared by the President of the Association at the meeting in June, 1884.

8. The amount of the prize will be given to the successful competitor in gold coin of the United States, or, if he prefer it, in the shape of a gold medal bearing a suitable device and inscription.

Signed, { F. T. MILES, M. D., Baltimore,
J. S. JEWELL, D. D., Chicago,
E. C. SEGUIN, M. D., New York.

Hypnotism.—M. Donats has been holding *séances* in Paris to illustrate the wonders of hypnotism. Instead of employing hysterical women, as did Charcot, he employed healthy young men, whom he found quite as subject to his will as were Charcot's patients. His exhibitions were thronged by students, and others, until at length Prof. Carmelli, of the government school, proved by a public exhibition that he could do exactly the same things as were done by Charcot and Donats, without any pretense of hypnotism. This exposure broke up Donats' *séances* and led him to dismiss his female assistant, who in revenge turned State's evidence, and exposed the whole system by which he had so successfully practised his impositions upon a credulous public.

Cholera is said to be causing terrible havoc in Southern Mexico. It began in July, 1882, on a farm near the river Chiapas, and has extended gradually to San Bartolo, Chiapas, Tuxtla, Tobasco, and other places.

M. Fourmant states that according to his just concluded exact experiments trichinæ were not killed in meat which he kept in salt for fifteen months. Mice fed with that meat showed the most marked "trichinosis."

It is an incontrovertible fact that sewer gas is poisonous; and the only question should be, by what method or means are we to get rid of it? We have no special leaning to—and certainly no sort of interest in—any particular "system." It is obviously necessary to discharge the gas as far as possible *out of* the respired atmosphere, and consequently it cannot be right to ventilate the sewers directly into the streets. This is

a simple common-sense conclusion. . . . The only rational plan of procedure, as it seems to us, is to ventilate the sewers by pipes rising above the level of the adjacent houses, so that it may mingle freely with the higher strata of the atmosphere, and become oxidized. . . . There are two points we would again, and more strongly than heretofore, press on the notice of the public: First, the system of ventilating by street gratings *must* be finally abandoned. In some parts of the metropolis the condition of matters in this respect is most unsatisfactory. Second, *it is useless to trust to the ordinary traps* for disconnecting house-drains from the sewers. This last-mentioned matter is within the control of every house-holder. Properly constructed disconnecting chambers should be fitted to every house.—*The London Lancet*.

James T. Gardner has made an elaborate report to the State Board of Health on the subject of "Sewerage in Towns and Cities," which is published in several consecutive numbers of the *Hydraulic and Sanitary Plumber*. He closes his paper with the following "conclusion:"—

"In obedience to the resolution of this Board I have endeavored by the examination of foreign and American experience to determine what method of sewerage we ought to recommend to the towns and cities of this State applying for advice. I am convinced that both in England and in America large, *combined sewers* for carrying storm-water and sewage *are and necessarily must be constant and powerful sources of disease*; and that for most towns, they are a very costly method of removing sewage

"I am of the opinion that the separate system of small sewers avoids in great measure the inherent sanitary difficulties of the combined plan; and that it is an efficient and economical method of removing the sewage of towns. I therefore recommend the State Board of Health to advise the adoption of the separate system of sewage in those towns which have asked for information on this subject."

The "combined" system spoken of by Mr. Gardener is that which is in use in New York and in most or all of the large cities in this country, and which, it is probably safe to say, will not be, or cannot be changed; they must therefore remain as they are now, "powerful sources of disease."

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SULPHUR AS A DISINFECTANT.

At one time and another, in nearly all countries, sulphur has enjoyed a reputation as a disinfectant, and occasionally as a means of cure; and even to this day, in many of the ports of Southern Europe, the favorite mode of disinfecting clothing, passports and other papers, is to subject them to the fumes of burning sulphur. At one time there was a popular opinion that it was especially efficacious against the infection of Asiatic cholera, and a Dr Bird of New York recommended it to be taken regularly in the form of a pill, both as a preventative, and as a curative agent. Dr. Bird's sulphur pills were tried by many, as of course they would be, but they were found not to possess any of the qualities claimed for them.

Recently Herr Kircher, who has been forty-four years director of an ultramarine factory, in which sulphurous acid is generated largely by the burning of sulphur, has sought to revive the claims of sulphur as a disinfectant, and as a curative agent. Accepting the German idea that consumption is infectious, he declares that none of his employes have ever suffered from consumption, typhus, cholera, or any other disease which is propagated by infection. He recommends therefore the continuous inhalation of the fumes of sulphur as a remedy for tuberculosis. Tuberculous patients, he says, should occupy rooms in which one or two drachms of sulphur are burnt every hour; and to complete the cure, they should be in the same manner exposed for a time to the vapor of aromatics.

No doubt sulphurous acid is a disinfectant, although much inferior in this respect to the chlorides and carbolic acid; but the properties ascribed to it by Kircher are probably imaginary. It is quite doubtful whether he has any knowledge how many of his employes have died of cholera, typhus, measles, chicken pox, small pox, diphtheria, whooping cough, or of other infectious diseases. What he has said upon this subject may herefore be regarded as the loose statement of an

irresponsible layman; nor could it have claimed from us any serious attention were it not that it is quoted by the *Lancet* and other respectable medical journals, and with the approval which silence generally implies. We would as soon have thought of quoting Mrs. Squeers' opinion, and the experience of Dotheboys Hall, as to the balm of sulphur and treacle. As indicating the value of such kind of testimony, we may cite the remark of M. Parent Duchatelet, made in 1832, that, having visited that incomparable stable of filth and nastiness at Montfaucon, just outside the walls of Paris, where are cut up, boiled and picked to pieces thousands of dead cats, dogs, horses and other animals, he found the men and women employed in these loathsome occupations enjoying excellent health, and as having experienced a complete immunity from cholera and other epidemic diseases, at periods when the diseases were exceedingly prevalent and fatal in Paris. He adds, also, very naively, that the women were "remarkable for their fecundity."

It must be admitted that in this latter respect the reeking odors of Montfaucon have the advantage over the fumes of sulphur in Herr Kircher's ultramarine factory; at least no such effects have been noted by him.

SUICIDE AMONG CHILDREN.

Quoting from the official statistics recently published of suicides in France, it appears, between the years 1876 and 1880, that 198 boys and 40 girls below 15 years of age destroyed themselves. Of these 200 were over 12 years of age; 21 between the ages of 12 and 10; 4 were 10 years old; 6 were below 9; the youngest being only 7—making a total of 238.

Has it been from the flow of unrestrained passion which sometimes marks the bringing up of the only child of wealthy parents, that its little appetite—already palled with satiation—leaves nothing more to be desired; and, from a dread of the *ennui* which it sees in the palsied powers of those the sands of whose life are but half run out, prefers the mystery of death? Or is it that a child's mind instinctively seeks the divine—a power to guide as well as control—and that the attempt to crush out the God-given instincts of prayer and worship of a higher power paralyzes even a child's desire to live without God?

Children are the hope of any nation. We long for some light to be thrown upon this grim official list, if any can be given, by which one might fathom the depth of anguish and despair which could so obliterate the hope and joyousness of child life at the tender age of 7 to 15, that within four short years 238 children became so palled with life's history as to seek by their own hand the mystery of death?—*Paris correspondent of the London Times.*

With the meagre information furnished by the *correspondent* we do not think the question propounded by him can be satisfactorily answered, but we suspect that the two principal factors which concur to produce these results in France are, orphanage and the lack of a religious sense.

In France the number of children born out of wedlock is very large. These children, or most of them, are cared for by the government charities, and they soon learn that they have no parents, no relatives and no home. And these facts once learned, they are never permitted, from the hour of their first contact with a selfish world, to the hour of their death, to forget them.

Inseparable almost from this social isolation, is the absence of religious influence. If religion is taught to these children it is only in a perfunctory manner; and its teachings have seldom any permanent effect upon their faith or conduct. With no social ties in the world, and no fears or hopes in regard to a future world, a comparatively trivial provocation is sufficient to induce these waifs, to end their otherwise incurable troubles in death.

Of these two factors we incline to think that irreligion is the most potent.

We do not doubt the compatibility of religion and science; but whatever science may teach, society demands religion. It constitutes an essential part of State medicine; without which individuals and communities tend to a condition of reckless irresponsibility, which ends, in most cases, in a species of mental and social anarchy. In our opinion, therefore, whoever attempts to loosen this anchor is an enemy to his own race.

CLINICAL LECTURES ON THE NERVOUS AFFECTIONS OF CHILDHOOD.

BY

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etc., etc.,

LECTURE I.

GENTLEMEN:—I purpose to-day showing you a couple of children with hemiplegia and to call your attention to the pathological condition and sequelæ of hemiplegia in children. The symptoms consist in loss of power upon one side of the body, vertically, with the peculiarity that the symptoms are chiefly at the periphery. The face, arm and leg are affected; the shoulder, trunk, hip and upper facial muscles escape. It is a limited hemiplegia in children. In some cases in adults as well as in children we have, more especially cerebral symptoms, aphasia or difficulty in articulation. In some rare cases there is strabismus. The vast majority of cases of hemiplegia in children, as in adults, present more or less loss of power in the lower part of the face, arm and leg.

CASE I.—Girl, aet. seven years. At seven months convulsions and left hemiplegia. Slow and imperfect speech. Is backward. No epilepsy.

In this child's walk and attitude you see the characteristics of a partially cured hemiplegia. She limps on the left side. There is limited voluntary power in the left upper extremity. There seems to be no appreciable deviation in the face in this case and the tongue does not deviate to the paralyzed side. It has been my experience that in children there is not in reality as much facial paralysis as in grown persons.

CASE II.—Boy; history uncertain. No epilepsy. Hemiplegia slighter than the other. There is very little difference in the voluntary movements in the two sides. The face is straight and the tongue also.

With respect to the finer movements of these two cases, the girl with a great deal of effort manages to make a sort of fist, the boy can make quite a fist. In the girl you notice in what a slow, vermicular and choreic way she performs voluntary movements.

An interesting feature in these cases, after the lapse of a certain number of years, is the want of development. This condition of atrophy of the paralyzed side in the hemiplegia of children is to be distinguished with a great deal of care from the atrophy which occurs in spinal affections. If you were to examine this girl with the faradic current in spite of the arm being smaller it is found that the muscles on the left side respond to the current as well as the muscles on the opposite side. The muscles and bones are healthy. It is not a pathological atrophy but simply a want of development. The parts are normal physiologically but abnormal in not having attained their full degree of development, and size.

As regards the face, in accordance with the rule that it is seldom much paralyzed in children, we find atrophy of the face is very rare. I have seen a child with infantile hemiplegia present a small forehead, face, arm and leg on the same side. I have seen a case in Canada in which there was a small face, arm and leg and small cranium, but the small of the cranium was on the opposite side. The relative atrophy of the face is in its lower part. Very seldom can a baby have hemiplegia even with a certain amount of recovery and yet escape a certain amount of this relative atrophy.

Anæsthesia is just as rare in children as in adults. In examining the histories of adult hemiplegias you will learn from a large number of patients that there is numbness on the paralyzed side. If you examine the patients objectively with the æsthesiometer you will find to your surprise that even if there be numbness there is no anæsthesia.

Mode of Occurrence of Attack and Pathological Conditions.—In the first place there are a number of children who are undoubtedly born hemiplegic. In these cases the pathological change may be either injury to the cranium of the child in utero or alteration in the nutrition of the brain on one side. These cases are exceedingly rare and it requires a good deal of evidence to support the statement of the parent that the child was born hemiplegic.

Another mode of attack is as in this girl, with convulsions. At any age under five or six years the child is seized with convulsions which can not to be distinguished from an ordinary attack of eclampsia. At the close of the first, second or fourth attack of convulsions there is discovered paralysis on one side and the patient may recover without any subsequent fits.

The pathology of these cases is very obscure. There are two predominant theories about which we can feel no certainty. One is that the convulsion is an eclamptic attack from worms, teething, indigestion, fright, etc., and in some of the convulsions we have meningeal hemorrhage. Another interpretation of the condition is the reverse, namely, that the child has meningeal hemorrhage from some cause and that the meningeal hemorrhage causes the convulsion. Really the convulsion is the first symptom and the hemiplegia is the second.

If we consider the etiology of these cases the second hypothesis is a very good one. A good many of these cases occur after falls. Sometimes we do not learn about the fall until years after the attack. The fall is followed within a few years by an oozing which leads to the convulsive attack and hemiplegia.

Another category of cases with a convulsive beginning, are those in which the convulsion is the first symptom of some organic brain disease. This may be acute or chronic. For example the child of tuberculous parents has been restless at night, seeming to have worms, will have convulsions and fever which will continue. Insensibility will supervene. Ophthalmic examination shows choking of the optic disk.

An examination of these cases shows tuberculous meningitis with some deposit of tubercles within the meshes of the pia mater. On slicing the brain the condition of hemorrhage is made out. In these cases the attack is acute, and epileptiform attacks of convulsions are the first actual symptoms in meningitis. In the chronic cases, which are often syphilitic, the convulsion is, apparently, the first symptom, and the lesion is either a simple tumor or a gummatous degeneration. There is hemiplegia after the attack which persists and in most cases the epileptic attacks recur.

Another category of cases in children is the simple

hemiplegia, and finally hemiplegia with apoplexy. A child under seven or eight years may be attacked with hemiplegia like a grown person. It may have complete paralysis of one half of the body without losing consciousness, without any headache, without any convulsions and the recovery occurs gradually, in many cases completely. Then there are cases [very rare in children] in which there is an apoplectic attack without convulsion. The convulsive cases are by far the most common.

The pathology of these two classes of cases when not traumatic is that there has been either embolism or hemorrhage in the brain. Cerebral hemorrhage develops sometimes under conditions of a cachectic nature. Possibly the vascular walls are diseased as in adults who have hemiplegia.

Another class might be added of slowly developed hemiplegias. These are due to a tumor which may be tubercular, sarcomatous or specific, inherited from the parents. In these cases we almost always have convulsions but not as initiatory phenomena.

I will now describe to you certain sequelæ of hemiplegia; I will divide these into clinical and pathological. The clinical sequelæ are: 1st relative atrophy; 2d an athetoid, choreic, ataxic state; 3d epilepsy; 4th imbecility; 5th deformity.

Dr. Hammond has described a disease which he has termed athetosis, a condition in which in his first patient there were continuous, slow movements of one hand without hemiplegia, without paralysis, and the muscles of the hand and forearm had become hypertrophied. The extension movements particularly predominated. Quite a number of cases have been described since in this country and Europe, and the disease is now recognized. I first described in lectures the condition which I termed the athetoid state in children. Very soon after studying Dr. Hammond's case in 1873 and 1875 I observed that almost all children who had hemiplegia presented a certain amount of this so-called athetosis.

The epilepsy which accompanies hemiplegia in childhood may be a continuation of the primary attack. When epilepsy is combined with hemiplegia in children after they recover they seldom escape imbecility, which is very unmanageable. It is a great deal worse than the idiocy which comes from want of development of certain parts of the brain. An epileptic child with hemiplegia is a very unpromising candidate for education and treatment.

Another sequela is deformity of the leg, which consists in drawing up the heel. The leg is shortened; the child walks upon the ball of the foot. The deformity of the hand is very much wing-shaped and there is hyper-extension of the phalanges. In some cases the hand is clenched. A good deal can be done for most of these cases in the deformity of the hand and legs by proper electrical treatment and massage. The principle of electrical treatment is that you are to faradise the weakest muscles. If you faradise the whole arm you make the child worse. If you limit the faradization to the extensors and interossei there is a marked change in the child's hand and arm in the course of a few weeks. The current should be strictly localized; the electrodes should be placed close by together, so as to produce contraction in all the weakest muscles. The flexors require no treatment. Massage and passive movements are very important. In some cases the maintenance of normal attitude or even overextension in the clenched cases by a little apparatus will do a great deal of good. The child should be forced to use the hands and legs. The well hand

should be tied up for a few hours a day, according to the temperament of the child. What is called in the education of idiots "physiological training of muscles," is more important and should be attempted in all cases. Train the hand for delicate movements by a graduated series of little muscular exercises.

PATHOLOGICAL SEQUELÆ, ATROPHIC CONDITIONS OF THE BRAIN.

Take a case of convulsions beginning with meningeal hæmorrhage. The blood is absorbed in the course of a few weeks. There results a sac which at one time contains a yellowish fluid and later on a watery clear fluid. There is also a certain amount of thickening of the dura mater and arachnoid. In some cases there is a good deal of thickening of the arachnoid and pia mater, a good deal of depression of the brain and the result is that there is a sac lying over one hemisphere. This sac contains thickened membrane, perhaps laminated clots, which contain a certain amount of fluid, according to the nature of the lesion, in old cases a pure liquid.—In old cases the hemisphere is atrophied. In some cases the cranium shares in the atrophy. In other cases the hæmorrhage causes what is practically an atrophy of the brain which may be a visible atrophy *i. e.*, on post mortem the surface of the hemisphere is found to be sunken and there is a fluid in the sack without evidences of hæmorrhage; but it is immaterial whether the lesion be meningeal or parenchymatous. These secondary conditions of atrophy of the brain set in and are in proportion to the amount of lesion. The peculiarity of this secondary atrophic state of the brain is that the cerebellum also undergoes atrophy. The cerebellum is atrophied upon the opposite side to the cerebral lesion. The connection between the two facts is very simple. The anterior peduncles of the cerebellum are the connecting media between the two parts. These pass under the tubercula quadrigemina and cross over to the crus of the opposite cerebral hemisphere.

In some cases of infantile hemiplegia with contraction of the paralyzed members, we find still further central atrophic changes. These are in the spinal cord, pons varolii and medulla oblongata.

In the medulla oblongata the degeneration is in the anterior pyramids and on the same side. Most secondary degenerations below the decussation of the pyramids are in the postero-lateral columns, not quite reaching to the cortex of the cord, but a little is to be found in the columns of Turck. These are caused either by a parenchymatous change or meningeal lesion.

The diagnosis of infantile hemiplegia presents no difficulties. It is impossible for the most careless observer to be mistaken between infantile spinal paralysis and hemiplegia. Though infantile spinal paralysis sometimes effects the limbs on one side it can be distinguished by the electrical reactions and conditions of the muscles. In the spinal form of paralysis the muscles are morbidly relaxed whereas in the hemiplegic form, they are nearly always somewhat contracted. This has been spoken of sometimes as *hemiplegia spastica*. This is a strictly cerebral affection.

Another test is by electricity. In hemiplegia of cerebral origin you can get a reaction with the faradic current in all the paralyzed muscles; whereas in spinal paralysis you get no reactions to faradism, and the reactions to galvanism are more or less changed from the normal formula.

The diagnosis of the pathological condition is very

often impossible. It is very difficult in adults and almost impossible in children.

Prognosis.—The prognosis as regards life is usually very good. If we leave out the cases in which there is immediate danger,—cases of meningitis which may be tubercular and cases of severe injury to the health, you are to be governed in any prognosis by the temperature and by the general symptoms and not by the amount of injury.

The other element in the prognosis, taking all cases together, is as a rule bad, viz. : the utility of the parts affected. The probabilities are immensely against perfect recovery, rather more so than in adults. In adults we get a certain number of cases of hemiplegia caused by minute emboli : others which are caused by small, speckled hemorrhages—the miliary apoplexies and miliary hemorrhages of Cruveilhier, recover in nearly all cases perfectly.

Treatment.—The treatment in a case of this kind will vary in accordance with the pathological diagnosis. The treatment of cases of convulsions from injury will differ materially from cases in which you suspect tubercular meningitis or one in which you have good reason to believe there is some gastric irritation. There is not much to be said on the therapeutics of the first stage of hemiplegia of children. Avoid doing too much. The only exception to this is in cases where at an older period than mere babyhood we have convulsions followed by hemiplegia of a rather slowly developed kind and continued convulsions in which the teeth are bad, etc. In these cases the general rule not to do too much is reserved. Mercury, iodide of potassium and cod liver oil will do a wonderful amount of good. Many adult cases of syphilis do not improve until cod liver oil is added to the iodide of mercury.

With respect to the treatment of the sequelæ, clinical and pathological, there is nothing to be done to the pathological sequelæ. These degenerative changes in the brain are beyond our reach. Various clinical sequelæ are to be combated according to the indication. The athetoid and choreic conditions should be corrected by gymnastics, massage and electricity. Epilepsy is to be treated by the bromide of potassium, but it is not required in large doses as in common epilepsy. I have seen excellent results from the combination of the iodide and bromide of potassium in patients who have had the remains of hemiplegia and epilepsy at the same time. I should give 30 centigrams of the iodide and 60 centigrams of the bromide of potassium twice a day to a child 4—5 years old, at the same time attending to the general condition, hygiene, tonics, etc.

Imbecility is to be corrected by training. Parents of poor patients should be directed to send their children to the schools for idiots, of which there are quite a number in the Eastern and several in the Western states.

The deformity is to be remedied partly by massage, electrical treatment, exercise, and also by orthopedic apparatus ; by shoes extemporaneously made and by prothetic apparatus for the hand.

If the circumstances are favorable a great deal can be done for the child.

A CASE OF ANGIOMA OF THE FOOT.

A CLINICAL LECTURE DELIVERED AT THE UNIVERSITY MEDICAL COLLEGE.

BY

PROF. J. WILLISTON WRIGHT, M.D.

GENTLEMEN : I have a case here I am very anxious to show you because of its rarity, though I do not intend to do anything to remove the difficulty to day.

The patient is a young woman 26 years of age. She says that about a year ago she sprained her right foot by jumping out of a window about four feet above the ground. She struck upon her toes and thus strained the bottom of her foot, and she felt a sudden sharp cutting pain as if a knife had divided some of the tissues at the time, and following this there was more or less numbness in the foot, and it was also a little swollen from that time on ; but two or three weeks after it became a good deal swollen, and it has remained so for all the past year. About three months ago however she says she first noticed a lump on the sole of the foot in the neighborhood of the ball of the great toe, and this became so painful that she was obliged to walk on the side of her foot to relieve the swelling from the pressure of her weight. When she first found it, it was about as large as a marble. About a month ago a second but smaller lump made its appearance a little to the side of the first and resembling it in nearly every respect. These swellings have increased somewhat in size and are very painful all the time, whether she is standing up or lying in bed, and on removing her shoe they throb and beat as if more blood had been forced into them as soon as the support of the shoe and stocking was taken away.

Now as I examine the foot, the first thing I notice is an unnatural thickness of the member through the region of the instep, and the sole of the foot is nearly flat, the natural arching of it having disappeared, and on pressing upon it with my fingers I get a sense of doughy semi-fluctuation. But on the under surface of the posterior portion of the great toe, where it forms a prominence on the front of the foot, I find a tumor about the size apparently of a horse-chestnut, and its surface has a blue or livid appearance, and I can appreciate that it fluctuates distinctly, and on feeling deeply with my fingers it almost gives me the idea of containing something like a foreign body. But that peculiar feeling I conclude is due to the presence of a mass of twisted and tortuous blood vessels with unusually thickened walls. A little more toward the central line of the foot, or rather directly on this line, I find a similar but smaller tumor which gives the same feeling and the same fluctuation, but on feeling deeply it gives me the idea of a growth of some kind which has pushed itself out through an opening in the plantar fascia. But I do not know that this is the case. One of these tumors has already been aspirated with a needle, and its contents was found to be blood.

Now, what are we to infer from her story and this appearance ? I believe this is one of those tumors I have already described to you under the name of "angioma," that is, a vascular tumor, also known as an "erectile tumor," and composed mostly of blood vessels. I believe too that this is not all the disease which you see on the outside, but that this thickened foot and the boggy sensation and the semi-fluctuation are dependent on a similar condition of the vessels beneath the plantar fascia on the sole of the foot.

Whether the injury received a year ago, which she thinks was the occasion of this trouble, really had any-

thing to do with it, I think is exceedingly problematical and indeed very doubtful, for that would more naturally cause a rupture of some of the blood vessels and an extravasation of blood into the muscular or connective tissue and give rise to a dissecting or a diffuse aneurism as it is called. But I can hardly conceive how such an injury could possibly cause a tumor of this character, which undoubtedly contains a number of vascular trunks, arranged in a very tortuous manner. Now there is another point to be considered. If this is a vascular tumor at all, is it venous or arterial in character? If it were arterial we would probably be able to get a pulsation in it, or we would get a creaking or rubbing sensation, and by a little firm pressure we could probably empty it. I can not make out any pulsation, nor any bruit, nor any rubbing sensation, nor can I make it appreciably smaller by pressure with my fingers. Yet I am inclined to think that the source of the blood supply of this tumor is in some way connected with the branches of the plantar arteries which are the ultimate branches of the posterior tibial, and one of them, you know, connects with the anterior tibial through the communicating branches of the dorsalis pedis. Now, I propose to settle this question to-day by putting an Esmarch's bandage on the foot, so as to press out all the blood from its vessels, and then upon taking it off I will put my finger over the posterior tibial so as to control the flow of blood into the sole of the foot, and then see if this tumor quickly fills up again. If it does, then I shall conclude that it is not fed principally by the posterior tibial artery, but it is rather one of those tumors caused by a collection of twisted veins and not of arteries.

But now if we find that it is connected with the posterior tibial artery, the next question is, what can be done for its removal? You would naturally think that the best plan would be to expose these vessels by a careful dissection and then throw a ligature around the whole mass on the sole of the foot and thus strangle it all together, and let the ligature and its contents slough off, and the disease will be removed.

This would probably be the result of such a method of treatment if all the disease were external and visible, but in case there were other similar vessels lying beneath the plantar fascia this treatment would be of no use. You would then be obliged to consider another plan of treatment, such as injecting something into the tumor, so as to coagulate the blood for instance. But this I consider a dangerous operation, for some of the clots thus formed are liable to become loosened and pass into the general circulation and so cause trouble. Then, pressure over the tumor might be thought of, but this expedient is not generally successful.

Another and better resource would be to put a ligature on the trunk of the vessel which feeds this growth, and so shut off the circulation in it altogether.

But these are all questions for future consideration, for the girl is not ready for an operation to-day even if one is found to be necessary, but she prefers to wait and go to the hospital to have it performed, for it is an operation of some importance, and the matter should be carefully considered in all its relations before it is decided to do anything. The case is so interesting, however, that I wanted you to see it even though I could do nothing for its relief to-day.

You see I have now had the Esmarch's bandage applied so as to press out all the blood from the foot, and as it is being taken off I compress both the anterior and posterior tibial arteries with my fingers, and so prevent the return of the blood. Now, under that management you see the tumors have become con-

siderably smaller, and the blue or livid appearance has disappeared from their surface, and they are also much softer and compressible than they were. Now, I am going to let up my pressure on the posterior and anterior tibial arteries successively and see what the result will be. On letting up the posterior tibial the tumor becomes a great deal more tense at once, and it gets larger and begins to recover the same livid appearance as before, and on letting up both arteries the tumor becomes still more tense and swollen. So I feel now pretty well assured that we have to deal with a vascular tumor, an angioma, or as it is sometimes called, an angiectasis, and it seems to be intimately connected with the arterial supply of both the anterior and posterior tibial arteries, but especially the latter.

As this girl intends to go to the hospital for treatment you may have an opportunity to observe more of this tumor before a great while, but to day we will have to satisfy ourselves by merely determining its character.

A CYSTIC TUMOR IN THE PELVIS.

A CLINICAL LECTURE.

BY

PROF. T. GAILLARD THOMAS, M. D.

This patient, Miss T. J., is 34 years of age, a native of the United States, and unmarried. She says that about a year ago her water suddenly stopped on her, and she has had trouble in passing it at various times ever since, and often she has had to use a catheter. The stoppages most frequently occur just before or just after she is unwell, or else during the continuance of her monthly sickness, but last month it happened while she was not unwell. When she stops passing her water she experiences an intense burning pain. She also complains of pain in the side and of much backache.

Now, gentlemen, in practice a man ought to be very charitable in criticising the mistakes in diagnosis which his neighbors make, and I want to tell you here in this case how an error in diagnosis might easily occur. Here is a delicate young woman of 34, and unmarried, who comes to a doctor and tells him this story, that now and then during the past year she would be unable to pass her water, especially at her regular menstrual periods, and then she would have to send for a physician, who would draw off her urine with a catheter, and during the intermenstrual period nothing troubled her except pain in passing water, and pain in the side, and a good deal of backache. This is all. Very likely the doctor who first sees this case, finding that she is unmarried and only 34 years of age and refined in appearance, is very naturally averse to making a vaginal examination, and believing that it is only some local trouble prescribes something to act on the bladder and to relax spasm, and tells her to go away and return in three or four months and report her condition. She takes his medicine, but at the next monthly period she suffers more pain perhaps than before, and then concluding that the first doctor did not understand her case she naturally goes to another, who perhaps is more gruff in his manner and not so careful for his patient's feelings, and he examines her carefully and finds what I found here, namely, a very small uterus with a tumor eight or ten times as large as itself projecting out from one side, and connected to it by a very short and narrow pedicle apparently. The man who does not examine such a case

as this out of regard for his patient's feelings is certainly excusable if he makes an error in diagnosis, and if you are so fortunate as to discover the true condition you should be generous in your estimate of him.

That tumor probably began to grow about one year ago, and it is not pressing on the bladder or urethra, but it reaches far down into the pelvis and presses upon the nerves in the sacral region, and by deranging the innervation it produces a tendency to a spasm of the sphincter muscle of the bladder, which is not enough ordinarily to stop the flow of urine through the urethra, but when at the periods of ovulation the whole nervous system gets in a state of increased excitability the already irritated nerves of this region can not stand it longer, and hence a spasm at the neck of the bladder takes place and the exit of the urine is stopped. And this nervous exhaustion also accounts for the increased pain she experiences at her monthly periods. The principal difficulty of which she complains, therefore, is not the important point here, for it is only an effect of the main disease, which is, a tumor of some sort connected with the uterus.

What the nature of this tumor is I am uncertain, but it is probably an ordinary ovarian cyst or a parovarian cyst. In either case it seems to be situated between the layers of the broad ligament, and this has kept it bound down in the pelvis for a long time. It might possibly be a fibro-cyst of the uterus. At any rate it is certainly not a solid tumor, for I can feel that it fluctuates. It makes no difference anyway at present what the character of it is, and the diagnosis may just as well be left doubtful. Yet you know it is common for men to say in such cases that you must settle the diagnosis at once, and the most certain way of doing this is to plunge into the tumor a needle and draw off enough fluid to examine chemically and microscopically. But I say there is no immediate reason for knowing what sort of a tumor this is, for in any case it is not the time for an operation now. It seems to have no pedicle, and it is not yet large enough to think of removing it by an abdominal section. No matter what the diagnosis here is, no operation should be performed at present; and so in many other cases like this, it is not a proper course to attempt to make an exact diagnosis at the time the tumor is first discovered. This may possibly be a dermoid cyst, but I feel pretty confident that it is rather one of the other varieties I have already mentioned.

As to palliative treatment, we can do nothing for the bladder except to use the catheter when necessary, as before. All I would advise is, to let her understand thoroughly the character of the case, and then let her have the tumor looked at every two or three months, so that its progress may be watched. If after this interval I should find that she had been losing flesh and strength, and had a rapid pulse, and her condition was becoming depreciated generally, then I should say it was time to operate, and if upon examination I found that the tumor had a pedicle I would ligate it and remove the growth. But under the present existing circumstances I can only tell the patient to go away, and in two or three months to come back and have the tumor examined; and I would wait for the diagnosis till the time for operation comes, and then I would operate boldly and without hesitation. Meanwhile I would keep her on tonic treatment and build her system up as much as possible. She is not getting food enough I think, and at any rate I think her condition may be much improved by proper feeding. The method I follow at my private hospital is the following.

I have the patient eat three times a day at the usual hours as much fresh meat and vegetables and other food as she can, and then between breakfast and dinner she drinks a tumbler full of milk with a tablespoonful of extract of malt, and then between dinner and supper she takes the same or a little beef tea with it, and this is repeated before going to bed at night, and in this way the patient's nutrition is increased. Then for the improvement of the condition of the blood, iron in some form is used, and to increase the appetite I use quinine, especially in the form of Huxham's tincture of cinchona, and also the compound tincture of gentian, and after meals I add one of the syrups of the hypophosphites of lime or soda.

Now if this patient will follow this plan for three months and then come back, I think we will find that she has not lost anything by it, and she will be in a much better condition for operation if it is then found that it is necessary.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, FEB'Y. 15, 1883.

The President, Dr. Fordyce Barker, presided. The minutes of the preceding meeting were read and approved. The report of the delegates to the State Medical Society was read and on motion of Dr. Piffard was received and placed on file. The scientific paper for the evening entitled,

"DIET IN THE TREATMENT OF THE GOUTY DYSCRASIA."

was read by its author, William H. Draper, M. D., and discussed by Drs. Fordyce Barker, Austin Flint, E. G. Janeway, Hadden, Mary Putnam Jacobi, Piffard, and Kinnicut.

The following is a brief abstract of Dr. Draper's paper and the discussion which followed:

This subject is one which presents many claims to our consideration. The relations of food to normal nutrition constitute an important problem which is daily attracting closer attention from medical men. The day has gone by when the selection of food is left to the intelligence of the patient and judicious feeding plays a most important part in modifying mal-nutrition. To-day it is appreciated as never before that "there is death in the pot."

It is impossible in the limits of this paper to review the theories of the pathology of gout. I will therefore before proceeding to a consideration of the diet suitable for this dyscrasia, make a brief preliminary statement of its accepted pathology.

The humeral pathology has the most adherents. It proceeds on the theory that every atom of food taken into the body is eliminated as urea, carbonic acid, and water by the process of oxidation. Recent investigations tend to establish that the liver is chiefly concerned in the production of urea. We not infrequently see gout and diabetes alternating in one patient which would point to their having a common cause. While defective oxidation is no doubt a factor in the production of gout, we can not reduce the part it plays to a mathematical equation. Imperfect blood elaboration must depend upon more than the amount of food and oxygen taken.

That gout as a diathesis is a blood crasis, in which uric acid exists in the blood and is responsible for the

disease is accepted by many. Heredity also plays an important part in the development of the gouty dyscrasia. Uric acid like urea is supposed to be one of the normal results of metamorphosis of the nitrogenous elements and yet in the excreta of birds from whose food the nitrogenous element is eliminated. Apart from the physiological objections to the accumulation of uric acid being the cause of gout, it is well known that it occurs in other diseases as well, and is not always present in gout. Its presence may be only an epi-phenomenon. It may be said that the chemical pathology of gout is involved in obscurity. Some believe it to be a neurosis, and this view of gout is made plausible by the frequency of purely nervous symptoms and by the fact that purely nervous influences often determine an attack of gout, but this theory does not militate against the humeral pathology of gout. Neither the chemical nor the neurotic theory are entirely proven. The treatment of gout based upon its neurotic origin is not successful in acute gouty arthritis.

Treatment may be divided into dietetic, hygienic, and medicinal. It is to the dietetic treatment alone that I will ask your attention. This involves a consideration of the quantity and quality of food best adapted to maintain healthy nutrition. The amount of food taken is of course variable and should be proportioned to the individual and the kind of work. The source of all vital energy resides in the food, and there is no motion without antecedent motion. The quantity of food taken has a direct bearing on the gouty habit. Excess may be positive or relative. The quality of food though less important than the quantity, plays a striking part in the dietetics of gout. The farinaceous foods are better adapted than the nitrogenous for the evolution of heat, and, therefore, more suitable for out-door workers, while a nitrogenous diet is better fitted for mental laborers.

In the special regulations for the gouty dyscrasia, the almost universal counsel is to use nitrogenous foods sparingly. This is based on the uric acid theory of its pathology. My own observations, extending over a period of fifteen years, have led me to believe that this counsel is not supported by clinical observation. There exists in the gouty a limited capacity for the oxidation of sugars and starches which provoke acid and flatulent dyspepsia. Why lithæmia is brought about by the non-oxidation of carbonaceous foods it is impossible to explain, except on the theory that the liver is concerned in the production of urea.

The diet which I have adopted in the treatment of gout with gratifying success, is similar to that in glycosuria. The exclusion of fermented liquors, farinaceous food and fats. There is no question as to the pernicious effects of malt liquors as gout producers. The heavier wines are the more mischievous. Cider and sherry favor acid dyspepsia, and are contraindicated. Gout is more prevalent in England than in Ireland, Scotland or Poland, which may be due to the fact that in the latter countries distilled liquors are more largely consumed, while in England, beer is the universal beverage. The directions to a gouty patient should, therefore, be most strict. Beer should be excluded; in regard to wines, the less allowed the better, of the champagnes the dry wines are preferable, sherry, madeira and port must not be taken. If some form of alcohol is required, dilute spirits with food is safest.

Next to the fermented liquors, the use of saccharine foods should be interdicted, their strict prohibition may be necessary. Next come the amylaceous food elements, which must not be used in excess. The fats

are, as a rule, easily digested by gouty subjects. A purely milk diet is often a great resource. Most of the succulent vegetables may be used with safety. A bill of fare for gouty subjects is not uninviting nor does it lack variety. If the patient be an out-door worker it may only be necessary to give up the fermented liquors, if he lead a sedentary life more rigid regimen may be required. The principles are mainly those which govern the treatment of glycosuria.

Dr. Hadden spoke as follows: The paper has detailed the line of treatment which I have pursued for five years. However it may be opposed to chemistry or custom, the clinical facts are as stated by Dr. Draper. Liebig, many years ago, advocated a system of treatment which Majendie proved to be erroneous or wanting. My experience has been that nitrogenous food fully allowed, counteracted the dyscrasia. I have collected a number of cases, which have been published, in which this line of treatment was carried out. I have kept patients on it for weeks and months. Under its influence the urates of soda in the blood and urine diminished and the cases did well as long as they stuck to the diet, relapses only coming on when it was abandoned. This is something more than a theory, it is a fact. The medicinal agents used were those employed to combat incidental disturbances. In those cases in which the accumulation of gases in the intestine had been very troublesome, they ceased to be so. In the claws of the parrot, pigeon, and barn yard fowl gouty deposits are found, while in those of the eagle and vulture, who are carnivorous, there are none. In herbivorous animals, highly fed, as the horse, it is not uncommon to find a deposit of urates in the joints. Such deposits are never found in felines or canines. It is conclusive to my mind that this line of treatment solves the problem.

Dr. Putnam Jacobi said:—The question brought forward by Dr. Draper is a profoundly interesting one. To simply state that the carbonaceous foods do not go through the oxidation process in the gouty is not to offer an explanation. The experiments of Pettenkofer and Voigt as to the amount of oxygen taken up by the blood have a bearing on this subject. They proved that the amount of oxygen taken up by the blood was in proportion to the amount of albumen stored up in the tissues. The amount of oxygen taken up is in proportion to the increase of albumen in the food. The process of oxidation is more active at night, though more oxygen is taken up during the day. The key to the solution of the question lies in the inability to store up oxygen; many of the nervous phenomena and functional cardiac disturbances, and the profound mental depression are due to a defect in this power. There is no constant relation between the excess of uric acid and the deficiency of urea. We occasionally meet with cases such as Dr. Pepper describes who are robust, in good health, with large white teeth, who become victims of hypochondriasis and whose urine shows no quantitative excess of uric acid but who are cured by a milk diet. In regard to a purely meal diet diminishing uric acid, I have records of many cases proving this. On the use of a diet of gluten bread and meat, uric acid will often fall from three parts per thousand to one. Dr. Draper has said nothing as to the difficulties met with in subjecting patients to the exclusive nitrogenous diet. He no doubt can tell us much of interest regarding this point. In one case in which I advised it for obesity my patient fell into a state of profound prostration, but with the aid of *nux vomica* and nitro-muriatic acid she rallied and was able to continue the diet for a year.

Dr. Piffard said :—Seven or eight years ago, I read a paper advancing the same views now presented by Dr. Draper, who read a paper on this subject at that time, I think, before this academy. The liver is essentially the organ at fault. If we desire to indulge in an unlimited amount of food—in a word, if we want to be good livers, we must have good livers. Gout is more prevalent now than twenty years ago on account of the more extensive use of glucose in beer and wine. An analysis of 60 different wines showed that they nearly all contained glucose.

Dr. Flint thought that the important practical point involved should be settled by further clinical observation. To himself it was a matter of speculation which needed further observation and reflection to speak intelligently of.

Dr. Janeway said in regard to excluding the carbonaceous elements from the gouty dyspeptic's diet, it must be remembered that when we confined them to a milk diet we were giving sugar in a considerable amount and capable of acid fermentation. The great point seemed to him to be to avoid acid dyspepsia, in one case, one kind of food produced this, in another an entirely dissimilar one, so that a rule for diet could not be easily formulated. Gout was often determined by an injury or nervous shock which acted by causing dyspeptic symptoms. He regarded the humeral theory as nearer the truth than the uric acid theory of its pathology. He related the case of two men, twins, who, all their lives, were surrounded by precisely the same conditions, had the same diet, the same occupations, and yet one suffered from gout, the other not. They had also been subject to the same diseases except that one had had malarial fever and small pox, which the other escaped. Such cases were difficult of explanation.

Dr. Barker said his own ideas had been much upset by the views presented and he wished to reflect and see if he was all wrong in what he had accepted as the correct views on this subject. He continued—"I can feel on this subject better than I can speak. It is well known that there exists a sort of free masonry among gouty subjects which induces them to confide their sufferings to each other. I recall the case of a gentleman who had not touched stimulants for twenty years, but who had indulged in them freely in his youth. He was a great sufferer from gout, so much so that his hands and feet would swell so as to be scarcely recognizable. I saw him and to his horror advised him to take some Scotch whiskey, which he consented to do however and was relieved after two doses. Each case of gout is a problem by itself, depending not only upon heredity, but upon individual idiosyncrasy. I recall a case in which one strawberry would bring on an attack, and, in my own case, a slice of watermelon will suffice to bring on an attack. It seems to me that we can not reduce these cases to rule. I have patients in mind in whom an attack of gout would be developed by indulgence in roast beef or eggs, and others who would have a gouty explosion after taking alkalies. The point I wish to draw out is this, that our danger lies in generalizing upon an insufficient number of cases.

In closing the discussion Dr. Draper said: I entirely concur with Dr. Flint that this question must be settled by clinical observation. I wished to make clear that this diet cannot be explained by pathology. I presume every physician who has had much to do with gout has seen such cases as those described by Dr. Barker. I cannot explain them. Neural pathology alone would account for these idiosyncrasies. Dr.

Janeway has stated that nervous women are not gouty; I think that many of them who have no arthritic lesions are nevertheless gouty, they may have all the other manifestations without this. In answer to Dr. Jacobi's question as to difficulties met with in confining patients to a rigid meat diet, I may say that I have rarely found it necessary to make the restrictions so severe and patients are rebellious when the regulations are too exacting. Usually succulent vegetables may be allowed without harm.

The Academy then adjourned.

SELECTIONS FROM JOURNALS.

TUBERCLE BACILLUS AND PHTHISIS.

Dr. T. Henry Green (Physician to Charing Cross Hospital, and Senior Assistant-Physician to the Hospital for Consumption and Diseases of the Chest, Brompton), in concluding a lecture on the relation of this micro-organism to phthisis, observes, with regard to treatment: "What is the practical teaching of Koch's discovery with reference to the prevention and cure of phthisis? If our pathological conclusions be even only partially true, they clearly indicate, I think, the necessity of carefully distinguishing between the bacillus and the conditions which favor its influence, and of directing our treatment to both. We must endeavor to prevent the access of the organism, and, if possible, to destroy it after it has effected an entrance; and we must also strive to maintain a healthy condition of the pulmonary tissues, and thus prevent the occurrence of that tendency to apical stagnation which appears to be such an important, if not essential, factor in the disease. The latter of these indications is, I believe, as important as the former; and it is, perhaps, rather in danger of being lost sight of in the very natural eagerness with which attention is now being directed towards the bacillus.

"Firstly, then, with regard to the condition of the lung which favors the influence of the bacillus. Here it is only necessary to remark that, whatever promotes a vigorous state of health will, by improving the condition of the blood, the nutrition of the vessels, and activity of the circulation, and the exercise of the respiratory function, tend to prevent that stagnation and transudation in the highest portions of the lungs, the etiological importance of which we have so frequently insisted upon. The value of treatment which has for its object the fulfilment of these indications in the prevention of phthisis it is, I believe, difficult to over-estimate; and its usefulness is almost equally valuable when the disease is established. I cannot but think that, in the meantime, such treatment promises better results than any attempts to attack the specific organisms. Secondly: the tubercle bacillus. The consideration of this naturally divides itself under two heads: (a) the prevention of its access, and (b) attempts to destroy it when the disease is developed. (a) The prevention of the access of the bacillus. The present position of our knowledge appears to point to the desirability of adopting measures for the disinfection and destruction of the sputa of patients suffering from phthisis; and perhaps, also, of the alvine secretions, where there is any evidence of tuberculous disease of the bowel. It also raises the question as to how far it is desirable to allow individuals who are not consumptive, but who inherit a phthisical tendency, and especially when such individuals are out of health, to intimately associate with those who are suffering

from the disease. If our pathology continues to move on the same lines, this subject may become one requiring the consideration of those who manage our hospitals. (b) The destruction of the bacillus after the disease is established. Attempts to do this are made principally by means of antiseptic inhalations. This is the fashionable, though perhaps somewhat misdirected, therapeutics of the day. A respirator charged with some antiseptic, such as creasote or carbolic acid, is now being largely used in the treatment of phthisis. Although I should be very sorry to unfairly criticise such treatment, I cannot but think that the evidence that its usefulness is in any way dependent upon its destruction of the bacilli, or of any infective substance which they may originate, is wanting. It seems to me much more probable that such inhalations, when beneficial, are so mainly through the favorable influence which they exercise upon the mucous membrane and secretion; and when, as is so often the case, they are combined with chloroform, they will also act as direct sedatives. What we want are cases of early and progressive phthisis in which antiseptic treatment alone, without adjuncts, is followed by marked improvement. When it can be shown, *e.g.*, that the pyrexia of early phthisis is reduced by such treatment, we shall have evidence pointing to the influence of the germicides upon the bacillus of considerable value. We are now making some observations in this direction, but, at present, with negative results. Whilst, therefore, I do not wish to be understood to discourage the treatment of phthisis by antiseptic inhalations, I think we must be careful as to the interpretation we put on their results. The treatment of phthisis and of other pulmonary diseases by means of medicated atmosphere has been greatly stimulated by Koch's discovery. Such treatment has undoubtedly been too much neglected in the past, and its prosecution promises the best results. But, in the meantime, I think we have no evidence that we are able by such means to influence the tubercle bacillus; although, if Koch's investigations be true, the discovery of some agent which, by destroying it, will arrest its injurious influence, is obviously the greatest desideratum.—*British Medical Journal*.

CASE OF FOREIGN BODY IN THE EAR NEARLY TWENTY YEARS.

Dr. Lucius Holland (Physician to the Newcastle-on-Tyne Dispensary, Nelson Street; to the Department for Diseases of the Ear, and Lecturer upon Diseases of the Ear and Aural Surgery), describes the following case: "A woman aged 27, came to the dispensary complaining of frequent headache and giddiness. According to my custom in these cases, the ears were examined, and a black mass of cerumen being visible in the right ear, she was referred to my clinic for diseases of that organ. Some difficulty being experienced in clearing the canal, a probe was employed, which at once came into contact with a hard body; and its impaction required the further use of forceps for removal. This body upon examination, was found to be metallic, in the shape of a grape-stone, with very sharp apex, and weighed twelve grains. It was kindly tested for me by Mr. Leopold Dean, analytical chemist at Sir William Armstrong and Co.'s, and proved to be a globule of iron. The patient had lived in the neighborhood of ironworks from the age of three until ten years, and as a child played and rolled in the sand. During the latter part of this time she suffered from

pain in the right ear, for which the workmen puffed in tobacco smoke. At the age of ten years she was removed from the locality, and since then has resided in such places where no opportunity has afforded for the introduction of such a body, besides having no recollection of anything of the kind happening during the seventeen years. The globule of iron will, therefore, have been in the ear nearly twenty years. It was imbedded in dense cerumen, occupying the deep part of the canal, the circumference of which I observed to be irritated, the membrana tympani was somewhat depressed and thickened, with alteration of the "cone of light." Hearing has not diminished, and since the removal of the foreign body the giddiness and headache have ceased. After the age of ten years the earache subsided as the calibre of the ear increased. This case may be regarded as a most remarkable instance of a dangerous foreign body remaining for years in the ear without serious and alarming consequences.—*British Medical Journal*.

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REPORT OF THE MILITARY LYING-IN HOSPITAL OF COLCHESTER FOR 1881 AND 1882.

Dr. Forbes Dick (Surgeon-Major, A. M. D., in Medical Charge), states in this report that, this hospital is simply a double wooden hut, joined at an angle, and is situated in the camp, which is surrounded by a high wall. It is divided into a confinement room of 1,386 cubic feet, and a lying-in ward of 2,520 cubic feet, and four small rooms which act as kitchen, office, store room and matron's room. The lying-in ward has four opposite windows, and is warmed by a central stove; the confinement room has a fireplace. These rooms communicate by opposite doors, which admit of the easy passage of a wheeled *lit de misère*. Other cases of illness are also occasionally admitted for treatment.

In 1881 there were 55 deliveries. Of the mothers, 21 were primiparæ, and 34 pluriparæ; of the children, 32 were males, and 23 females. One female child was stillborn, and one male child died of defective development from prematurity in four hours, and another from cyanosis in twenty-four hours. All were head presentations, and the forceps were twice employed in primiparæ. There was no death of a mother.

In 1882 there were 51 deliveries. Of the mothers, 21 were primiparæ, and 30 pluriparæ; of the children, 34 were males, and 17 females. A very large male child of a primiparæ was stillborn, and also a female twin. A breech-born female child of a primiparæ was recovered. There was one twin case, one breech case, one forceps case, one case of puerperal fever, and one of puerperal mania. There was no death of a mother nor of a live-born child.

The percentage for the two years of primiparæ was 39.38, and of pluriparæ, 60.45; of male children, 62.26; and of female, 37.73; of still-births, 1.89; and of deaths of children from defective development, 1.89; mothers, none; 106 mothers received 1,386 diets in hospital, or remained in it on an average of 13.07 days, and went home with 102 children.

Both personal and general disinfection are carried out in the hospital. On admission, each woman has a footbath and her knees are well washed. This is useful as much in a disciplinary as in a sanitary point of view. A 1 to 60 solution of carbolic acid containing a minute quantity of cassia oil, which makes the smell agreeable, is used for syringing each case once, and some cases three times daily, and for frequently

sponging the genitals. The same solution is evaporated on the central stone, which is very convenient for this purpose; and diapers are washed in chloride of lime water, and chloralum wool as a disinfectant absorbent has been lately placed under them. Chloralum wool soaked with lochia has remained six months in a stoppered bottle without tainted odor. It is believed to be a good aid to personal disinfection, and that it would well fulfill this purpose if more absorbent, by being better carded. For the hands, the carbolic solution, carbolic oil and the nail-brush are in constant use.

Six soldiers' wives were trained as midwives and nurses in 1881, and six in 1882. The majority have left this station. Two are at present nursing in officers' families.—*British Medical Journal*.

THE TREATMENT OF INCREASED ARTERIAL TENSION.

Solomon Charles Smith, M. D., Surgeon to the Halifax Infirmary, after discussing this subject, and dwelling at length on the physiology of the circulation, concludes that the presence of increased arterial tension or blood pressure involves the existence of obstruction at one end, and increased heart-force at the other; that it is important to distinguish between these two conditions; that the form of trace usually considered indicative of high tension really only shows obstruction, which, while necessarily occurring with it, may also occur by itself; that the measure of the tension is the pressure required to stop pulsation in the artery or the circulation in the limb; and that while we should always try to reduce abnormal obstruction, we should but seldom interfere with the tension as such, unless it threaten danger to the heart or vessels.—*British Medical Journal*.

DANGEROUS HÆMORRHAGE FROM THE EXTERNAL GENERATIVE ORGANS DURING LABOR. By PETER YOUNG, M. D., F. R. C. P. E.

In the great majority of cases, bleeding during or after labor is intra-uterine, and is readily controlled by supra-uterine pressure. Sometimes, however, when the bleeding has its origin from a tear in the cervix, this treatment does not suffice, and plugging of the vagina in the first instance, at all events, is urgently required. Occasionally, but still more rarely, alarming and even fatal hæmorrhages may occur from laceration of the vulvar orifice at the vestibule. The submucous tissue between the urethra and the clitoris consists largely of spongy erectile structure, and when torn, even to a moderate extent, is apt to bleed profusely. Of the latter form of hæmorrhage he gave the histories of two cases.

In the first case, a multipara, which was attended by a midwife; he was called in owing to persistent bleeding after the child and placenta were expelled. When seen, the patient was almost pulseless and deadly pale. The uterus was firmly contracted, and the bleeding had ceased. To insure immunity from further loss of blood the vagina was plugged, and a firm compress laid on the vulva. Notwithstanding the vigorous application of the usual restoratives, the woman died in a few minutes, and before arrangements could be made to perform transfusion.

On post-mortem examination the source of bleeding

was found to be a tear at the upper margin of the vulvar orifice, extending from the left side of the urethra up towards the clitoris. Numerous venous sinuses and two or three small arteries were lacerated.

In the second case, a primipara, the child was born a few minutes before Dr. Young's arrival. The patient was pale and anæmic, and in a fainting condition. The uterus was firmly contracted round the placenta, and the bed-clothes saturated with blood. On exposing the vulva, blood was seen flowing freely from the neighborhood of the symphysis which was at once checked by placing the finger on the spot and exercising steady pressure against the subjacent bone. The expulsion of the placenta was proceeded with in the usual way, the finger being still kept applied to the bleeding part. On careful examination the vestibular tissue was found lacerated much in the same way as in the first case. To prevent further hæmorrhage a couple of metallic sutures were inserted, and a compress of cotton applied. The sutures were removed on the seventh day. The patient had made a good but slow recovery. In these cases it is to be noted that pressure on the uterus increases the hæmorrhage, owing to the free anastomoses of the veins of the generative tract and the absence of valves; local pressure and the application of styptics in the slighter cases are the only means of stopping the bleeding. With regard to the etiology, the lacerations were probably due partly to the rapid expulsion of the child's head, but chiefly to a friable condition of the vulvar tissues.—*Med. Press*.

ON THE THERAPEUTIC VALUE OF SULPHUROUS ACID IN SCARLATINA MALIGNA.

Dr. Keith Norman Macdonald, after denying the prevalent opinion, that no reliance can be placed on any drug in cases of scarlatina, does not hesitate in affirming that, when properly applied, both locally and internally, sulphurous acid is by far the most efficacious remedy we possess. He continues, "I have had several opportunities of testing its efficacy in some of the worst cases I have ever seen, during the epidemic which has been rife in this town (Cupar Fife) for the last two months, and I am bound to say that, of all remedial measures in this disease, it is, in my opinion, the most reliable. My treatment is as follows: The moment the throat begins to become affected, I administer to a child, say of about six years of age, ten minims of the sulphurous acid, with a small quantity of glycerine in water, every two hours, and I direct the sulphurous acid spray to be applied every three hours to the fauces for a few minutes at a time, by using the pure acid, in severe cases, or equal parts of the acid and water, according to the severity of the case. Sulphur should also be burned in the sick chamber half a dozen times a day, by placing flour of sulphur upon a red hot cinder, and diffusing the sulphurous acid vapor through the room, until the atmosphere begins to become unpleasant to breathe.

"In the worst cases, where medicine cannot be swallowed, this and the spray must be entirely relied upon; and the dark shades which collect upon the teeth and lips should be frequently laved with a solution of the liquor potass permanganatis of the strength of about one drachm to six ounces of water, some of which should be swallowed if possible.

"In cases presenting a diphtheritic character, the tincture of perchloride of iron should be administered in rather large doses in a separate mixture with chlo-

rate of potash. and equal parts of the same with glycerine should be applied locally, with a camel's hair brush several times in the day ; but, as in the majority of cases among children, it is next to impossible to use a local application more than once ; the spray and permanganate solution will then prove of great service.

"As to other remedies recommended by various authors, ammonia is nasty, and cannot be taken well by children ; carbolic acid has the same fault, and cannot be applied properly. Gargles are also useless in children, because they seldom reach the diseased surfaces, and warm baths and wet sheet packing are dangerous, because they are never carried out properly in private practice. The hypodermic injection of pilocarpine is a remedy that may give good results hereafter, but I have had no experience of its use."—*British Medical Journal*.

CASE OF INTERSTITIAL TUBO-GESTATION.

Dr. Henry Habgood describes the case of a married woman, aged 35, who died with all the symptoms of internal hæmorrhage, in the eleventh week of pregnancy. "At the necropsy, there were about five pints of clotted blood in the pelvic and abdominal cavities. On turning this out, the source of the hæmorrhage proved to be a sac, formed by the uterine portion of the left Fallopian tube and the wall of the uterus, which had grown outwardly to about the size of a walnut, and then ruptured anteriorly. Chorion villi were distinctly visible in the sac. The opening of the tube into the sac had become obliterated. There was evidence of a previous partial rupture, in the shape of a small hæmetocele, on the posterior aspect of the sac. The foetus had escaped into the abdominal cavity, and was unfortunately lost. The left ovary was closely attached to the left side of the uterus by old bands of lymph, and contained several cysts. The right ovary was normal, and contained a corpus luteum. The uterus was enlarged, and its lining membrane was red and thickened, forming a distinct decidua, that could be easily detached. The bladder was healthy, but contained no urine. The abdominal organs were healthy, but very anæmic.

"With regard to the cause of the arrest of the ovum in that particular spot, I may remark that nothing existed in the Fallopian tube or uterus, in the shape of polypus or fibroid, to cause obstruction, but that there were plenty of adhesions on the left side, matting the uterus, Fallopian tube and ovary together, altering their relative positions, and, possibly, causing obstruction. Yet the presence of a corpus luteum in the right ovary, coupled with the cystic condition of the left, would point to the theory of transmigration of the ovum as being the most probable explanation of the phenomenon."—*British Medical Journal*.

CEREBRAL DYSPEPSIA. BY JOHN S. MAIN, M. D.

The author strongly insists on the purely cerebral origin of many forms of dyspepsia, where the patient is neither overindulgent, nor intemperate, nor addicted to hurrying over meals, nor accustomed to eat coarse or unwholesome food. The cerebral form of dyspepsia is well seen, in many cases, where a healthy man, with a good appetite suddenly receives bad news when sitting down to a meal. "But, perhaps, of all conditions acting on the brain in this manner, and through the brain on the stomach, no one is more injurious, or

more jarring to the cerebral elements, than uncertainty, and the worry caused by the same, more particularly in preternaturally, irritable subjects. In fact, it is in connection with this same worry that the form of dyspepsia I have at present under consideration most frequently occurs. The mind, in such cases, preys upon itself; the cerebral elements seem to get jarred and out of gear : and with this condition the stomach sympathises. But in addition to worry the habitual practice of calling into action the "reserve fund" of the cerebrum, as already mentioned, will bring about the same consequences—namely, cerebral fatigue and exhaustion, indicated chiefly by preternatural irritability ; this condition, sooner or later, telling upon the digestive organs. Having said this, it is almost unnecessary to add, that such cases are most commonly met with amongst those who are engaged in the hottest part of the 'battle of life,' or 'struggle for existence'; and, again, amongst these, chiefly those whose business or profession leads to much anxiety, uncertainty, or over stretching of the mental powers. In over-aspiring, over-ambitious natures 'hope deferred' may bring about the same results ; as, according to the biblical expression 'it maketh the heart sick.' My attention was drawn to several cases of dyspepsia, connected with one or other of these conditions, some time ago ; and what made me more strong in my view of these cases being cerebral, and not stomachic at all in their origin, was their obstinacy under all forms of natural treatment. Latterly, I have found that the only treatment capable of doing these cases any permanent good, is a change, in the wide sense of the term—a relaxation from business or study ; and as regards medicines, not such as are meant to act on the stomach directly, but those meant to act on the cerebrum. Amongst these, I have found the most useful to be the bromide of ammonium, or bromide of potassium—perferably the former—given in sufficient dose at bed-time, to secure a good night's sleep, this being often very indifferent, and so tending to complicate the case ; and, combined with this, to be taken three or four times during the day, such medicines as are known to have a building up effect on the nervous system. Amongst these, the most useful being phosphorus, or the hypophosphites, and cod-liver oil. Arsensic and quinine are often also useful, and a generous diet is always indicated. Unless the stomach has passed into a state of disease (which it may do, if overtaken when in this weakened state,) any of these medicines are generally well borne. It will be well to bear in mind, however, that if the mucous membrane of the stomach be in a state of irritation, quinine, arsenic, phosphorus, the hypophosphites, and sometimes even cod-liver oil, are generally inadmissible."—*British Medical Journal*.

MEDICAL NOTES AND NEWS.

Mr. James C. Bayles, editor of the *Metal Worker*, delivered a lecture before the Master Plumbers' Association of this city on the evening of Feb. 6th, a portion of which is published in the number of the *Hydraulic and Sanitary Engineer* for Feb. 15th, and which the very intelligent editor of the latter characterizes as "replete with sound common sense and useful information."

The lecturer in the course of his remarks spoke as follows :

The idea is gaining ground, that what are styled

"modern conveniences" are dangerous luxuries, and that by reducing the plumbing work in our houses to the simplest necessities and depriving ourselves of the luxury of baths, basins and indoor closet accommodations, we shall cut off a good many sources of danger which now beset us. Speaking to an audience composed largely of plumbers, and by invitation of the Master Plumbers' Association, it would be a very pleasant thing to say that this recommendation is an absurdity, and that such conveniences are not dangerous luxuries. The fact is, however, that such a statement would demand a great many qualifications. Mr. Bayles proceeds to describe under the inspiration of what he characterizes as a "day dream," a model house, in which the occupant may enjoy all the comforts and luxuries of "modern improvements," without the evils of sewer gas and of bad ventilation. He informs his hearers frankly, however, that he cannot invite them at present to his model house, for it is not yet built.

One of the improvements intended for his day-dream house is the rejection of the trap now ordered by almost every board of health, or sanitary expert, to be placed between the house-drain and the sewer. He knows very well, he says, that this opinion will be regarded as "rank heresy," nevertheless he is prepared to show that, by retarding the flow of sewage, these traps cause foul gas to accumulate in the house drains, and that they are on the whole more mischievous than useful. If the house drains are properly ventilated by pipes leading to the roof, he thinks the traps referred to will be found unnecessary.

We fear it will be a long time before his new ideas will be accepted, and his day-dream be fully realized.

Decay of Population in France.—The well known fact that there has been through a long series of years a steady decline in the rate of increase of population in France has received fresh confirmation in the report on the census returns of 1881 recently made by the Minister of the Interior to the President of the French Republic. Taking the results contained in this report a writer in a recent number of the *London Times* shows that, while the average increase for every ten thousand inhabitants is one hundred and one in Great Britain, one hundred and fifteen in Ger-

many and still greater in Russia and the United States, it is only twenty-six in France. This small excess of births over deaths in France is not due either to a high death rate or to a small proportion of marriages to population. Neither the death rate nor the marriage rate is exceptional in France. It must, then, be attributed to the birth rate, which is found to be lower in France than in any other country of Europe. Thus in Russia there is one birth for every twenty inhabitants; Germany, one for twenty-five; Austria-Hungary, one for twenty-six; England, one for twenty-seven; Italy, one for twenty-seven, and Spain, one for twenty-eight. In France the rate is one for thirty-seven. As there is little variance in the proportion of marriages to population in the countries named these figures show that the average number of births to each marriage is exceptionally low in France. Statistics also prove that the decrease in the birth rate, and consequently in the rate of increase in the population, has been steady for more than half a century, and the results of the recent census do not show any signs of arrest of this backward tendency.

According to report, the brain of Gambetta weighed only 1.160 grammes, or about 36 ounces. The average weight of French brains is said to be about 48 ounces; but the brain of Dupuytren weighed 62½ ounces, and of Cuvier, 64¼ ounces.

Of distinguished persons out of France, we can mention that the brain of Spurzheim weighed a fraction over 55 ounces; of Abercrombie, 63 ounces, and of Webster, 63¾ ounces. The average weight of the Caucasian brain is about 49½ ounces.

The brain of Gambetta was, therefore, far below the average of sound brains in point of size; but it has long been recognized that the size alone of the human brain is not the measure of power, and that the quality or texture of the brain, its education, or training, and its pathological condition, have to be taken into account in connection with size. As a rule, no doubt, large brains show the most power; but a small brain of the finest quality, in the best training and pathological condition, may be more intellectual than a large, coarse, untrained and physically unsound brain. It is only where other things are equal that size is the measure of power.

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THE AMERICAN ACADEMY OF MEDICINE.

Dr. Traill Green, of Easton, Pa., President of the American Academy of Medicine, in his address at the Sixth Annual Meeting, held in Philadelphia, October 26, 1882, furnishes a brief resumé of the opinions held by distinguished medical men in this country as to the necessity of a thorough preliminary education as a preparation for the successful study of medicine. He also quotes largely from the German professors who regard the classical training as more important to the medical student than the scientific.

The distinguished American surgeons and physicians to whom he refers as having publicly urged the necessity of a more thorough preliminary education than is now demanded in this country, are as follows: John W. Francis, Nathan Chapman, Alexander Stevens, John Ware, Jacob Bigelow, Oliver Wendell Holmes, W. Hooker, T. W. Blatchford, N. S. Davis, Zena Pitcher, James R. Wood, D. Meredith Reese, John Bell, W. K. Bowling, Charles Fishback, C. C. Cox, Henry Miller, Alden Marsh, Harvey Lindsley, Thomas Antisell, S. D. Gross, Yandell, William O. Baldwin, J. C. Reese, George McCook and Geddings; no mention being made of the several contributions to this subject by himself and by the successive presidents of the American Academy, Hamilton, Steiner, Caswell and Lentz, and by its members, Drs. Sibbett, Beard, McIntire, and Dunglison, etc.

The professional sentiment is apparently almost unanimous upon this subject; but until recently what has been said has seemed to have but little influence upon medical colleges, with whom almost exclusively rests the application of the remedy. For many years those gentlemen whose names we have mentioned as having spoken and written to almost no purpose, so far as could be seen in the conduct of those authorized to educate and license medical students. Up to the time when, six years ago, the American Academy of Medicine was organized, there was but one medical

school in the United States, Harvard, which required preliminary qualifications, while now there are 16. Dr. Green points to this fact, as also to other recent reforms in medical education, instituted by the colleges, as furnishing presumptive evidence that the Academy, instituted for the sole purpose of accomplishing these ends, is exerting a wholesome influence.

A REMEDY FOR DYSPEPSIA.

In the recently published correspondence of Thomas Carlyle and Ralph Waldo Emerson, Mr. Carlyle for once becomes amiable when contemplating his possible relief from the torments of dyspepsia by the prospective use of a saddle. — Emerson had sent him \$250 as the first remittance from an American edition of one of his books, and Carlyle thus writes to Emerson:—

"The bill was thrust duly into Baring's brass slit 'for acceptance,' on my return hither some three weeks ago; and will, no doubt, were the days of grace run, come out in the shape of Fifty Pound Sterling; a very curious product indeed. Do you know what I think of doing with it? *Dyspepsia*, my constant attendant in London, is incapable of help in my case by any medicine or appliance except one only, Riding on horseback. With a good horse to whirl me over the world for two hours daily, I used to keep myself supportably well. Here the maintenance of a Horse far transcends my means, yet it seems hard I should not for a little while be in a kind of approximate health in this Babylon, where I have my bread to seek: it is like swimming with a millstone round your neck—ah me! In brief, I am about half resolved to buy myself a sharp little nag with Twenty of these Transatlantic Pounds, and ride him till the other Thirty be eaten. I will call the creature 'Yankee,' and kind thoughts of those far away shall be with me every time I mount him. Will not that do? My Wife says it is the best plan I have had for years, and strongly urges it on. My kind friends!"

It does not appear whether he ever bought and rode "Yankee"; although in a metaphorical sense, as is well known, he often rode the Yankee very roughly.

Happily, living so remote from the British isles, we are quite indifferent as to what he thought of us, and especially because in that matter, as in many others, he was not always of the same mind. His judgment of things and of men, depending apparently, in a great measure, upon the state of his digestion.

We are interested only in observing that he reasoned soundly as to what was most likely to correct the habitual acidity of his stomach, and prevent those unpleasant belchings which he found it so difficult to restrain even in the presence of respectable people; and since he understood so well that nothing but a saddle would cure it, it is to be sincerely regretted that some kind friend did not furnish him with the means of riding as long as he was able to speak and write.

LECTURES.

A CLINICAL LECTURE ON STERILITY,

DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS,

BY

PROF. T. GAILLARD THOMAS, M.D.

GENTLEMEN: I will read you this woman's history. Mrs. J. D., 27 years of age, married 8 years, and never has been pregnant.

I have arranged to-day to present before you three cases of sterility following each other, for I want to give you some illustrations of what sterility is due to, and the

kind of efforts to be employed in curing it. If your experience is like mine, your success in the treatment of sterility will be very slight, and you will not cure more than one or two out of every twenty cases that come to you. But let me tell you of a curious thing you will notice, and that is, that your neighbors will be more successful in this line than yourself; and on the other hand your neighbors will find that you are more successful than themselves. The explanation of this curious fact is, that if you cure two out of twenty cases you will talk more about those two than of the eighteen others, and you will publish your successful cases and every one will hear of them, while the eighteen unsuccessful ones will be entirely forgotten; and the same will be true of your neighbor's success.

There is only one way to get any good results in the treatment of sterility, and that is, to treat every case on its own merits, and not say to yourself that Dr. So and So says that this or that is the best plan of treatment and therefore I will try it. When a woman comes to you complaining of sterility examine her and see if you can find any cause for it, and if you do not then do not attempt to treat her, but first seek for the cause elsewhere, that is, in the husband. In some cases you will find that a constitutional disease in him has affected the vitality or lessened the number of spermatozoa, or a gonorrhoeal inflammation may have at some time existed in the testicle or its appendages and as a result the canals of the spermatic ducts may have become destroyed by an adhesive inflammation agglutinating their walls together, and hence the spermatozoa cannot traverse them. If you can find out which of these causes exists and can remove it you can cure the sterility in the woman.

Our patient here says that she has had no children and she has been married eight years. Let us examine her now and see if we can learn why she has not borne any children for these eight years. She says that she feels pretty well except at the time for her monthly periods when she suffers a great deal from pain in the back and headache and a dragging and bearing down pain in the womb. She is not at all regular in her periods, for they may come on only once in three or four months and then they last less than twenty-four hours usually and she loses only a very little blood. She wants to bear children, and her husband is a robust and healthy man.

Now, gentlemen, you have the history of this case, and it looks as if there was something wrong in this patient herself which prevents her bearing children, and I will have to examine and see if I find her uterus normal and her reproductive organs all in their proper condition before I can say what the cause of her sterility is. Having placed the patient on her back I passed my finger into the vagina and pushed it up until it came in contact with the cervix, which I found about in its normal position; but I discovered something peculiar here, and that was this. As I pressed against the cervix with my index finger the os uteri felt to me like a small pin-hole. This was not a natural os uteri therefore, and the little opening made by it in the cervix gave a sensation to my finger very much like a small dent in a piece of wet leather. This little os uteri would not allow the passage of an ordinary sound, but only of a very small one. As I passed my finger again along the posterior vaginal wall I felt there a lump, and as I pressed against it she winced, and it evidently was pressing down upon the rectum. Then as I made pressure downward with one hand on the anterior abdominal wall, I failed to find the uterine body where I would get it between this hand and the

finger in the vagina. When now I changed the position of the patient, and put her on her side, and introduced a speculum in the vagina, I found that I could pass only a very small probe through the narrow os uteri, and as it entered it turned backward towards the hollow of the sacrum. There was unquestionably therefore a retroflexed corpus uteri.

We have found so far by our examination evident causes enough for her not bearing children. Women with a retroflexed uterus often do bear children, but these are usually women who have had children before, and the displacement of the uterus is due to subinvolution and a feebleness of its supports, but during subsequent gestation, as the uterus swells it straightens itself and so rises out of the hollow of the sacrum and the pregnancy goes on to a favorable termination. But this case is of a different nature, for the woman has never been pregnant. I will tell you the history of most such cases as this, and I suppose it will be her's too. Originally the uterus was standing erect in its normal position, but it had a long narrow cervix with a minute os uteri. Now, when she began to menstruate, this cervix was so narrow that the menstrual blood could not escape, but it would collect in the cavity of the uterus, and then after much pain a clot would be forced out and the menstrual blood be expelled in large quantities. These little clots often form at the internal os or in the cervical canal, and they give rise to intense labor pains until they are expelled, when a great gush of blood follows, and the sufferer experiences a sense of relief. This is repeated again and again, and the uterus becomes distended and unable to support itself, and when it returns to its natural size it falls over backward and produces a retroflexion. This flexion at the os internum presents to a limited extent a barrier to the outflow of blood, which coming against this bend finds it difficult to get out, and now a spasmodic contraction of circular sphincter fibres of the uterine muscles takes place, and thus a sudden spasmodic pain is added to that which existed before. This spasm is due to the overdistension of the uterus with blood, just as in the bladder a spasmodic stricture is caused by the contraction of the sphincter fibres encircling the urethral orifice from overdistension with urine, or a spasmodic colic is caused by an overdistension of a portion of the intestines by gas. So in a uterus like this the following conditions obtain during the menstrual act. By reason of the narrow cervix the menstrual blood comes out drop by drop, and the uterus becomes ballooned and distended by the retained blood, and it gets so heavy that the fundus bends backward, or perhaps forward, and still further obstructs the outlet for the blood, and hence spasmodic dysmenorrhœa is added to the patient's suffering. In the next place the uterus becomes congested by reason of this engagement, and after menstruation has ceased a uterine catarrh or leucorrhœa remains. In these conditions therefore you have found causes enough for uterine sterility; and now that you have found the causes, the question is, have you got the remedy.

This patient says that when she began to menstruate at 18 the doctor had to cut her cervix before any blood could escape, for the os was so small that the cervical canal was imperforate. Now, suppose such a patient should come to your office and tell you that she had been married eight years without having a child, and that she comes to you to be cured of her sterility, if she asks you if you can cure her do not promise her anything. After you have examined her you should tell her that you see here a number of conditions which are sufficient to prevent her bearing

children, but you think that you can remove them, and if so, the chances that she will bear children will be very much greater than they are now.

Now for the plan of treatment. I need hardly tell you that the proper thing to do here is to cut. You should try to remove the morbid conditions; but do not take them up necessarily in the order of their occurrence, namely, 1st, the elongated cervix; 2d, the pin hole os uteri; 3d, the retroflexion, and 4th, the spasmodic contraction and pain. If this patient were at the Woman's Hospital, where I shall try to have her go, I should advise to begin the treatment here by putting her on hot vaginal injections and laxatives, and then keep her quiet till one menstrual period has passed. This will give time for the congestion to diminish somewhat, and will give us an opportunity to watch the course of her menstruation. I would also use the intra-uterine sound to replace the uterus two or three times a week if necessary. Then at the end of her menstrual period I would introduce a speculum, and with a bistoury cut through the cervix by two lateral and a posterior incision. I would pass the knife up to the os internum and then cut outward, first to the left side a distance of an eighth of an inch, and then to the right for the same distance, and then cut up and down posteriorly in the same way, leaving a section thus: Having done this I would take a glass stem nearly straight and push it up through the cervical canal into the cavity of the uterus. You may find difficulty in pushing such a glass stem in the first time you try, and if so cut the incisions in the cervix a little deeper and then pass the stem all the way up to the fundus, and then put in an ordinary Albert Smith pessary, not to keep the uterus up merely, but also to keep the glass stem in place while the cervical tissue is allowed to heal around it. Then I would put the patient in bed and order carbolized vaginal injections to be given three times daily. After she had been quiet in bed for three weeks I would take the stem out, or if she were menstruating I would leave it till after the period had passed, for it does not at all interfere with the process of menstruation, but the blood trickles out along the sides of the stem while the uterus is kept erect and congestion is prevented. If after this it is taken out, the uterus will be found to keep its position and the congestion will have disappeared, and the endometritis and leucorrhœa be lessened, and the spasm of the sphincter muscle will have ceased and the narrowness of the cervical canal have been removed. After this had been accomplished I should be ready to tell the patient to go home, and would only do one thing more. Twice a week I would tell her to come back, and I would remove the stem, and having put a small piece of cotton on an applicator I would soak it in pure carbohc acid and then carry it through the cervix up to the fundus and move it about so as to coat over the whole endometrium with the acid. I never use tincture of iodine or alum as local applications to the uterine cavity, but I do use carbohc acid constantly, and I have never known any harm to come from it. Now, having made my application of carbohc acid I would put back the glass stem and the pessary and let her go. I would keep up this treatment and hope that by the end of eight, or ten, or twelve months I could take out the glass stem and find that the uterus would now stay up by itself without any support, and that the endometrium would be so improved in character that the seminal fluid could pass up without being destroyed, and thus fructify the ovum and produce pregnancy. By this plan of treatment, if our premises are correct, we will have cured the long and narrow cervix, the

flexion of the uterus and cervix, the dysmenorrhœa, and the uterine catarrh. This is what will be done in this case if our patient will place herself in such circumstances that she can receive proper treatment. If she goes to the hospital, after one month of treatment she can go out again, and then twice a week go somewhere where she can have the applications of carbohc acid made, and I hope that the results will amply repay her for her trouble.

CASE II.—Now Gentlemen here is case number 2.—Mrs. L. S., 19 years of age, a native of Germany. Was married at 15, that is four years ago. Has never borne children, but thinks that she had one miscarriage three years ago, and has never been pregnant since. She complains of pain over the region of each ovary, not constant, but coming on three or four days before each monthly sickness and lasting all through the period and for a day or two after, when they disappear. Those can be put down certainly as ovarian pains because of their fixed position and limited duration. She also at the same time has pain in the top of her head. This is what is called a uterine headache. She has the whites. Is anxious to bear children.

You have heard the history of this case. A young girl was married at fifteen, and at the end of a year she became pregnant and had a miscarriage, and she now thinks there is no doubt about that. She comes to us complaining of never having been perfectly well since. But that is not what troubles her most. She is sterile, and she has passed three years hopeful of becoming pregnant and she has not. Now the question is, how are we going to benefit her. We have had one case to-day of sterility due to a retroflexion of the uterus and a narrow cervix, but there is nothing of that sort here. We must therefore investigate this case in the same way as we did the last and see if we can discover the cause of her sterility. If we can find no cause for it then we should tell her so and not make any attempts at treatment.

I placed this patient on her back and I found the following conditions to exist. As I passed my finger up the vagina it did not come in contact with the cervix as it ought to, but on turning it over I found the cervix almost out of reach on the posterior vaginal wall, and as I pressed my finger down I discovered that the body of the uterus was lying back directed in a straight line toward the hollow of the sacrum, and it was pressing upon the rectum. I also discovered on directing my finger to the sides of the uterus, the ovaries, about twice their normal size, which you ought not to find because the normal ovary can not usually be felt or mapped out. But I can touch her ovaries easily and they are sensitive to pressure. I next put the patient on her side and examined her with the speculum, and from the cervical canal I found hanging out a long string of whitish mucus, looking like the white of an egg. This mucus is very tenacious, and if you were to take a sponge and pass it up to the cervix and twist it around you would find on withdrawing it that the mucus would come with it like a piece of India rubber down to the mouth of the vagina, and then it would spring back. If you then should take a piece of absorbent cotton and put it on a probe and thus try to cleanse the cervix, you would find it very hard to do. But if you take a little piece of dry sponge, about the size of a large pea, and pass it by the forceps up to the os internum you can then twist out this egg like material so that you can see the mucous membrane, and in this case you would find it very red and bleeding easily, and having very much the appearance you will see on the conjunctiva of patients with granular lids, at the eye infirmary.

This was probably the history of the disease in this case: The girl was perfectly healthy until at sixteen years of age she had a miscarriage from some cause not known. She probably got up on the third or fourth day after this, and very likely with the consent of her physician, for many doctors seem to think that the same amount of care is not necessary after an abortion as after a labor at full term, and the uterine supports not being sufficiently strong to hold up the uterus it fell backwards, and the uterine ligaments, especially the broad ligaments, being pulled on, the circulation in them was interfered with and the uterine veins became congested. This congestion has continued therefore for three years, and as a result the glands of Naboth have taken on a chronic inflammation and are constantly pouring out this thick mucus secretion. The diagnosis we have arrived at here is therefore, a retroversion of the uterus, with uterine engorgement and endometritis, and a sympathetic enlargement of the ovaries.

You may attempt treatment here, but you will find that this chronic inflammatory condition of the Nabothian follicles is almost incurable. The great Dr. Tyler Smith has recently estimated that in the *arbor vitæ* of the cervix, between the *os internum* and the *os externum*, there are no less than ten thousand of these Nabothian follicles. Is it any wonder therefore that this diseased condition is so incurable? I wonder that it is ever curable! Now how shall we treat this patient? First we will put the uterus in place and retain it there by a pessary; so as to keep it in an upright position by mechanical influences until it finally falls over forward of itself. Then this mucus secretion must be removed by syringing the vagina out with very warm water every night, and then the whole of the inside of the uterus must be painted over with pure carbolic acid. I have given up all other applications above the *os internum* and only use pure carbolic acid, which is the best I know of. The result of this plan of treatment I think will be that, in a year or so she will feel much better, and she may become pregnant after this thick mucus has disappeared. I doubt if this woman will come in the category of the two curable cases rather than in the eighteen incurable ones with which I said you would meet; yet still she ought to have the benefit of the doubt and see what treatment will do for her.

Now, Gentlemen, I have no doubt you think I am very discouraging in my remarks about the treatment of sterility, but I would not be honest with you if I should tell you that I could cure either of these two cases we have just seen, for no living man could be sure of this. Yet they may possibly both be cured. But I think this doubtful simply from the pure difficulties of the cases, yet happily all patients are not so difficult to cure of sterility as these.

CASE III.—This next patient is Mrs. R. G. an Austrian. She has been married 6 years and has never been pregnant. Is 24 years of age. She has never had a miscarriage and her only trouble is that she does not bear children. She is anxious to become pregnant. She is unwell regularly every month and flows for from four to six days. She does not suffer much pain at these times except every second or third month, and every alternate month as a rule she is perfectly free from suffering. Notice that fact, Gentlemen; the patient says she sometimes suffers agonizing pain at every second monthly period and at the alternate period not at all. It is a curious fact that some patients who live in mountainous districts will suffer greatly at every monthly period but if they remove to

the sea coast they feel better at once and have no more pain. Again other women who live on the sea coast will suffer pain every month but if they take a trip to the mountains the pain will disappear. Again some patients who live in malarial districts will have much pain at every monthly period but if they go away from home they will have none at all. I knew at one time a patient who had lived in Cuba but when she came here she always suffered much pain every month. On returning to Cuba however her painful menstruation entirely disappeared. This then is one of those cases where the pain is supposed to be due to some temporary abnormal condition which is not severe enough to cause a constant return of dysmenorrhœa but only gives rise to an occasional spasm of the uterus, but a change of surroundings is enough to cause a beneficial influence over this condition and the patient gets well, but when she goes back where the former influences prevail the old condition returns.

One of my humorous assistants has written on the back of this patient's card,—“Crazy for a child.” You have doubtless noticed how I ask each patient who comes to us for sterility, if she is anxious for children. This is necessary in this age when so many women try in every way to avoid becoming pregnant, in order that you may not be deceived as to the cause of the sterility. But as this patient is anxious to become pregnant we must search for the cause of her not becoming so.

When I placed her on her back and passed my finger into the vagina I found nothing remarkable until my finger touched a very little *os uteri* which felt like the *os* of an undeveloped or an atrophic uterus. Not only was the *os* very small but the cervix had a peculiar feel and instead of being rounded as it should be with a recognizable *os* in its centre, I felt that the uterus was of normal size but with a pointed or pyramidal cervix and a pin hole *os*, through which only a very small probe could be worked with difficulty. That was the only condition present, and she had no leucorrhœa. The probe took a natural course in the cavity of the uterus showing that the organ is in proper position. I think therefore we have found the real cause of her difficulty, though we cannot be sure of this. If you will look in Sims' book on Uterine Surgery you will find that he says that this condition of a pyramidal cervix with a pin hole *os* is one of the commonest causes of sterility.

This case will go with one of those two successful ones and not with the eighteen, and I think she can certainly be cured if she will submit to the operation necessary. This is the operation:—Slit up the cervix on each side with the scissors and then cut off the ends of both the anterior and posterior lips and then adjust the edges and bring the two lips together with sutures by Sims' method, and then put in a glass stem and leave it in place while the cervical tissues heal about it. By this means you will get a short cervix with a large *os* which will easily allow the passage of spermatozoa into the uterus. In some cases of pin hole *os* however the cervix is not long enough to make an excision of it necessary. In such cases you need only make the slits in the sides and then put in a glass stem with a pessary to retain it in place, and probably within six months the sterility will be cured.

Having now shown you three cases, in two of which the chances of success are very doubtful, I am very glad to be able to end up with one which presents fair prospects of being cured of her sterility.

CLINICAL LECTURES ON THE NERVOUS DISEASES OF CHILDHOOD.

BY

E. C. SEQUIN, M. D.,

Professor of Nervous Diseases, College of Physicians and Surgeons, New York, etc.

LECTURE II.

GENTLEMEN: I purpose speaking to-day on the cerebral affections of children. Here I present to you two backward children. The one has a hemiplegic weakness; the other child presents the condition of stiffness of limbs known as tetanoid.

CASE I.—Boy aet. nine years. Was a small baby. The mother was ill four weeks before confinement. Seemed different from other children, throwing the head back on the pillow. At about six months began to have still fits, *i. e.*, slight convulsive movement with bluish face, at irregular intervals till one month ago. One year ago had a severe series of attacks for eight hours. Right side was more affected than the left. Mother does not think that he ever used the right side well since three months old. There is a decided difference in the two sides of the body. The right side is stiffer and weaker and is less used. He has had considerable contracture of the knees, having been tetanoid. On account of epileptiform attacks and stiffness of limbs was circumcised by Dr. Dupuy four years ago. There was a relief of nervousness but no relief of stiffness and contracture of legs. There is no stammering and no lingering paralysis. There is convergent squint which has been noticed since sixth month. Child is more intelligent than the absence of speech would indicate. Obeys commands and understands nearly everything. Toes are turned in; knees stiff and increase in reflex is greater on the right side. Right half of the tongue is smaller than the left; right hand smaller and a little jerky in movements. The condition is one of uncured right hemiplegia and nearly congenital aphasia.

The objective symptoms are reduced size of the right half of body; right hand smaller than the left; left face is not affected.

This child was a delicate baby and unpromising to start with. The mother had been ill before she had any influence on the nutrition of the foetus. His throwing the head back in the first few months of life is not a symptom which indicates more than irritability and debility. Apparently the convulsions were the first symptoms and the squint appeared simultaneously.

It seems to me that within that period from the third to the sixth month there was a lesion developed, either destructive from mal-nutrition of the brain, or else there was a small hemorrhage which partly destroyed the motor areas from the arm, leg, tongue and face. If we take into consideration the absence of any sudden attack, it seems that the case was one of a slowly destructive lesion from want of proper nutrition of the brain substance, and the region affected in either of these areas was on the left side. The child has not learned to talk because of the lesion on the left side of the brain. The lesion involved the third frontal convolution. We have here aphasia previous to the development of language. There was on the left side of the brain also a lesion sufficient to interfere with the acquisition of the proper functions of the leg. He should be taught to articulate. It is possible that

the third frontal convolution on the right side will take on the functions of the one which underwent injury. He should have gymnastics to develop the muscles on the right side. The contracture can be cured by passive movements and gymnastics.

The prognosis as regards mental development should be guarded.

CASE II.—Female child aged 2 1/2 years. Child has stiffness of legs. There is resistance at the elbow-joint; a certain amount of resistance in the hand. There is extreme spasm of the adductors and flexors of both legs and tetanoid paralysis. There is highly increased reflex of the knees. Rhythmical contractions take place in a reflex way. Highly increased patellar reflex. Tetanoid state; small head and idiotic condition of mind. There are no convulsions.

In a certain number of cases of tetanoid paralysis the minds are unaffected.

This condition is intimately connected with a lesion of the posterior lateral columns. In adults we have a primary lateral sclerosis. I believe that this lesion of the lateral columns is always secondary. The posterior lateral tract of the spinal cord is a part of the motor region of the cortex of the brain. It can be traced by degenerative changes in adults. In children born with deficient brain there is want of development of the posterior portion of the spinal cord. For at the second month of foetal life the postero-lateral portion of the spinal cord is rudimentary and through some lesion in the motor area of the brain there is found to be a descending degenerative change down to the postero-lateral columns. This would make a strong support for a theory of these infantile cases. First of all these stiff arms in idiots without atrophy and anaesthesia with greatly increased tendon reflexes must be due either to want of development of the motor tract or to a disease of the motor tract. This condition of lateral sclerosis in the motor tract in cases of stiff legs and arms of idiots is consonant with the remarkable fact that in some cases there is pretty fair mental development, and the absence of convoluted matter is to be found in this further explanation that so far as we know the functions of this portion of the brain the median region of the hemispheres is essentially motor. While the motor manifestations are essential to the development of mind, yet there are a great many parts of mental development which are more connected with the sensory areas of the brain—the posterior temporal lobes—than with the motor area. An adult may have extensive lesion of the motor tract of the brain and yet remain perfectly intelligent.

The worst cases of hydrocephalus are those with premature closure of the fontanelles. The fontanelle is a sort of safety-valve for the development of the brain and usually remains open for the first year. It allows for the congestive changes, growth of the brain, and for a good many variations of volume which must take place in the first two years of infancy. Here it was closed in five months. The closure of the fontanelles indicates a tendency to a recurrence of tetanoid symptoms.

There are cases of idiocy in little children with or without motor symptoms which arise in consequence of debilitating, acute disease. Children may be born perfectly well and remain so till the first or second summer. Then from an attack of cholera infantum, with the necessary starvation which accompanies that disease, they have anaemia of the brain and hydrocephalus. After recovery the child again acquires fat and blood. The brain however does not show the proper amount of activity and the defect may be motor or

psychical, very often both. The child may be left with stiff legs and a degree of paralysis, either hemiplegic or general and very often epileptic. I have traced quite a number of cases of epilepsy back to an attack of this kind. It may be any other disease which produces anæmia for a certain number of weeks.

The explanation of this very serious result of acute disease is that the brain is starved during a period of extreme growth. During the second year of life the brain is the most active portion of the development of the body. The brain is positively or relatively starved in blood. It is soaked in fluid, and when the arterial tension or the amount of blood diminishes in it, the deficiency is made up by an effusion of fluid. When this occurs there is immediately extended from the vessels a compensatory amount of fluid. In typhoid fever, chronic Bright's disease, etc., there is this exudation or pathological dropsy of the brain. This soaked cedematous condition of the brain, which is perfectly demonstrable post-mortem, is of course highly unfavorable to nutrition. The ganglion cells must become more or less granular, shrunken and impaired in their texture by the presence of so much watery fluid and the relative absence of rich arterial blood. There need not be in these cases any gross lesion. The epilepsy in these cases is commonly "petit mal." The child is said to have "queer turns."

CASE III—This young girl, gentlemen, has a peculiar form of spasm accompanied by a noise. The spasm consists of a number of movements. There is some diaphragmatic action, movement of the left shoulders and there is a resemblance to laryngismus in the sound she makes. Referring the spasms to its nervous distribution, we find that the nerves involved are those which supply the intrinsic muscles of the larynx, the diaphragm and elevator muscles of the scapula. These are the phrenic and spinal accessory. The phrenic is formed by filaments from the third and fourth cervical and supplies the diaphragm. The spinal accessory has a very extensive origin, partly spinal in the lateral and central portions of the spinal cord as low down as the fifth, sixth and seventh cervical nerves. A part arises from the medulla oblongata below the calamus scriptorius at the gray portion of the floor of the fourth ventricle. The spinal portion of the spinal accessory supplies the trapezius and sterno-cleido-mastoid and the bulbar portion supplies the intrinsic muscles of the larynx.

As regards the existence of any central disease we have no post mortem evidence to show that there is an organic lesion capable of producing these spasmodic manifestations. I have no hesitation in the case of a healthy child like this to say there is no organic lesion at all. It were possible that this be caused by a condition of anæmia which is the basis of a great many hysterical symptoms. Different patients become over excitable because they are starved to get rich blood. Thus neuralgia is set up in anæmia. The condition of over excitability and irritation at the origin of the motor nerves produces spasm. The most likely cause of trouble in this child is a peripheral irritation which is simply a diffused pelvic irritation approaching puberty. This little girl is eleven years, very bright and forward and the probabilities are that she will mature very soon. She looks like it. My impression is derived partly from the certainty I have that there is no local organic lesion in this case and partly from the absence of any other peripheral trouble. There is no dyspepsia, no irritation of worms, no local disease. In view of this, together with the age and forward condition of the child men-

tally, I believe that the fullness of the ovarian plexuses, the general irritation, unconscious to the child, which is preliminary to menstruation is the cause of this extraordinary reflex spasm, and whether treatment by medicine will help her or not is a little uncertain. If she were suffering from severe dyspepsia with irritation of the branches of the pneumogastric causing reflex spasm it would be comparatively easy to treat her. I have given her bromide of potassium in moderate doses, 1.30 gms. every night and have blistered the back of her neck without any improvement at all. I may conclude to give her ergot in view of this theoretical cause. With respect to hiccough, I have seen several very formidable cases of that disease. There was a case in Prof. Detmold's clinic in which the patient had hiccough many times a minute for several months. She suffered excruciating pains in the hypochondriac region. The hiccough had degenerated. It was a combination of hiccough and laryngismus and cough when I saw her.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK COUNTY MEDICAL SOCIETY, February 26, 1883.

The president, Dr. David Webster, in the chair. After the transaction of routine business, the scientific paper of the evening entitled

"THE INTIMATE NATURE OF TUBERCULOSIS, ITS TRANSMISSIBILITY AND ITS PARASITIC ORIGIN,"

was presented by its author, Dr. Charles Heitzman, and discussed by Drs. W. T. Belfield and A. Jacobi.

Dr. Heitzman prefaced his remarks on the nature of tuberculosis by some general pathological and microscopical explanations regarding the ultimate elements of tissue. The following is an abstract of the lecturer's remarks.

The human mind is in some of its manifestations a queer study. Once let a doctrine gain a foothold there and it is difficult to eradicate it. If we undertake any scientific work our only safe guide must be truth. This is especially apparent in microscopy, where the fallacies of untenable theories are speedily shown. Nine years ago I presented to you some doctrines which were not then proven or accepted by others, and I was regarded as visionary. Instead of these doctrines being refuted by subsequent experiments by other observers, they have been confirmed, and are now recognized and accepted by scientists abroad. Stricker has corroborated the main parts of my discovery, and by a series of entirely independent experiments and observations has arrived at the same conclusions. I will briefly repeat to you this doctrine which is opposed to that which has been maintained by many.

I believe there are no individual cells, they are all connected by shoots of living matter. The structure of the so called protoplasm is reticulated, it is by no means composed of single cells, but the whole organism is one continuous mass of living matter. In 1880, Stricker asserted that this tubercular structure was apparent in saliva corpuscles. In hyaline cartilage I found that by the use of the proper reagents it could be demonstrated that from the whole periphery emanates a reticulum strictly identical with that of corpuscles. Cartilage corpuscles themselves are thus con-

nected. This living matter is present in basic substance, although the reticulated structure is concealed until made visible by reagents. Chloride of gold and nitrate of silver were formerly used, but now the process is a far simpler one which makes this demonstration easy to a child.

In 1880 Stricker announced that under favorable conditions we can observe movement in the basic substance of the cornea. A few weeks ago he announced in a public lecture at Vienna that after six years hard work he has arrived at the conclusion that basic substance is endowed with life the same as protoplasm. In consequence of this he further says, the old cell doctrine must fall to the ground. Having made to you these two assertions, viz: as to the reticular nature of protoplasm and the life of the basic substance which are not now accepted by me alone I will proceed to speak of some facts relating to the inflammatory process which I may say are not yet acknowledged outside my own laboratory.

If the basic substance is alive we can understand the process of inflammation. John Hunter has said that inflammation consists of a reduction of the tissues into their juvenile elements, thus the corneal corpuscles divide and produce inflammatory infiltration. This theory is opposed to that of Cohnheim who maintained that inflammation consisted of the emigration of colorless blood corpuscles, though he does not say what becomes of the old tissues. Cohnheim had many followers. The theory of Hunter is nearer the truth. Stricker has demonstrated that the tissue being alive, not only does the cell divide but also the basic substance itself which assists in the formation of inflammatory products. Under the microscope we are able to observe the disassociation of the basic substance. The whole basic substance splits into elements which form the inflammatory corpuscles. This is certainly a strong confirmation of John Hunter. The fact which I have demonstrated, and which Stricker does not allude to is that all the elements of inflammation remain connected by sprouts which are off-shoots of the tissue itself.

The inflammatory process may take two courses either the hypertrophic or the ulcerative. A tissue never ceases to be a tissue, though it grows eventually into a new element. Augmentation of bulk may take place. If, however, the off-shoots become broken as by mechanical violence they are suspended in serous liquid and pus in the result, which never forms tissue but is extraneous matter which must be gotten rid of.

This is the process of inflammation in connective tissue. In epithelium the process is similar.

An important point to be considered is the structure of the blood vessels. The changes which take place in the epithelium occur also in the endothelium. First swelling takes place and then step by step a breaking down into elements which form the inflammatory corpuscles. In simple croupous pneumonia in the stage of gray hepatization many blood vessels perish. If the inflammation takes a favorable course these are reproduced. Should the result be hyperplasia cicatricial tissue is formed. In ulceration the tissues are deprived of their vessels.

There is a striking difference in the aspect of pus from different individuals. That from a strong healthy person is thick and yellow, that from a strumous person gray and serous.

Several years ago I brought this subject of the appearance of corpuscles before you and drew some inferences as to nature of constitution and vitality from the appearance of the corpuscles. In the one case

there is a large amount of living matter present, in the other very little, the former indicating a robust person the latter a weak one.

When an originally good constitution becomes broken down as by struma or tuberculosis, the pus corpuscles are pale and mixed with cheesy pus, finely granular and scanty living matter.

If inflammation takes place new tissue is formed and a variable amount of the infiltrated tissue is deprived of its vessels through the process of disassociation, and from that moment the tissue is doomed. Whether the inflammation run an acute or chronic course the process is the same, a transformation into a mass which is destined to die. In the lung the inflammatory corpuscles choke the alveoli, there is complete absence of blood vessels and a part or perhaps the whole lung dies.

It is evident that this doctrine is far different from that presented by Virchow, and Niemeyer.

There has been a sharp line drawn between phthisis and miliary tubercle. I see no difference between these. Should an inflammation focus be present it is virtually a foreign body, as an abscess. The term deposit used by Hahnemann we have to-day done away with, it is not an extraneous deposit but the tissue itself with which we have to do. In an abscess the process is a rapid one, in the tuberculous foci a slow one. Around this cheesy mass deprived of vessels, forms a capsule, a tissue which has vessels.

Now if new inflammation occur from irritation, ulceration of the capsule may occur and a deposition of lime salts takes place. This healing process is frequently seen to have occurred in the lungs of those dying from other diseases, but this does not usually occur, since when one focus heals in this way a new one forms. In miliary tubercle the inflammatory foci are numerous. Between the infiltrated and nodular tubercle there is no material difference, though Virchow insists on such a difference. From this point of view it will be seen that scrofulosis and tuberculosis are equally regarded as being dependent upon a want of living matter. Clinically they are different, but pathologically they are identical.

Having made to you these pathological explanations I will consider a question of great practical importance, viz.: Is tuberculosis contagious or infectious? This question is not decided by clinical observations. During the latter part of the last century there was a strong belief in Germany that tuberculosis was infectious but this belief gradually disappeared and where I studied in Vienna there was no such theory held. When it was boldly announced in Paris that tuberculosis was contagious we were thunderstruck. To-day widely divergent opinions on this question are held. Experiments seem only to have confused this subject still more.

Villemin, by inoculating rabbits with tuberculous matter, produced the disease, but Cohnheim demonstrated that the inoculation of tuberculous matter was not necessary, the injection of any irritating substance or even injury alone was sufficient to produce the disease. Then we all thought this question was settled, but subsequently Cohnheim himself became the strongest advocate of the infectious theory and Klebs also became its advocate so that again we were at sea. Rabbits whose corneæ were injected with tuberculous matter died of the disease and those fed upon the milk of tuberculous cows likewise succumbed to it, but these experiments were negated by the fact that the injection of the rabbit's corneæ with syphilitic material was followed by tuberculosis.

In considering the value of such experiments it must be remembered the rabbits and guinea pigs were confined in dark places and put on poor food so that they became sick in a few days with diarrhoea. And when it is remembered that rabbits and guinea pigs have very little living matter in comparison with other animals, the cat for example, one may more readily believe that these animals are naturally predisposed to the disease and see how a simple wound may sometimes be sufficient to bring about general tuberculosis. On the other hand, I have witnessed experiments in which rabbits kept in the fresh air and properly fed were not inoculated. Animals kept in confinement in a menagerie eventually become tuberculous. It seems to me that tuberculosis is a constitutional disease, to which some are predisposed. The term *depræcia* which was used to indicate predisposition to disease was discarded by Virchow who substituted *diathesis*; others call it *disposition*, but they all are expressive of a certain debility of tissue which make it more fit for disease. I thought what I saw under the microscope would solve this question, but perhaps I was too sanguine and I must still prove how far constitutional condition is shown by the amount of living matter present in the tissues. The time may come when an accurate comparison may be made between the diseases to which an individual is prone and the amount of living matter in his tissues.

Next discussing the bacillus of Koch Dr Heitzman said.—I had intended saying many things on this subject but the recent brilliant presentation of it by Dr. Belfield before the Alumni association has taken the wind from my sails. That the bacillus of Koch exists there can be no doubt. To this bacillus attaches much diagnostic and prognostic importance. The greater their number the more rapid the progress of the disease. But the important question is what causal relation exists between these bacilli and the disease. A great many observations and experiments are necessary to settle this question. If centuries of experiment have not settled it we should not despair if we are unable to solve it at once.

The fact that bacteria are found in the interior of joints shows that under certain conditions bacteria develop from certain germs which are constantly circulating in the blood. In conclusion Dr. Heitzman thought that from one point of view even now it could be legitimately said that the bacillus of Koch caused tuberculosis.

Dr. Belfield of Chicago said.—Most of us find it extremely difficult to shake off the teachings of early youth. I had expected to-night to hear only the pathological side of this question but am pleased to have heard presented the practical side as well. I am for the most part in harmony with the statements made except that I think the Doctor lays too much stress on the fact that mechanical irritation is followed by tuberculosis. Dr. Belfield also alluded to some striking experiments bearing on this question in which animals breathing the expired air of phthisical patients died, while those breathing such air passed through carbolized tow did not die. Phthisical sputa inhaled by dogs developed the disease but when inhaled after being boiled it failed to do so.

Tuberculosis, like pyæmia, though infectious might occur spontaneously or follow a wound, or specific inoculation. The important question was not whether tuberculosis was infectious, (which was pretty well settled now), but what was the agent of infection.

Dr. Jacobi admired the lucidity with which Dr. Heitzman had presented his views and convictions.

He had however been very positive about some facts which from the standpoint of clinical observation he (Jacobi) must doubt. Thus he could not accept the statement that miliary tubercle and phthisis were identical, at least in their origin, nor that it is the same thing to say *dyscrasia*, *diathesis*, or *disposition*. The influence of age on miliary tubercles has not been brought out.

I believe that phthisis can be transmitted but I also believe that other diseases, as eczema for example, which are not considered transmissible are so.

There will be transmissibility when there is congenital similarity or reciprocity.

Dr. Heitzman closed the discussion. The society then adjourned.

SELECTIONS FROM JOURNALS.

THE OPERATIVE TREATMENT OF CANCER OF THE TONGUE.

Dr. Wölfler (Langenbeck's *Archiv*, Band xxvi., Heft 2) says that, from the year 1871 to the end of 1876, forty-two cases of carcinoma of the tongue were operated upon in Billroth's Clinic. Of these fifteen died (38.4 per cent.) in consequence of the operation. From 1877 to 1881 forty-five cases were submitted to operation; of these nine proved fatal (20.0 per cent). All the patients were men. Out of 115 cases of cancer of the tongue treated at the Clinic, only four of the patients were women (3.4 per cent.). In cancer of the floor of the mouth, it was found that glandular enlargement took place in the submaxillary region, while in cases in which the tongue itself was affected, the retromaxillary glands were those implicated. It was also found that, in the treatment of lingual carcinoma by palliative measures, the average duration of life was thirteen to fourteen months, while by operative measures the period was lengthened to nineteen and twenty-one months. According to the estimation of authors the prognosis of cancer of the tongue, as regards immediate mortality, is not so unfavorable as in rectal carcinoma.

During the last three years Dr. Billroth's improved method of operating has been in vogue, and the statistics show that the fatal cases during that period amounted to 17.6 per cent., while in previous years the mortality was 32 per cent. The best proof of the utility of the present operative measures is, that many cases of widely spread disease of the tongue and floor of the mouth have remained perfectly well after healing was complete.

The steps of Billroth's method are as follows: Both lingual arteries are first ligatured; the mouth is then kept open by a speculum, and all diseased teeth opposite the ulceration are extracted. The gum is next separated from the inside of the lower jaw with the raspator. Excision of the floor of the mouth is then effected by means of scissors and forceps.

The bleeding points are ligatured, and the tongue, being drawn forward, is finally extirpated. After the separation of the organ, permanganate of potash, either in powder or in watery solution, is applied to the wounded surface, and a drainage-tube, of the thickness of a finger, is inserted through the floor of the mouth. Through this the various discharges escape, and diphtheria of the mouth, cervical phlegmon, and broncho-pneumonia do not occur in such cases when properly drained. The patients are fed by means of a stomach-tube, until the drainage opening has quite closed.

The proceeding is not so severe as the methods of Langenbeck and of Regnoli and Czerny; and the immediate results of the operation are more favorable than by any other plan, viz.—84.2 per cent. of recoveries. The deaths were caused by septicæmia (acute or chronic) or by pyæmia. In seventy-one cases ten radical cures have been obtained (14 per cent.) by Professor Billroth; while in 373 instances of mammary excision, only fifteen radical cures have resulted.—*London Medical Record*.

ELECTRICITY AND INTERMITTENT FEVERS

The treatment of intermittent fever by electricity in the Medical Clinic of Genoa, directed by Professor de Renzi, has given very good results (*Annali Univ. di Med.*) Electricity was first tried in the treatment of intermittents by Frank and Borsieri, afterwards by Aldini, Cavallo, and Puccinotti, and lately, after having been neglected, for a long time, by Bossi of Rome, Sini of Leghorn, and by Shipulski, Deparquet, &c. In De Renzi's hands it gave immediate and decisive results. He says that in the majority of cases intermittent fever can be cut short more promptly than by quinine. In nine cases he had five complete cures, one marked improvement, one slight, and two unsuccessful cases. He uses the constant and the faradic currents; the constant applied for five to fifteen minutes in ascending direction along the spinal column, the rheophores being placed over the two extremities of the medulla; the faradic of medium intensity for half an hour, the patient holding a rheophore in each hand. The faradic was more efficacious than the constant current. The new studies of De Renzi have confirmed the possibility of overcoming intermittent fever by this method, but do not solve the following questions: Why is a rapid and complete cure sometimes obtained, while sometimes it is incomplete? What is the best method of applying electricity? When ought it to be preferred to the preparations of cinchona?—*London Medical Record*.

GASTRIC IRRIGATION.

This operation is becoming every day more recognized as useful in suitable cases. Bianchi relates four cases (*Lo Sperimentale*, June 1882). 1. Chronic gastritis, simulating cancer, pains in the right side, great emaciation, vomiting of food and blood, followed by relief. Many remedies were tried with no good effect until irrigation of the stomach with water at 12° or 14° C. (53.5° or 58° F.), was resorted to. The patient felt better the same day. The irrigation was repeated every morning, at first with plain water, afterwards with water containing 8 grammes of bi-carbonate of soda to the litre. The patient was discharged cured in a month, having gained 5 kilogrammes in weight.

2. Chronic catarrh (drunkard's), with probable pyloric stenosis of inflammatory origin. There were pyrosis and vomiting of food preceded by pain in the epigastrium; cure in a month. 3. Gastric catarrh, with marked dilatation of the stomach. Great improvement followed in three days, when the patient left. 4. Carcinoma of stomach, fixed pain in the pyloric region, vomiting of blood, even more than three litres in twenty-four hours. The patient experienced much relief from the irrigations, and was able to take liquid nourishment and gained strength for a time, but died after a month, worn out by the cachexia and debility.—*London Medical Record*.

CAPILLARY PUNCTURE OF THE STOMACH FOR THE INJECTION OF LIQUIDS.

Dr. Iginio Tansini, of Lodi, (*Gazz. degli Ospitali*, Aug. 16) proposes this operation as likely to be often of great service, especially where passing the œsophageal tube is impossible or unadvisable, and where antidotes have to be promptly introduced into the stomach. Gastrotomy is always a serious operation, while puncture by a capillary trocar he has proved by experiments on animals to be harmless. From his studies on the dead body he believes that it is practicable, even with the stomach empty and retracted. Labbé says that the anterior surface of the empty stomach is directly accessible in a triangular space, whose space is below and corresponds to the great curvature (or to the transverse line which joins the cartilages of the ninth ribs), and whose margins are—to the right, the left lobe of the liver; and to the left, the margin of the false ribs. Tansini introduces the trocar about 6½ centimètres from the xiphoid apophysis on the left, near the costal margin, the trocar being directed slightly towards the diaphragm. For greater security, when the stomach is pushed against the diaphragm, he introduced the trocar in the eighth left intercostal space, close to the sternum. He owns that the introduction of a trocar through the abdominal and intercostal parietes into an empty stomach is uncertain: the risk is run of either not penetrating the stomach at all, or of penetrating too deeply. He therefore recommends an incision to be made 3 centimetres along the left costal margin, the centre of the incision to be about 6½ centimetres from the xiphoid apophysis. Thus the anterior surface of the stomach may be exposed and seen to be uncovered by the left lobe of the liver and colon, and if this last be in the way it may be pushed down and the trocar then introduced.—*London Medical Record*.

INTESTINAL OBSTRUCTION CURED BY CAPILLARY ENTERO-PUNCTURE.

Dr. Giulio Dozzi (*Gazz. Med. Ital. Prov. Venete*, Sept. 23, 1882) relates the case of an old woman aged seventy who, after eating a large quantity of watermelon and swallowing the seeds, suffered from obstruction of the bowels. Purgatives and injections had been tried with no relief. The meteorism was enormous. He determined to try entero-puncture, using trocar No. 2 of Dieulafoy's aspirator. Four punctures were made, two in the right iliac region, the third in the left upper fourth, and the fourth in the left lower fourth. From three punctures issued an immense quantity of gas; from the fourth no gas, the trocar being plugged with fæcal matter. A dose of oil given the same evening procured four copious evacuations, and the patient made a good recovery. One of the punctures gave rise to a small abscess. In this case peristaltic action was evidently prevented by the enormous quantity of gas, arising from the decomposition of the retained fæces.—*London Medical Record*.

THE ABORTIVE TREATMENT OF GONORRHOEA BY IODOFORM.

Mr. W. Cheyne reviews in the *Lancet*, Aug. 1882, 175-213, the various means of cutting short an acute attack of gonorrhœa, giving his experience as to the quickest method of bringing about this result. By the means usually recommended, the injection into the

urethra of a solution of nitrate of silver, tannic acid, wine, &c., an attack of gonorrhœa generally lasts from four to six weeks, to say nothing of the agonizing pain and inflammation usually caused by this supposed abortive treatment. Mr. Cheyne has found after long experience that, to bring an acute attack to the chronic stage as quickly as possible, the best means are the introduction into the urethra of a rod, made of eucalyptus oil, iodoform, and cocoa-butter, to be retained as long as possible, and the internal administration of copaiba; when the rod can no longer be retained, a solution of sulpho-carbolate of zinc is to be used as an injection. This not only cuts short the acute inflammatory type, but leaves the discharge in a condition very amenable to treatment, so that the patient gets rapidly well with suitable remedies.—*Lond. Med. Rec.*

DISLOCATION OF THE FIFTH CERVICAL VERTEBRA; RECOVERY.

Mr. Ceely, in the *Lancet*, Oct. 1882, p. 619, gives the notes of the following cases. C. K. fell backwards from a hayrick on to the ground (a distance of between twenty and thirty feet,) was picked up insensible and conveyed to the Bucks Infirmary. On admission, the patient was partially insensible, with complete paralysis of the upper and lower extremities, and breathing slightly abdominal; the pupils were equal but rather dilated. After a short time, the patient became more sensible, and complained of great pain at the back of the neck, with numbness of the arms and feet, and difficulty of breathing. Strict rest was ordered, and for a time, the patient showed no serious symptoms, but after about an hour-and-a-half the man rapidly became worse, and the house-surgeon, Mr. Van Buren, saw that unless something were done at once he would shortly die, and a more careful examination discovered that the spinous process of the fifth cervical vertebra was very prominent. Getting a nurse to steady the patient's head, he placed his two thumbs on each side of the projection, and with the other parts of his hands taking a firm grip of the neck above the clavicles, applied gradual pressure, whilst the nurse slightly elevated the head. The vertebra went in with a distinct snap, and all prominence disappeared. The patient at once became sensible, within two hours moved his arms and legs, had no rise of temperature above 100° Fahr. and made a rapid recovery.—*Lond. Med. Rec.*

TRANSFUSION IN GAS-POISONING. By HENRY J. GARRIGUES, M. D.

On the 17th of February last, I was requested by Dr. Ferd. E. Valentine to assist him professionally in the treatment of a case of poisoning with illuminating gas.

A gentleman, forty-two years old, of excellent constitution and of strong build, on retiring in the evening, had blown the gas out, instead of turning it off. The room had the size of an ordinary hall room, and there was only one gas-bracket, placed near the window. The next morning at six o'clock a strong smell of gas was noticed in the corridor, and traced to the room occupied by the said gentleman. The door and transom being locked from within, an entrance was made through a window. The air in the room was suffocating; the stop-cock on the gas-fixture was found open; and in the bed the gentleman was found lying unconscious. Dr. Valentine and Dr. James H. Anderson applied hot bottles and mustard plasters to the

skin, had the feet rubbed with a stiff brush, made him smell ammonia, and instituted artificial respiration. When I saw the patient, at 8 A. M., he was lying on his back; the face was pale, the conjunctivæ injected, the pupils dilated to the utmost degree and immovable. A well-marked strabismus internus was present. The breathing was puffing—22 per minute. The pulse was barely perceptible at the wrist—108 in the minute. Reflex action was active, but consciousness entirely gone. He frequently ground his teeth. Some sub-sultus of the tendons was observed, and all the muscles were in a high state of contraction, especially the flexors. The hands were clinched, the arms bent over the chest, and the knees drawn up.

I suggested to bleed the patient and perform transfusion, which being unanimously agreed upon, we proceeded at once to the operation. I took eight ounces of blood from the arm of a strong and healthy young negro. While it ran into a bowl, Dr. Valentine kept beating it with a fork. Next it was strained through a double layer of muslin—a clean pocket-handkerchief—in a tin funnel, and received into another bowl placed in a basin with hot water.

While the blood was being strained, I tightened a bandage above the elbow of the patient. No veins became sufficiently prominent at the elbow, but I could distinctly feel a branch of the basilic a little lower down on the forearm. I made an incision, three quarters of an inch long, through the skin, at an acute angle with the course of the vein, and dissected the adipose tissue off from the vessel. I introduced a probe under it, and bent it at the upper end, so as to form a hook, preventing the probe from falling. I made a small incision in the vein with a lancet, and evacuated about eight ounces of dark blood. While the blood was flowing the breathing improved somewhat. When Dr. Valentine reported that the pulse on the other arm became very small, we stopped. Then I introduced the nozzle of the transfusion apparatus, which I constructed and described in 1878 (see *American Journal of Obstetrics*, vol. xi, p. 754), into the vein which it filled entirely. Assisted by Dr. Anderson, I injected very slowly about six ounces of the defibrinated blood. During the injection, which took about three-quarters of an hour, the pulse became fuller and sank to 92 per minute, and the breathing, although retaining its frequency, became so natural in character as to resemble that during normal sleep. When we had finished, the patient could be roused sufficiently from his comatose condition to make him swallow some ammoniated water and black coffee; but, as he was yet very sleepy, he was constantly aroused by Dr. Valentine, by means of flagellation and the application of the electrodes of a Gaiffe's faradization apparatus, one of which ended in a metallic brush.

Three hours later he was sufficiently aroused to recognize his friends, and even speak a few words. The pupils had become smaller, and responded to light. At the end of the next two hours, consciousness had so entirely returned that Dr. Valentine, who at that time was the only physician present, allowed him to take short snatches of sleep. At half-past seven, pulse and respiration were normal; the patient laughed and chatted cheerfully, and had only a slight headache. As a precaution, he was ordered to be waked up every hour during the night. The next morning he felt perfectly well, except some soreness produced by the divers cutaneous stimulants used on the previous day. His pulse was full, and beat 64 in the minute.

The symptoms were those commonly observed in poisoning by oxide of carbon, with the exception of

the color of the blood, which in that poisoning is said to be light-colored, like arterial blood. In our case it was dark, as venous blood commonly is. This is probably due to the fact that illuminating gas is carbon hydrogen.

I report this case in order to call attention once more to the advantages offered by transfusion. Here it was not a case of acute anæmia which called for the operation, but one of toxæmia. We had to deal with a man who, although somewhat improved by cutaneous stimulation, was yet in a very precarious condition. The mere evacuation of some of the poisoned blood gave some relief, but the effect of the injection of fresh, defibrinated, healthy blood, full of oxygen, was instantaneous, and impressed all of us most favorably.

The operation itself is so simple that anybody who can use a knife and a forceps intelligently can perform it. With a single exception, the implements needed are so common that they are found in every house, or can be procured at the shortest notice. If a funnel is not at hand, the bottom may be knocked out of a wine-bottle, and the upper part used to sustain the cloth serving as strainer.

Only one particular instrument is required besides what every physician carries, or ought to carry, in his pocket-case, namely, the transfusion apparatus. Most of these instruments are so bulky, fragile, and expensive, that the general practitioner rarely possesses one. It has been suggested that an aspirator might be used; but it is difficult, if not impossible, to keep this instrument so scrupulously clean and aseptic as a transfusion apparatus ought to be. And, like all piston instruments, it has the fault that, as a rule, it does not work when needed. In cities a fine catheter, a piece of rubber tubing, and a small funnel may, perhaps, be obtained in a drug-store; but this is by no means sure, and such a catheter will very likely be found quite difficult to introduce in the small, collapsed vein into which commonly the transfusion must be made.

My apparatus has the advantages of being small, light, and flexible, easy to keep clean, easy to introduce into a small branch of vein, easy to manage even without skilled assistance, and quite inexpensive. It was originally made by George Tiemann & Co., 67 Chatham Street, who sell it for \$4.00. A chief point in the operation is to inject so slowly that the blood enters the vein merely in a thin stream, or almost drop by drop. After having been used, the apparatus must be taken to pieces, and every part of it scrubbed and disinfected by immersion in a five-per-cent. solution of carbolic acid. When it is to be used again, it suffices to let some clean water go through it before it is used for the blood. All air must be driven out by compressing the bulb entirely; but, when once the whole apparatus is filled with blood, it ought only to be worked by slight compression between the thumb and the index finger.

I am not aware that transfusion has been used before in cases of poisoning; but the striking effect obtained in our case ought to recommend it in similar occurrences.—*New York Medical Journal.*

CORRESPONDENCE.

THE NAVY DEPARTMENT AND THE MERCHANT MARINE SERVICE.

EDITOR MEDICAL GAZETTE:

The Secretary of the Navy having asked to have certain Bureaus and Divisions of the Merchant Marine Ser-

vice transferred from the Treasury Department to the Navy Department, and a bill to that effect having been introduced into the House, on the 2d of January, by Mr. Harris, the several bureaus included in the proposed change, have, in response to the inquiries of the Secretary of the Treasury, given their views as to the advisability of the change.

The Bureaus which the Navy asks to be transferred are the Revenue, Marine, the Coast Survey, the Life-Saving Service, the Steamboat Inspection Service, the Light House Board, the Revenue Cutter Service, and the Marine Hospital Service.

The objects which the Secretary of the Navy declares he has in view are: economy, efficiency, and, incidentally, the furnishing to the officers of the navy suitable occupations; their present number being greatly in excess of the needs of the service.

The answers made by the chiefs of these several departments to the Secretary of the Treasury are substantially a denial that such changes would be economical, or improve the efficiency of either of the several departments named; but that, on the contrary, such changes would diminish their efficiency, and, in most cases, render them much more expensive.

They have sought to show, also, that it has always been the policy of our Government, as indeed it is of nearly all other governments, never to subordinate civil service to the army or navy, but to keep them under all circumstances distinct and separate. This was the view taken by Alexander Hamilton, Secretary McLane, and by all the founders of our Government; and although from time to time similar attempts have been made by the navy to absorb certain branches of the civil service, it has always been promptly and successfully resisted.

The reply of Dr. Hamilton, Surgeon-General of the Marine Hospital Service, is much to the same effect. He states that, upon the petition of the Marine Society of Boston, Mass., this service was established by act of Congress, July 16, 1798, solely for the benefit of the commercial marine; but that on the following year, there being then no naval hospitals, its benefits were extended to the navy. In 1811, by recommendation of the Secretary of the Navy, a law was passed removing the sick seamen belonging to the navy to hospitals of their own, as they were found to divert from the marine hospitals. From that time until the present the marine hospital service has continued, as it was originally intended to be, a purely commercial and civil service. Its hospitals are situated not only along the coast, but it extends its service where no naval vessel ever floats—along the Mississippi, the Missouri, and the Columbia rivers, from their mouths to their sources, and upon other interior waters. It has a clientage of about 165,000, that being the number now paying hospital dues, and who are therefore entitled to hospital care. During the last fiscal year service was tendered to 36,184 patients, while the clientage of the naval service is only 8,250, and only 1,236 were treated in their hospitals during the last year. The cost of treatment of each person in the naval hospitals during the last year was \$110.43; not reckoning the salaries and emoluments of a large number of medical officers,—much larger than is employed for a similar service in the marine department—while in the marine service the cost per patient for the same year was only \$16.80.

It is claimed, also, that ordinary sailors, including those who navigate our interior waters, would never submit to the despotic, man-of-war discipline of naval officers, and the result of the union would be discontent and insubordination.

No complaint has ever been made that the Marine Hospital Department has not performed its duties satisfactorily and economically ; nor indeed, is complaint made that most of the other departments have not performed their duties properly, but naval officers have nothing to do, and the changes proposed are chiefly with a view to find employment for them. Resignation as a remedy is not suggested.

The vital argument is, to the mind of the writer, the manifest impropriety of subordinating, under a republican government, any portion of the civil service to the military. Such assumptions on the part of either branch of the military arm, have always been, and it is hoped ever will be, looked upon with jealousy and suspicion.

A CITIZEN DOCTOR.

A NEW METHOD OF USING NITRATE OF SILVER.

MR. EDITOR: I wish to call the attention of the medical profession to a new form of using nitrate of silver. At my suggestion John Wyeth & Brother, of Philadelphia, prepared for me three hard wood sticks coated at one end with a specially prepared solution of caustic. I am at present experimenting with them and hope to so perfect them that they will prove acceptable to the profession generally. No extended remarks are necessary at present.

Very respectfully,

SIMEON A. FOSTER, M. D.

MEDICAL NOTES AND NEWS.

Resorcin.—An agent called Resorcin, belonging to the phenol group, was discovered by Hlasiwitch & Barth, in Vienna, in 1864. Lately Dr. W. B. Platt, of Baltimore, has been experimenting with it in various ways ; one conclusion from his experiments being that it is much less efficient as an antiseptic than carbolic acid or even alcohol, "as far as its effects upon bacteria, or the prevention of putrefaction, may denote." Nevertheless it has been used by Langenbech in his clinic "since 1878 as an antiseptic, to replace carbolic acid, with the best results."

These statements are a little confusing. Either Dr. Platt's experiments are inconclusive, or the observations of Langenbech are inclusive ; or, indeed, we must accept of the alternative inference, that "the best results" (meaning, perhaps, equal results) "in the treatment of wounds are obtained by the less antiseptic agents."

Incidentally, Dr. Platt states that the power of resorcin, and of other antiseptics to destroy bacteria, depends upon the variety of the microbe subjected to this action, and to the age of the microbe. No suggestion is made, however, as to the length or limitation of the natural life of bacteria. This might be a curious and profitable line of enquiry in connection with their viability at the different periods of their existence.

The Preservation of Milk.—Milk allowed to remain at a temperature of 100° in a water bath for two hours, will keep sweet and pure for at least six months. It is important to seal it up before placing it in the water bath. The method known as Beckers, which consists in keeping the bath at 60°, is unsatisfactory, as milk thus treated is preserved for only forty-eight hours.—*Pharmaceutical Record*.

The Effects of Various Medicines on the Secretion of Milk.—Iodide of potassium diminishes, salicylic acid increases the quantity of milk secretion ; alcohol, morphine and lead leave the quantity unchanged, while pilocarpine does not increase the secretion. Salicylic acid increases the amount of sugar in the milk, alcohol the fat ; lead, morphia and pilocarpine exercise no influence, while on the other hand, iodide of potassium disturbs the entire milk gland. Alcohol does not go over the milk ; lead and salicylic acid only in traces.—M. Stumpf, *Deut. Arch. f. Klin. Med.* xxx, p. 201.

Lead-Poisoning Among Dressmakers.—Lead-poisoning is often produced in an unsuspected manner. The occupation of dressmaking might be regarded as one likely to be exempt from it, yet a dressmaker just admitted into the Leeds Dispensary, in England, was found to have a distinct blue line on her gums, with simultaneous symptoms, such as a furred tongue, inflammation of the lips, and general debility—all signs pointing to the probability of poisoning by lead. The physician in attendance for some time failed to discover the source of the lead-poisoning, and was beginning to think that the blue line had been caused in some other way, when he accidentally learned from a merchant that silken thread, being sold by weight, and not by length, is sometimes adulterated with sugar of lead. He then questioned the patient, and she informed him that it had been a common practice with her, when at work, to hold silk as well as other kinds of thread in her mouth, and that she had done this the more readily with silk, inasmuch as it often had a sweet taste. It will be found that the silk thread of the best makers is tasteless, whereas some inferior threads are sweet.—*Pharmaceutical Record*.

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WHAT IS A "SANITARY ENGINEER?"

The term is of modern invention, and is intended to designate a trade or profession combining the knowledge and experience of several other trades and professions. The supposed necessity for the existence of this new calling is to be sought chiefly in the extension of plumbing, or what is known among plumbers as "modern improvements." A sanitary engineer, however, does not limit his duties to the inspection of plumbing, with a view to determine whether it is safe in a sanitary point of view. He is supposed to understand the grading and laying of pipes and sewers, for the drainage of the soil and for the disposal of rain water and house sewage; the construction and general sanitation of houses, including heating and ventilation; and finally a knowledge of the sources and means of prevention of zymotic diseases with a general, but rather superficial knowledge of medicine.

In these days of specialties, when there is a growing inclination to decide and subdivide the duties of mechanics, tradesmen, artisans and professional men, each one being limited to the narrowest possible sphere, it is a matter of surprise to see a new profession created by the union of several of the leading divisions of human thought and labor; but this is what the sanitary engineer has attempted. To perform properly the duties he has imposed upon himself he must be a civil engineer, an architect, a practical plumber, a sanitarian and something of a doctor in medicine.

That such a combination of qualities might be made useful to the public no one can doubt; and medical men would be first to give them a cordial welcome, and to invoke their aid in the prevention and control of human maladies. But in order to ensure the confidence of medical men it is not sufficient that a man should call himself a sanitary engineer. Up to the present time, however, this is the only test of qualification which this class of men present when they first an-

nounce themselves to the public. So far as the public has any means of knowing, the sanitary engineer may really have no knowledge of either one of the above named branches of art and science.

These remarks convey no reflections upon honest and competent sanitary engineers, but they may suggest that their frequent animadversions upon the ignorance of medical men of sanitary science, need some better evidence than their unsupported statements can furnish. Medical men are by virtue of their calling trained sanitarians, and they have at least the credential furnished by a diploma, however poor that credential may be, while the sanitary engineer has in no case any credential other than that he has chosen to give to himself that title. It is not necessary to make special mention of the examples in which certain recently self appointed members of the new profession have spoken disrespectfully of the sanitary attainments of medical men. We say *recently* self-appointed, because the profession itself has not been in existence more than 10 or 20 years. It cannot therefore reckon among its members any veterans; yet it does not hesitate to criticise the opinions of veterans in medicine upon matters which the latter have made a special study for many years.

An intelligent and honest sanitary engineer ought to be a useful member of our modern social system; but he must be really intelligent and he must be really honest. He must be placed above all suspicion of prostituting his calling to the interests of a particular plumber or of a particular architect or builder or furnace maker.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, MARCH 1ST, 1883.

The President Dr. Fordyce Barker presided. The minutes of the preceding meeting were read and approved. The recommendations of the Council regarding the bill for furnace, viz., that it be paid, was endorsed by the Academy. Dr. Carpenter presented the report of the Section on Practice, Dr. Hunter the report of the Obstetric Section. The author of the scientific paper of the evening not yet being present Dr. Barker suggested that the members report any case which might interest the Academy.

In response to this request Dr. Johnson related a case he had met with in his own practice during the last week which impressed on him the danger arising from uterine injections in puerperal fever. He had been using Chambers glass tube for injecting and had not anticipated any trouble, when suddenly he found the water slightly tinged with blood, the patient had a severe chill, her temperature went up to 107, pulse to 160, this condition of affairs continuing for two or three hours, when the disturbance subsided.

In this connection Dr. Barker said that during the past few years he had had frequent occasion to speak of the danger of the continued use of uterine injections in puerperal fever. Nature closes up the uterine sinuses quite early after labor and continued injections sometimes opened these and the injection itself became a source of infection. The President announced the election as resident fellows of Drs. Gasper Griswold, R. G. Wiener, and Stacy B. Collins.

Dr. Isaac E. Taylor, whom the President facetiously

introduced as the late Dr. Taylor, then read the paper for the evening, entitled,

"ON THE NATURALLY FAULTY OR CONTRACTED PELVIS; WITH THE HISTORY OF A CASE OF LABOR, THE NON-DELIVERY OF THE CHILD AND THE DEATH OF THE MOTHER, AFTER CRANIOTOMY AND CEPHALOTRIPSY.

The paper was a plea for the more careful study by obstetricians of the naturally faulty pelvis, a description of its frequency, the difficulties of its recognition before labor, a comparison of this form of pelvis to that deformed by some dyscrasia, and a statement of the dangers to which both mother and child were exposed and the best method to be adopted to reduce this risk to a minimum. These statements were illustrated and the inferences drawn, enforced by the narration of a typical case—a classical resume of the scanty literature of the subject was also given by Dr. Taylor. The paper was discussed by Drs. E. A. Judson, Partridge, Garrigues, and Barker.

The following is a brief abstract of Dr. Taylor's paper and the discussion it evoked:—

Mr. President and Fellows of the Academy:—The unfortunate termination of the following case has induced me to offer a few remarks and comments suggested by it.

The patient was a healthy young woman, æt. 29, married, a primipera. I was called in consultation to see her July 28th, '82, at 7 a. m.—when she was having pains of short duration, at 3:30 $\frac{1}{3}$ of a grain of morphia was given hypodermically. I did not see her again until July 29th at 9:30 a. m. when I found the os widely dilated, but the head obstructed at the brim. The forceps were applied, but were of no avail in effecting delivery. Version was then attempted, but was found equally inefficient. Craniotomy was then decided upon. The external organs were swollen and oedematous, and there was no lubricity of the soft parts. Very little of the cerebral mass escaped. I supposed there was some defect in the pelvis or that the child was an abnormally large one. The cephalotribe was applied, but on its removal the head regained its original size. Meigs' embryotomy forceps were then inserted and after three hours of effort the head was delivered. Traction by the hand did not succeed in bringing down the shoulder and it took another hour to deliver the body, the mother dying three and a half hours after delivery of the body. It was then ascertained that the pelvis was a generally contracted or faulty one.

These forms of pelvis require more study than those arising from some dyscrasia of the system, since they occur in perfectly healthy and apparently perfectly formed women and give no evidence of their existence till delivery. The form of pelvis usually met with in this country is the simple flat pelvis, which does not depend on rickets—and it is to this form chiefly that the attention and interest of obstetricians have been directed. Alluding to the prevalent idea that women of small stature necessarily had had a difficult labor Dr. Taylor said that such women often bore children not only safely but also quickly and easily, and in this connection he cited the case of a girl of 12 he had met with in hospital practice whom he was about to discharge from the ward, when she told him she was to have a baby, and shortly gave birth to twins weighing $5\frac{1}{2}$ lbs each. It was a remarkable fact that the influence of the pelvis on labor was one of the

last points to which obstetricians had directed their attention.

Dr. Taylor analyzed the cases reported by Stern, Naegeli, Velpeau and Lusk, from which he derived the conclusion that a diminution in diameter of $\frac{3}{4}$ of an inch to an inch would make a fatal termination most probable if not certain.

As to the important question of the signs by which this form of pelvis could be recognized it must be admitted that there was no positive evidence of it until labor has progressed, perhaps not until traction was attempted. The position of the child's head at the superior strait might aid in its recognition. The flexibility of the child's head, Dr. Taylor stated, is sometimes remarkable, he recalled a case in which the side of the head lying on the pillow would flatten out, but regain its contour on turning the child over, when the other side would exhibit the same flexibility and elasticity.

In cases of naturally faulty pelvis we had usually to do with primipara. As a rule when the diameter of the pelvis was less than $3\frac{1}{4}$ inches the child could not pass with safety. Even in lower grades of contraction Cæsarean section should be adopted and to the cases under discussion symphysiotomy is peculiarly applicable.

Dr. E. A. Judson spoke as follows: The case presented is most worthy the careful scientific analysis given it by Dr. Taylor. Here was a woman in perfect health stricken down in the attempted performance of a physiological function. Surely if a more perfect knowledge of the rationale of such case would enable us to cope with their difficulties more successfully we should strive to gain this knowledge.

In the case described, which he attended, Cæsarean section would have been attempted, but the child was dead and the mother exhausted, and it had been hoped by craniotomy to easily remove the child and give the mother the best chance for life.

It was important to know if we had any certain means on which we can rely, of determining the various diameters of the pelvis. I am inclined to think these means exist in internal pelvimetry. Another method was one suggested by Paul Schroeder in a little book published by Appleton. He recognized the two finger method and determined what he calls the diagonal conjugate diameter by measuring off the distance between the promontory and the pubic arch. And this distance, he claims, always bears a certain definite relation to the conjugate vera, the proportion being about half an inch to an inch. I have not had an opportunity to test this, but Schroeder claims for it this advantage; that even in primipera, where the tissues are rigid, we can readily apply it. The value of abdominal palpation too, is too lightly appreciated.

Dr. Partridge said: If there are ways to predetermine the existence of this contracted pelvis, it is of course most important that we should recognize them. A fact that might throw some light on the subject was suggested to me by two cases I have seen. In both of these the first menstruation occurred at a very early age, and it occurred to me that the appearance of the function at an early age may lead to early development, and early ossification may take place before the pelvis has grown to its natural size. This fact seems to me to have enough significance to warrant our inquiring as to the date of the first menstruation.

When craniotomy has been done in this class of cases it is awkward to apply the requisite force to deliver the body. By applying the cephalotribe to the delivered head the body may be delivered with ease.

Certainly these cases should receive more attention and study.

Dr. Garrigues spoke as follows : With the enormous emigration to this country we get a large number of women who have been exposed to the influences resulting in contracted pelvis. During the past two months I have delivered six women whose conjugate was three inches or very near it. I have no doubt that the diagnosis of contracted pelvis can be made during pregnancy. I think it quite possible at least to form the idea that we have to deal with a contracted pelvis by external methods. I have often tried to use the method suggested by Dr. Judson, but it is by no means easy. I have found it easier by the aid of a polypus forceps to measure the transverse, than the conjugate diameter. My experience of cephalotripsy has been confined to two cases. I believe the cephalotribe a better instrument for crushing than it is for exerting traction. If operative procedures are required, Cæsarean section should come first, next Porro's operation would have to be considered, and lastly the total extirpation of the uterus.

Dr. Barker said : There is one point of practical importance, a point about which we are all liable to be consulted, viz.: the possibility of determining the naturally faulty pelvis by external configuration. I was glad to hear Dr. Taylor emphasize the point that external configuration furnished little or no indications of the faulty pelvis. I have had patients only 4 feet 11 inches in height, who have given birth to fine healthy, even large children. I have been asked in lateral and anterior curvature to express an opinion as to what might be anticipated in case of pregnancy, and I do not always find it possible to do this. I recall a case with anterior and lateral curvature in which I could discover no fault with the pelvis. She subsequently gave birth to a child weighing 10½ lbs., which was born in two hours.

A few years ago a lady, 5 feet 6 inches in height, perfectly developed and remarkably beautiful, came to me for advice. She had had one labor in which she was attended by Cazeaux, of Paris, and delivered with great difficulty by craniotomy, cephalotripsy, etc. Her convalescence from this labor was very slow. She came to me five and a half months pregnant. On examination I found a typical male pelvis small in every diameter. I brought on abortion by the catheter and Barnes' dilator, and had great difficulty in effecting the delivery of the foetus. The transmission of a large fortune depended on her giving birth to a living child, and she became dissatisfied and melancholy. She finally sought the advice of a physician, who believed that labor could be safely delayed until the seventh month, and at about this period of pregnancy she died undelivered of rupture of the uterus. Even though we make the most careful examination, we should be extremely cautious in making promises.

I recall another case of a lady, 5 feet high, who was brought to me by her mother to get my opinion as to whether she could marry and bear children with safety. She was engaged to an estimable party, there were ample means on both sides, and all were anxious to consummate the union. I told the mother that it was utterly impossible for me to express an opinion. The patient married and became pregnant. I was again called in, and after a careful examination could find no deformity. She will be delivered this coming summer, and I am very glad to say that I shall not then be accessible, so can not take charge of her case, but hope that they will call upon Dr. Taylor. Dr. Taylor closed the discussion. The Academy then adjourned.

LECTURES.

CLINICAL LECTURES ON NERVOUS DISEASES OF CHILDREN.

BY

E. C. SEGUIN, M.D.,

Professor of Nervous Diseases, College of Physicians and Surgeons, etc., etc.

LECTURE III.

GENTLEMEN : I purpose lecturing to-day upon some of the complications of chorea. One of these is *post choreic paralysis*. I wish to make my remarks upon this condition in contrast with the condition known as *post-paralytic chorea*. Another condition I wish to speak of is the *dementia* of chorea.

We find little patients who after having had chorea for a few weeks become paralyzed. If the chorea has been hemiplegic the paralysis is hemiplegic ; if universal the paralysis is all over the body. On the other hand we meet with adult patients who after having paralysis develop chorea in the paralyzed part. The prognosis is just opposite in the two conditions. In the first condition, which is apparently very threatening, we always get a cure. In post-paralytic chorea, which is not serious-looking, we almost never get a cure, seldom any improvement. The threatening state is the curable one and the seemingly slight condition is the incurable one. Fowler's solution should be given five drops at first and gradually increased. If the chorea is violent choral should be administered. With extra feeding, arsenical treatment, rest and rubbing, these cases of very grave post-choreic paralysis will get well within two or three weeks. On the other hand, if you give big doses of arsenic the patient may linger for months.

The condition of post-paralytic chorea is usually developed in adults after hemiplegia. It is found more frequently in hemiplegia in which motor symptoms are not very marked but in whom there is either very decided anæsthesia in the formerly paralyzed side or slight anæsthesia with a great deal of numbness. Sometimes there is also hemiopia. In some of these cases the lesion is in the sensory tract. There are irregular forms of movements in the paralyzed limb. Sometimes the movements are slower and more athetoid. There is another movement which is ataxic. There may be athetoid movements during ordinary choreic movements. These cases have been collected together by Dr. Weir Mitchell and Professor Charcot, in 1873, as cases of post-paralytic chorea, and they never get well.

The lesion is in a very delicate part of the brain, in the sensory mechanism which does not undergo repair as well as the motor mechanism, and the influence of remedies is slight. I remember, however, two cases that were greatly improved by galvanism. One was a woman who had a slight attack of paresis from time to time with post-paralytic chorea ; and the other was a man with a marked condition of ataxia following hemiplegia with anæsthesia over the body. The current passed from the affected hand to the spine. The hand is laid upon the positive pole upon the table and the negative pole is put upon the back of the neck and a gentle current allowed to flow through these nerves in the spinal cord.

In the first class of cases the paralysis follows the chorea ; in the second group the chorea comes on after the paralysis and is nearly always accompanied by ataxia and athetoid condition. It is not quite the

same as common chorea. The first group of cases are apparently very serious and get well rapidly; the second group embraces patients whose condition is apparently very insignificant and they never get well in spite of all treatment.

A good many cases of chorea show *dementia* which, like the paralysis, is not at all in proportion to the duration of the disease. Within two or three weeks after the chorea the patient may seem very stupid. An objection to the idea that dementia exists is that the dementia is apparent because of the peculiar distortion of the face and the relaxed semi-paralytic condition of some of the muscles. This state of acute illness is usually recovered from. When, however, the dementia follows repeated attacks of chorea,—relapsing chorea which tends to return in the spring time, the prognosis is much more serious, more particularly if you can trace the chorea to some vice, especially masturbation. Such cases in children about the age of puberty 12—18 years, of relapsing chorea with sexual irritation, stupidity and dementia are cases with bad prognosis.

With reference to the pathology of chorea, the theory has been advanced that chorea, more particularly hemi-chorea, is due to a minute embolism taking place in the vessels of the corpus striatum. This hypothesis does not meet the requirements of every case. The experiment of cutting the spinal cord in choreic dogs and seeing the chorea continue is against this theory. There are a great many cases of chorea in which there is no cardiac disease and in which it is impossible to suppose that there had been embolism without a great stretch of the imagination. There must be a deposit of some kind either in the valves of the heart, aorta, or at the orifices leading to it or some particles must enter the circulation from without, as any form of embolism or bacteria. In many cases of chorea there is no sign whatever of roughened valves or diseased aorta, and no externally introduced particles to cause chorea. If there was wanted any further argument against this theory of Dr. Bastian we have the therapeutic argument that some cases of chorea get well in a very few days.

It is doubtful if embolism in the brain is ever recovered from completely. There is no unvarying connection between cardiac disease and chorea. In a certain number of cases of chorea a murmur heard at the heart is present during the continuance of the chorea, and not present when they get well. Most of our books do not allow the functional mitral regurgitant murmur at the apex. The chorea is supposed to attack the cardiac muscles or columnæ carneæ which govern the valves, leading to imperfect closure of the curtains of the mitral valve. The other theory is that it is anæmic, although mitral. We also have the reflex theory of chorea. Facts are in support of both of these theories. There are cases of chorea cured by the removal of indigestion, worms, the amputation of a prepuce, and by the stoppage of masturbation. It is likewise true of a great many cases that chorea will get well under iron. Dr. Robert Bentley Todd, one of the pioneers of Nervous Diseases depended entirely upon what the English call with singular liking "steel" [iron].

The cold shower, chalybeates and cold water do not act as quickly as we cure them now by the thorough arsenical treatment.

Chorea is a symptom and not a disease. It is a symptom which may accompany a good many pathological conditions just as epilepsy or headache is a symptom. There is no theory of the disease epilepsy

but a good theory of the attack of epilepsy. We have to study our patient before we determine the pathological state in which he is as a basis for our theory of the chorea in that case; whether it be simple anæmia, irritation of digestion, irritation of sexual organs or whether there be disease of the heart.

CASE II.—*Chronic Hydrocephalus*. This is a remarkable separation of the sutures in this child, particularly the coronal suture, which increases toward the anterior fontanelle. There is more occipital depression than is common in these cases. The eyes are thrown down in a peculiar way, being pushed down and forward. This is probably due to a lowering of the orbital plate of the frontal bone by the pressure of the fluid. In some of these cases with tremendous exudation there seems to be no pain. Some retain their eyesight perfectly and others remain remarkably intelligent. In other cases there is atrophy of the optic nerves.

Dr. E. Seguin had a lady under his care for many years with hydrocephalus, whose head was next in size to that found in the Hunterian Museum, London. Her eyesight remained perfect and her intelligence was sufficient to qualify her for a respectable Sunday school teacher, which calling she followed during her life.

Usually in these cases the water is in the ventricles. Sometimes the hydrocephalus is external and the fluid is found in the inter-meningeal spaces. In those cases there is usually more or less paralysis and they are apt to follow upon primary lesion of the brain. These cases are sometimes prenatal. As the child grows older the head enlarges much and there is an impossibility to hold the head up. Dr. Detmold is fond of tapping these cases. He has had some success in this operation. If the hydrocephalus is due, as is sometimes the case, to a plugging of the aqueduct of Sylvius tapping can only act as a mechanical relief; also if the disease affects the ventricular lining, I should hardly expect more than momentary relief from tapping. I do not apprehend any special danger from tapping. If it be desirable to avoid the longitudinal sinus and middle meningeal artery and if possible the larger branches of the meningeal artery, the selection for tapping might be in the inter-mediate frontal region or in the parietal eminences a little away from the longitudinal sinus. Here there is less danger of striking the large branches of the middle cerebral artery and we come to the point where the branches of the middle meningeal artery are very small. The danger would lie more in the hemorrhage than in the reaction in these cases.

CASE III.—*Meningitis*.—Boy; within last two weeks has been irritable; seemed to be weak and indisposed to hold up his head; has not vomited and has no convulsions. Has had a rash upon the head for quite a while. Mother does not know of any injury to the child previous to the development of symptoms two weeks ago. Last week child fell heavily; jumped from mother's arm and struck its head on the floor. Has been cross within the last few days. Mother thinks it does not use right hand as well as left.

It seems to me that these symptoms are sufficient to warrant the suspicion of meningitis. Meningitis begins quite suddenly. Sometimes there is nothing but irritability, lack of appetite and a sort of change in the child's way. After these prodromata, symptoms appear in a very irregular way in different cases. Sometimes violent convulsions occur; sometimes there is fever, vomiting, retraction of the belly, staggering, and the pulse is irregular in many cases. The diagnosis is

not usually clearly established until convulsions and partial insensibility and marked irregularity of the pulse with vomiting appear. A very important symptom of meningitis in children, of the tubercular form especially, when present, is the choking of the optic discs.

I should advise keeping the child quiet and giving the iodide of potassium. If further symptoms should appear, using counter irritation at the back of the neck, and more iodide of potassium. The ordinary picture of meningitis, as you see it in the books, is delusive. Cases differ very much from those didactic descriptions, viz.: first, the period of irritation in which the child is irritable at night; then the period of fever with convulsions, and then the period of coma. There are constant variations from this type, and the element of variability in the symptoms is very suggestive of meningitis. The eruptive and visceral diseases of children are quite regular. This is perhaps the most irregular of all the dangerous diseases to which children are liable. In the hydrocephaloid condition of meningitis children are irritable and apparently suffering from the brain. In cases of pseudo-meningitis or hydrocephalus you get usually, a history of some exhausting disease, either diarrhoea or bronchial affection, and on examination you can clearly make out the anæmia. The child is emaciated, anæmic; the pupils are widely dilated; pulse is weak and sometimes irregular, and often the primary disease remains for observation, viz.: enteritis or bronchitis, and the coma sometimes. Symptoms which simulate meningitis are unquestionably due to anæmia of the brain with watery effusion, and disappear under tonic treatment, and the treatment of the local disease, whether of the bowels or lungs.

This child has red blood, and we cannot expect it to have anæmia with hydrocephalus. Infantile hysteria or infantile insanity are rather rare.

PUERPERAL SEPTICÆMIA; MENORRHAGIA.

A CLINIC.

BY

WILLIAM M. POLK, M. D.,

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This specimen, gentlemen, which I will show you before presenting a patient, is from a child who died from cyanosis within twenty-eight hours after birth. The cause lay in a complete closure, or almost a complete closure, of the pulmonary artery at its connection with the right ventricle. The child presented the ordinary appearances of cyanosis, a "Blue baby," as they are ordinarily termed, and it is very evident that it was impossible for it to survive longer than it did.

The other specimen alongside of it is nothing more than an ordinary uterine fibroid of the submucous variety which was removed by actual cautery. These growths when they assume the position and appearance that this did; where they are as it were entirely enucleated, and simply attached to the wall of the uterus by a small pedicle, are usually easily removed. In this case the os opened a good deal, and there was some attempt on the part of the uterus at expulsion, just as if it were attempting to expel a foetus in a case of miscarriage, the expulsive efforts being aided by the administration of ergot. The uterus had firmly contracted around it until it was finally sufficiently extruded to be seized by the vulsella forceps when it

was drawn down a little from day to day, assisted by ergot, until within a week it was sufficiently down in the passage way of vagina to admit of putting a wire around it. The platinum wire was put around it, and embedded deeply into its surface and the pedicle was divided with galvanic cautery. The advantage of using actual cautery consists in getting rid of the structure without causing hemorrhage.

This case gentlemen is possessed of several points of interest, first with respect to diagnosis, and second with respect to treatment. She was confined last Wednesday. Everything went on well until Saturday, that is four days after the confinement including that day, when she had a chill. The chill was independent of the secretion of milk for the reason that the breasts were already well filled. There had been before no doubt the usual milk fever, perhaps some little chilliness that is associated with the incoming of the milk, which occurs about the third day.

The chill which she had on Saturday was extremely violent, and was soon followed by a good deal of fever. The peculiarity about the fever was, that the temperature shot up very soon after the chill to 103° , but it had a tendency to fall. There was a morning depression and an afternoon rise. The temperature would go down in the morning to 100, and sometimes below that. It is true however that antipyretic remedies were being used. That is quinine and salicylic acid. It was therefore presumed that these remedies, especially as they were being given in large doses, were responsible in part for the (afternoon) fall. You will observe on this chart the appearance presented by the temperature at different times. Now with a temperature presenting the kind of wave which you see there, a part of which was caused before the administration of the antipyretic, the question came up very naturally as to whether it was puerperal fever or whether it was malarial fever, or possibly a combination of the two, because such a thing is not impossible.

Now, there are certain characteristics about malarial fevers that to my mind at least make them recognizable in any case, especially where the point to be settled is as to whether it be puerperal or malarial. Those characteristics are shown in the main by the action of certain remedies upon malarial fever. Now, I know perfectly well that there are some who maintain, that even large doses of quinine will not have the effect of reducing, steadily and permanently, the temperature in cases, for instance, of obstinate remittent fever. I confess that my inquiries amongst the best authorities, and my own observations, have led me to believe that there is no pure malarial fever that cannot be controlled temporarily, I will not say permanently, but that cannot be controlled temporarily by the action of quinine. If you find that the quinine simply reduces the temperature, say to within one or two degrees of the normal, never takes it quite down to the normal, then I am satisfied that you should look upon the fever as being one that has some complication. It may have a malarial quality, for we know that often after the system has once been exposed to malaria it leaves its influence for years, as do gout or syphilis. Take my own case for example: Ten years ago I had malarial fever, which continued (three years) in succession, and to this day I cannot have an ordinary sore throat without the development of malarial symptoms. And so it is with a large majority of those who have once been saturated with the malarial poison. Therefore, I say, here may be a malarial complication in this case, but you may be sure that where a case is purely malarial,

quinine will reduce the temperature to normal, and will keep it there just so long as the patient is under the influence of it. If it be impossible to drive down the temperature to that point, you may be sure that there is something else besides malaria.

Now, in this case the complication suggests itself at once, namely, that there is unmistakably some septic element at work. In an ordinary case, occurring aside from the puerperal state, in either male or female, I am satisfied that the majority of these cases belong to that class of diseases which we know as typho-malarial, which are nothing more than a mild form of typhoid fever with, perhaps, some malarial complication. We have many such cases here in the hospital, especially in the fall of the year.

In this case we rested our diagnosis as to whether it was a malarial attack entirely upon the action of quinine. The quinine probably depressed the temperature somewhat lower than it would have fallen without its administration, but the temperature would rise again, and in one instance it rose to 104.5° . The quantity of quinine given in this case was forty grains in twenty-four hours, and that is sufficient to settle the question whether it is purely malarial or not. A less quantity than this is usually found sufficient for diagnostic purposes in this connection, though there are cases of malaria where a larger quantity of quinine during the twenty-four hours is called for than this. We are undoubtedly justified in using it in such a case as this as an element of diagnosis. This patient, then, must have septicæmia. I say must have, for even though she might have a form of typho-malarial fever, that in the puerperal state assumes the same type as an attack of puerperal septicæmia; practically, therefore, we might consider the conditions as identical in a case of this kind.

Now, the fever being septic in its nature, the first thing to do was to wash the uterus. That was done. The uterus was thoroughly cleansed until there was no fetor, but in spite of that cleansing the fever continued unabated, even getting worse than it had been before. I found on examination an extensive laceration of the cervix uteri. In fact it is more extensively lacerated than we often find in a case of ordinary delivery, such as this was. The laceration is mostly on the right side extending clear up to the vaginal junction. It is exquisitely sensitive and has been, no doubt, the source of septic poison, as these kind of lacerations often are.

Now after cleansing the uterus, the next step was to keep the vagina clean. That was done by washing it out every three hours with carbolized water, using a two per cent. solution. Those washings under certain conditions are of themselves sufficient to reduce the temperature. For instance if septic disease comes from the decomposition of blood material within the cavity of the uterus, prompt cleansing of the cavity of the uterus is all that is necessary to bring down the temperature. In this case, though, we had to deal with a lacerated cervix, and in all probability there was a considerable degree of phlebitis extending from that, before we began the wash, so that there may be, and very likely is, some complicating cellulitis in this case, as there is apt to be in cases of laceration of the cervix.

However, the washes in this instance did not control the temperature as they should. We thought then of placing her on the fever cot and pouring water on the surface, but as she was weak we tried the wet pack first, as that means of applying cold water is less depressing than the ordinary way of applying it when the fever cot is used. The patient being stripped of all

clothing was enveloped in cloths wrung out of water at a temperature of fifty degrees. Under that treatment the fever subsided, but along with it we continued giving systematically intrauterine and vaginal douches.

Now I have called your attention to this case partly because it is one in which medicines, that is salicylic acid and quinine particularly, failed to control the disease. The temperature was only temporarily depressed even though she was taking salicylate of soda in conjunction with quinine. The salicylate of soda is supposed to assist the quinine in diminishing the temperature by acting on the septic properties in the blood. While these remedies were being administered there was no steady diminution in the temperature. It would go down in the morning and come up in the afternoon. But with the intrauterine injections, the vaginal douches and the wet pack the temperature fell and has remained down. But the cold pack had quite a depressing influence upon her at one time, and the temperature fell to about ninety-seven. You will have to watch that point in the use of the cold pack in all of these cases, so as not to reduce the temperature too much. You can see that, of course, by the appearance of the extremities and face. Any blueness or excessive chilliness is always an indication that you should suspend the use of the cold.

There is no doubt then that this is a case of puerperal fever. As to the cause of the puerperal fever it is probably to be found in the laceration of the cervix, possibly also with some decomposition of material within the cavity of the uterus. The cure has been effected by cleansing the cavity of the uterus by intrauterine injections, and by cleansing the vagina, particularly the lacerated cervix, with carbolized injections, and by the wet pack. I do not mention quinine and salicylic acid because, as I have told you, I believe they had only a temporary effect upon the temperature.

There is another point of interest in connection with this case, and that is that the secretion of the milk was not materially interfered with by the fever. Her fever lasted about a week, or six and a half days from the beginning to the completion. Now, under ordinary circumstances a fever of that duration, and particularly with such a temperature as she has had, will so diminish the supply of milk as to make it necessary for the woman to wean her baby. But such has not been the case here. It has certainly diminished the quantity of milk, but there is enough left to support the baby along with a little artificial food.

One word with regard to the kind of milk to be used in these cases. The freshest cow's milk is always to be preferred. It should be diluted with equal parts of water. It is a good plan to test the milk with test paper to see whether it is acid, whether it is beginning to ferment, if so it is of course unfit for use. The milk is to be diluted with equal parts of water because pure cow's milk contains too much caseine to be easily digested by children. In order to make the milk still more digestible it is advisable to add some alkali, and lime water is as good an alkali as can be employed. A tablespoonful of lime water to half a pint of milk is the proportion necessary. In addition to this a sufficient amount of sugar of milk, which is preferable to cane sugar, though the latter may do, should be put into it to bring it up to about the sweetness of human milk, which is just a little sweeter than cows milk; that can be judged of by taste. Probably a teaspoonful of sugar to half a pint of the mixed milk will be sufficient. The child can be kept on that in conjunction with what it gets from nursing for a few days, when the mother's nutrition being improved the usual amount of

milk will return. The child will probably require about three feedings in the twenty-four hours.

The house physician has just mentioned a point to me with regard to the case of which I was not aware before ; that is, that there were portions of retained membrane in the cavity of the uterus which came away on Saturday under washing. That fact would show us the importance of these intrauterine douches in these cases. I have spoken of the removal of the membrane in these cases, by means of the curette, but sometimes the attachment of the membrane is so close that it is rather difficult to get it off ; but still they are loosened and the subsequent washing will bring them away, as in this case. She was curetted toward the first, thinking there might be some portions of membrane there.

I will repeat the history of this, our second patient, as she has told it. You noticed that I tried to get her to tell her own story without any direct suggestions from me, because these patients will sometimes get excited, owing to their peculiar surroundings, and will answer your questions according as they think from their nature you expect them to be answered. Her history is simply this : That eight or nine months ago she had an excessive flow of blood which confined her to the bed for several weeks, and at the end of that time left her with a kind of bloody discharge, which continued for several weeks longer. She was under treatment, but simply took medicines, probably ergot or something of that kind, which succeeded in checking the flow of blood temporarily. Although her menses returned at the proper period, every time when they were upon her she noticed that she lost more blood than she should. She was in good health previous to eight or nine months ago, and her courses lasted not longer than four days, but since then they always last at least seven days, sometimes ten. But two weeks ago she had pains over the lower part of her abdomen, and her flow has not ceased since that time.

Now, gentlemen, you have the history of the patient, and it is a very straight one, too. You see she is comparatively a young woman, only twenty-two, and with the exception of this trouble of which she complains she is in very good health indeed.

Now, when I pass my finger into the vagina it meets at once with some fluid, which is the bloody discharge of which she speaks. The os uteri is small, rather pointed, and there is no special softening of it. The cervix is bent a little backward ; with that exception it is natural. Now, feeling directly behind the cervix, I meet with a tumor which is quite sensitive to the touch. In fact it is that that makes her cry out. This tumor is directly in Douglas's cul de sac. Now, carrying my finger in a little farther, and trying to map out the tumor, I find that there is a little resistance upon the left side, apparently connected with the left broad ligament. Now, that induration is very slight, and it may be nothing more than the resistance of tissues put upon the stretch in the abdominal cavity, because I have to thrust my finger well up in order to reach it. It exists on the left side. On the right side I find nothing of any consequence, so that this mass, which is in Douglas's cul de sac, is, as it were, isolated, rounded, possibly though due to the resistance which I spoke of. The impression which this gives to my finger is that the uterus is reflected, and that the mass which I feel in Douglas's cul de sac is the fundus of the uterus. It is sensitive, as the fundus of the uterus is apt to be when it is retained in that position for any great length of time, because it becomes congested and a certain amount of endometritis, and possibly even of metritis is excited, which of course would make it sensitive.

The mass is perhaps a little too sensitive. That is one point which is against its being the fundus. This is frequently sensitive, but rarely as sensitive as I find this mass. When I pass my finger along the posterior wall of the cervix it apparently passes directly from the body of the uterus upon this mass. In other words the cervix and the neck on the posterior wall seem to be continuous.

Now, when I come forward and make bi-manual manipulation with a view of determining whether I can get the fundus of the uterus in front, I find the patient's abdomen is so very sensitive that I cannot make satisfactory pressure. I do not feel, however, any mass in front to make me think the body of the uterus can be there. You see that bi-manual manipulation, as the patient is at present is of very little use to us. It is comparatively useless in the way of determining whether we have a retroflexed uterus or not. We are therefore obliged to resort to the use of the sound in order to settle the question. If the patient were not so sensitive, or if it were worth while to put her under ether, we could very readily determine the matter without using the sound.

Now, in using the sound, or probably better in this case, the probe, as being less likely to occasion harm, we must move with a great deal of circumspection. We must, in fact, carry the instrument into the uterus with as much care as we would exercise in introducing the sound into the bladder. Feel your way carefully, and when the sound has reached the fundus the position of the handle will show you which way that portion of the organ is turned. The sound has passed straight forward into the cavity of the uterus, the depth of which is about two inches and a quarter. That mass then that I feel in Douglas's cul de sac can not be the fundus of the uterus ; it must be something outside the cavity of the uterus, and from the history which she gives of pain, coming on suddenly at the time of her menses two weeks ago, and which has continued constantly since then on the left side, I think it must be a cellulitis. It gives one the impression of the kind of mass that would remain after a small hæmatocele, but she does not give a history of sudden, excruciating pain, together with the symptoms of shock, that always accompany that accident. So that in the absence of such symptoms, and in view of the fact that there has been a pain in that side which has become less and less within the last two weeks, taken in connection with the result of the physical examination, I am disposed to think that it is a case of mild cellulitis, having associated with it certain other conditions however.

Now, the examination has shown us that so far as the position of the uterus is concerned, it is normal. We have some slight inflammation outside of the uterus, however. The question comes up as to the cause of this bleeding, which is really what brought the woman into the hospital. The lump in the left side is only a matter of secondary importance with her.

Here you have a woman twenty-two years of age, who gives a history of being perfectly well until eight months ago, when she had quite a severe hæmorrhage, which she supposed to be a miscarriage ; since that time at every menstrual epoch she has lost more blood than natural ; there has been no special pain with the flow, but it has lasted from a week to ten days, whereas the normal period with her was shorter than that, four days. If there were a fibroid or anything of that kind there would be some enlargement of the uterus. Granular degeneration, independent of miscarriage, is not likely to occur at her time of life. It is evident that

her trouble is connected with the miscarriage which occurred eight or nine months ago. The history runs right straight back to that time. I am positive that the trouble here is a portion of retained placenta within the cavity of the uterus, and which by its irritating action keeps up this bleeding. It may possibly have formed such intimate connections with the mucous membrane itself as to constitute such a fungous granular condition as one of you mentioned a moment ago, and the condition has so increased that now her bleedings are very much greater than they were originally, and if it were left as it is would in all probability greatly weaken her; weaken her to such an extent as to produce profound anæmia. Ultimately a polypus might be developed from the bed of this formation.

The treatment will consist in removing the retained portion of placenta. Her cervix is so small that a sponge tent or a dilator at any rate would have to be used in order to get into the cavity of the uterus. The ordinary curette would not pass. I am disposed to move very cautiously here in the dilatation of the cervix for the reason that she already has a cellulitis. The cellulitis has not been of more than a month's standing, so that if we were to proceed at once to the dilatation of the cervix it would probably light up inflammation anew at the point of the cellulitis, and she might not get over it so easily the next time as she will probably do now. Suppuration might result. We will not therefore, dilate the cervix at once to remove the cause or the hæmorrhage, but we will use palliative measures, and if the hæmorrhage becomes severe at any time we may use the tampon, and in the meanwhile we will make local applications over the abdomen for the purpose of relieving irritation due to cellulitis. We will use the hot douches, notwithstanding the fact that it may have a tendency to increase the hæmorrhage, for I think we can control that by the means of which I have spoken. We will pursue this line of treatment then for the coming week, and if by that time the sensitiveness in her pelvis has been sufficiently relieved, we will proceed to dilate the cervix and then gently remove the mass that has created the trouble.

CHRONIC SALPINGITIS AND OVARITIS.

A CLINICAL LECTURE DELIVERED AT THE COLLEGE
OF PHYSICIANS AND SURGEONS,

BY

PROF. T. GAILLARD THOMAS, M.D.

This patient's name is Mrs. Mary H.; she is 33 years of age, a native of the United States, and has been married ten years and had two children, the last of which was born seven years ago. She says that she has now been sick for about six years, though she has never been entirely well since weaning her last child, which she nursed for seven months.

I think, gentlemen, that you have heard such a history as this before. A woman who was married ten years ago and whose last child was born seven years ago has been sick for about six years. Notice that she does not complain of having been sick since the last child was born, but only since she got through nursing it, and that means only since she began to ovulate. What she suffers from now she describes as a pain in the lower part of her stomach, and nothing else. Twice, she says, her stomach bloated up and she thought she had dropsy, and this was accompanied by severe pain the second time and it lasted for a

couple of months, confining her to bed. During her monthly periods she does not have much pain, but she does have a little for a week before the flow begins and then it is relieved when the blood commences to flow. She is never entirely free from the pain in the lower portion of the abdomen, but it does not interfere with her walking or attending to her regular household duties.

When I made an examination of this woman by the vagina this is what I discovered: When I first passed my finger directly up to the cervix, I found that the uterus was in its normal position and somewhat moveable, and there was nothing remarkable about it. But when I passed my finger to one side of the uterus I found an unusual enlargement there which extended laterally, and it could easily be mapped out as going from the uterus to the ovary, and I found that it was tender on pressure. The same condition was found to exist on the opposite side. Upon more careful examination around the uterus I found that there was in fact more or less fixation of the organ, which tells me almost positively that this woman has had pelvic peritonitis, and I have no doubt that those two attacks of what she called dropsy, where the abdomen was swollen, were really attacks of peritonitis, and the swelling was due to the accumulation of gas in the bowels.

Now what is the diagnosis here? All who examined this case in the other room felt positive with me that it was a case of enlarged fallopian tubes with enlargement of the ovaries at the same time. So this woman after she ceased nursing and had begun to menstruate again, no doubt got up a chronic ovaritis and a chronic salpingitis which have annoyed her ever since. This condition of ovaritis and salpingitis accompanied by tubal dropsy is the condition which has recently been so fully described by Mr. Tait of Birmingham. And these repeated attacks of peritonitis which she had were probably due to the escape of fluid from the fallopian tubes into the peritoneal cavity, causing an inflammation there which was slight in the first attack, but the second was more serious and lasted for two months. There can be no doubt as to the character of these two elongations extending outward on each side of the uterus. They are dilated fallopian tubes. In this class of cases I would perform an operation for the removal of the diseased organs only after great hesitancy. I have operated in only five cases, and the last was four days ago. The patient had been a sufferer for seven years and the pain at her menstrual periods was so severe that she had accustomed herself to use a hypodermic syringe, and she would take as much as seventy grains of morphia in a week, or an average of ten grains a day. Since the operation she has had sixteen grains every day, and to-day she is for the first time beginning to diminish the quantity, so we hope that after a time she will be able to get along without any at all.

In the case of this woman I cannot recommend her to risk an operation, because it is one in which there are many chances. The only fault I have to find with Mr. Tait's able paper on this subject is, that he says the operation is not attended with any great danger. I consider it a very hazardous one, and only justifiable after the suffering of the patient has become so constant and unbearable that death is preferable to such a life. Mr. Tait says that he only lost one case out of his last thirty-five operations; and this success is wonderful, for it is a very dangerous procedure. In all the five cases I have operated on death would have been preferable to such a life of suffering.

For in one of these worse cases the patient became a burden to herself and to all about her, and she is worse off than a leper because she cannot be put aside, and it is dreadful to endure her presence and at last she of necessity becomes a confirmed opium eater.

It is hard to determine just where the dividing line between the patients who should be operated on and those who should not is to be drawn. I should not operate in this case because I do think that life has yet become an intolerable burden to her, but I saw a case yesterday where the recurrence of peritonitis is so constant, and the woman's general condition is now so demoralized that I think I would do so in her case.

If this patient will go to the Woman's Hospital I will see what can be done for her without risking an operation. We will try the effects of galvanism, and counter irritation to the vagina by the application, of the compound tincture of iodine, or a small blister, and injecting the vagina thoroughly with very hot water etc., and if she does not improve under these means then we will see what else we can do for her.

MEDICAL NOTES AND NEWS.

Weight of Women's Clothes.—In relation to rational dress the dress reformers have, we are glad to see, been advised to give attention to the absurd fashion now prevailing as regards women's dress, and especially at this time of the year, when, in addition to their ordinary clothes, ladies cover themselves with heavy mantles of fur, etc. Many women complain of feeling tired after a short walk, whilst they are really carrying a weight which would soon tire a strong man. There waists are encircled with a belt or hoop, to which a load heavier than a felon's chains is attached, and the shoulders and chest are compressed by an additional burden. Breathing is laboriously performed, and the contents of the trunk and pelvis are thrust down with a force which if represented in pounds would occasion considerable surprise. It would be a matter of great interest if medical men would ask their female patients to ascertain precisely the total weight of the clothes they wear in-doors and out.—*Lond. Med. Rec.*

How to Hang.—In a recent paper on this subject, Dr. G. M. Hammond produces evidence that the common practice of jerking the body by the neck with a view to dislocation is wrong, useless and barbarous. In hanging, death takes place either by asphyxia or apoplexy, or by both. If the cord be loose or too high up on the neck, a little air may still reach the lungs, and life be prolonged till the slower death by apoplexy takes place. The object should be to produce immediate asphyxia, with a noose adjusted so as to close the windpipe at once. Usually there are both apoplexy and asphyxia. Dr. Hammond had himself partly strangled in a chair. A towel was passed round his neck and the ends twisted together by a medical friend, while another friend stood in front to watch the face and make necessary tests. As the twisting proceeded Dr. Hammond first noticed a sensation of warmth and tingling, which began with the feet and spread over the body; vision partly disappeared, but there was no appearance of colored lights. The head felt as if it would burst, and there was a roaring in the ears; consciousness continued, and Dr. Hammond could tell his friend whether he suffered pain from the

knife-thrusts being made into his hand. In one minute and twenty seconds from the commencement sensibility was abolished. In another experiment, sensibility ceased in fifty-five seconds. A knife-thrust, sufficient to draw blood, caused no sensation whatever. Dr. Hammond considers that the proper way to hang is to stand the criminal on the ground and adjust the noose carefully round the neck below the larynx; then raise him by pulling on the rope, which should pass over a pulley above, and he should be allowed to hang for thirty minutes. If he be let fall through a trap, or lifted suddenly from the ground, the noose is almost certain to be displaced, and death to be less sudden than it should be. The rope should be soft and flexible, so as to fit closely to the neck; probably one of cotton or flax would be preferable to the usual hempen cord. In hanging by the method indicated, sensibility would cease almost immediately after suspension, and much physical and mental suffering would be obviated. In the case of persons weighing under 150 lbs., it would be well to attach a weight to the feet to insure sufficient traction of the cord. Dr. Hammond notices the mistaken idea that dislocation of the neck causes instant death; in some cases even recovery has taken place. Even where death does occur, it is no more instantaneous than when asphyxia is accomplished, and there is no greater freedom from convulsions. Any convulsions observed in the other case may be regarded as no more evidence of pain than are the movements of a decapitated chicken.

The Influence of Rarefaction upon Blood-Pressure.—Dr. A. Fraenkel has read a paper before the Physiological Society of Berlin on certain experiments which he has made, in conjunction with Dr. Gerpert, to determine the influence of a rarefied atmosphere upon the animal organism. In addition to the general phenomena and the behavior of the gases of the blood in animals which breathe in a rarefied atmosphere, investigations were made as to the influence of rarefaction upon blood-pressure. The blood-pressure was read off upon a manometer, one arm of which communicated through the side of the box (in which the animal was kept exposed) with an artery of the animal, while the other arm was in communication with the general cavity of the box. When the atmospheric pressure sank to half the normal amount, the blood-pressure showed no change; when the pressure sank to a third of an atmosphere, a small rise took place in the blood-pressure. This rise, however, passed away during the sleep that occurred under the influence of this amount of rarefaction, and the pressure became normal again. When the air was still further rarefied till the pressure was as low as one-quarter of an atmosphere or less, the pulse became weak and small, the blood-pressure went down, and then, if normal quantities of oxygen were not quickly restored, the heart stopped. The chief gain of the whole investigation was the definite determination of the influence of a rarefied atmosphere upon metastasis (*Stoffwechsel*), upon which question only few and contradictory data exist. The investigators agreed in general with M. Paul Bert in regarding the effect of a rarefied atmosphere as inducing a chemical change which was brought about by a diminished supply of oxygen. The amount of urea secreted in the twenty-four hours was taken as the measure of metastasis. During a lengthened period of observation on those days in which the animals thus experimented upon had the same amount of food, the quantity of urea secreted in the twenty-four hours re-

mained constant. Nor was there any alteration in the amount of urea when they were exposed to variations of pressure down to half an atmosphere. On the diminution of the pressure to one-third of an atmosphere, at and under which pressure the amount of oxygen contained in the blood is markedly diminished and the animal falls into a deep sleep, there was—after this degree of rarefaction had lasted several hours—a very remarkable increase in the amount of urea. This increase did not occur till the next day in the case of animals which had been fed, whereas it occurred on the day of the experiment in the case of those animals which were kept hungry; but it lasted in all cases over a couple days after the experiment. Dr. Fraenkel's belief is that the rarefaction influences metastasis by depriving the blood and tissues of some of their necessary oxygen, and that this want of oxygen entails an excessive destruction of albumen; the constituents of which are in part deposited as fat, and in part are changed into urinary products. Besides the increased elimination of urea, fatty degeneration of tissues (*e.g.* of the heart) is observed when the system is in want of oxygen.—*Lond. Med. Rec.*

Giacomini's Process of Preserving Brains.—

Mr. A. W. M. Robson (in the *British Medical Journal*) recommends the following process for preserving brains: The fresh brain in its membranes is placed in a saturated solution of chloride of zinc, in which it floats, and must be turned over two or three times a day. After forty-eight hours, the membranes must be removed without taking the organ out of the fluid. Allow it to remain in this fluid until it ceases to absorb, as shown by its remaining at the same level, and not sinking. Then remove it, and plunge it in alcohol of commerce, where it must remain for a period of not less than twelve days, during which time the spirit should be changed two or three times. When removed from the alcohol it is to be placed in glycerine of commerce, to which 1 per cent. of carbolic acid may be added. At first it floats in the glycerine; but as the spirits evaporates, and the glycerine penetrates it, it gradually sinks to the level of the surface of the fluid, when it may be removed, put aside to dry for a few days, and, lastly, coated with several layers of gum-elastic varnish, or marine glue diluted with a little alcohol.

Lantern Fish.—The latest submarine explorations made on board *Le Travailleur*, have brought to light an extremely curious fact which none of the scientists who have hitherto endeavored to guess what might be the nature of life in the sombre depths of the ocean have ever thought of. These abysses are not only peopled by foraminifera and infusoria, as has been supposed, but numerous species of fish analogous to those which inhabit the surface of the water are there found possessing very curious anatomical peculiarities and novel organs. These organs are transparent plates covered by the skin and filled with a liquid capable of becoming luminous under the influence of the encephalon. It hence results that these vertebrata which inhabit regions where the sun never penetrates, and where consequently eternal darkness reigns, possess a kind of dark lantern, which they can light at will. It should be added that one peculiarity has long been taken cognisance of, which is that a majority of the zoophytes which carpet the bottom of the sea are naturally phosphorescent.

Obesity and Its Treatment.—Ebstein, of Weisbaden, describes a new dietetic method for the relief of obesity. He does not believe in 'Bantingism,' and states that it produces inanition which may be injurious. Dr. Ebstein contends that a diet of albuminous and fatty matter tends to check deposit of fat, and that it is the sugars and starches which are to be left out in an anti-fat regimen. He gives bread, however, and green vegetables, peas and beans, but no potatoes. The addition of fat to the diet list has the advantage that it produces satiety sooner and the patient does not eat so much.

A Blind Cat.—An interesting account of a cat which became quite blind, rather suddenly, from cataract, when about four years old, is given by Mr. Hovey in the *Scientific American*. At first the cat would sit and mew most piteously; and when he tried to move about he met with all conceivable mishaps—ran against walls, fell down stairs, stumbled over sticks, etc. If placed on the top rail of a fence, he would traverse its whole length, seeking vainly for a safe place to jump off. On being called, he would run about in a bewildered way. Ere long, however, Dido (so-called, irrespective of gender) showed a power of adaptation to altered conditions. He became able to run down stairs at full speed, turning into the hall after the last step. In this process he went to one side on the top step till he felt the balusters touch his whiskers, and by these he was guided. One by one he made each familiar path a study, and noted the situation of each door, etc., and with such success that it often seemed as if sight had been restored: but if an unexpected obstacle were placed in his way he showed, by running against it, that he was still quite blind. Dido seems as eager for war as he formerly was, and he even goes abroad in quest of adventures. His value as a mouser does not seem to be in the least diminished. Put into a closet where rats are suspected, he was found in the morning mounting guard over a large rat he had killed. Dido's sense of smell is by no means acute; yet he uniformly chooses the shortest road home, without reference to the path he may have taken in leaving the house. Once, when the ground was thickly covered with snow, Mr. Hovey took Dido out a considerable distance, and, after making a number of turns to bewilder him, tossed him adrift and awaited results. The animal turned his head in various directions and mewed piteously; but, finding he was left to his own resources, he stood motionless for about a minute, and then, to the author's surprise, made his way directly through the untrodden snow to the house-door.

An Assuager of Thirst.—Sir Joseph Fayrer, Medical Officer of the Secretary of State in India, has reported his experience in the use of coca-leaves, chewed during mountain-climbing, as a means of preventing or relieving thirst. His experiment consisted in the distribution of about eighty grains of the leaf to each one of the four guides and porters who accompanied him. During the ten hours consumed by the excursion, no water and but a limited quantity of wine was consumed. They drank no tea nor coffee, nor did they use ice or snow. Nevertheless, the chewing of the coca appeared to furnish great relief from thirst, and to enable them to make the trip with comparative comfort.

Poisoning by Strychnine.—A criminal case tried some time ago in Germany having shown the inadequacy of scientific notions as to strychnine poisoning and detection of the poison in putrefying bodies, four *savants*—viz., Dr. Ranke, a physiologist, and MM. Buchner, Gorup, Besancz, and Wislienus, chemists—have lately made a fresh experimental study of the subject. Seventeen dogs were caused each to swallow a pill of 0.05 gramme nitrate of strychnine. The salient features of the poisoning were these. The time between taking the poison and the first tetanic attack varied widely, from five minutes to eighty-three minutes; the average was eighteen. So did the time between taking the poison and death; the average was thirty-five minutes. On the other hand, the interval between the first symptoms and death varied little. It never reached half an hour, and the average was eleven minutes. Race and weight had no influence on these intervals. Immediately after death there was complete muscular resolution; rigidity set in in twenty-one minutes after death at the earliest, ninety-seven minutes at the latest; average fifty minutes. It began with the fore limbs. Its duration was the same as in other kinds of death; sixteen hours after death it was rapidly diminishing. The tetanic fits were few, two or three generally, and death always came suddenly during a fit. The fits lasted one minute on an average. Next as to search for the poison in bodies exhumed after 100, 130, 200 and 330 days. Using Stas's method (improved), the authors were unable to find strychnine, even where 0.1 gramme had been given to each dog, a fatal dose even to a man. But, even in the dogs longest buried, the presence of the poison might be assumed from the bitter taste of the product obtained. The physiological reaction is infinitely more delicate. The extracts were dissolved in cold water and injected under the skin of frogs and in a few minutes these animals had violent tetanic spasms. The action was more pronounced the shorter the time the animal furnishing the extract had been buried. The nature of the ground, permeable or otherwise, where the dogs were buried, did not appear to influence the physiological reaction of the strychnine in the extract. The extracts from very putrefied bodies produced in the frogs a torpor, with weak and sluggish movements of the heart, which might retard and partly mask the action of the strychnine. A critic has suggested that those alkaloids, called ptomaines, found in dead bodies, might even in some cases exaggerate and simulate the action of the strychnine. While this action of putrid matter is most conspicuous with extracts from the intestine, the action of strychnine is most pronounced with extracts from the liver and spleen. Professor Dragendorff has objected to the method the authors adopted to liberate the alkaloid—viz., agitation with ether, then with chloroform and amylic alcohol; and he has indicated a superior method, enabling to detect 0.000001 gramme of strychnine, while the physiological researches require at least 0.000004 gramme. Thus he considers chemical analysis the more delicate method.—*Lond. Med. Rec.*

A Prize for the Prevention of Blindness.—The fifth international Congress of Hygiene, which will meet at The Hague in 1884, will award the prize of two thousand francs (80*l.* sterling) offered by the London Society for the Prevention of Blindness to the author of the best essay written in English, French, German or Italian on the causes of blindness and the practical means for preventing it. Besides this prize the International

Society for the Improvement of the Condition of the Blind reserves to itself the right to award a second prize of one thousand francs (40*l.* sterling) or two prizes of five hundred francs (20*l.* sterling) each and a silver gilt medal with a diploma, should it see fit, to such of the essays as should, in the opinion of the International Jury for the principal prize, be deserving of it; the last mentioned prizes will be distributed at the centenary festival of the first blind Institution founded by Haüy, which will take place in Paris in 1884. The fourth International Congress of Hygiene, which met at Geneva in September, 1882, has adopted for this competition the following programme, as prepared by the London Society for the Prevention of Blindness:—1. The study of the causes of blindness; (a) Hereditary causes; diseases of parents, consanguineous intermarriages; (b) Infantile eye diseases; various inflammations of the eyes; (c) School period and time of apprenticeship, progressive short-sightedness, etc.; (d) General diseases; diatheses, various fevers; chronic poisoning, etc.; (e) Trade influences; wounds and accidents, etc.; sympathetic ophthalmia; (f) Social and climatic influences; contagious ophthalmias; unhealthy habitations; defective lighting, etc.; (g) Neglect of treatment and bad treatment of eye affections. 2. The study of practical preventive means:—(a) Legislative means; (b) Hygienic and professional means; (c) Educational means; (d) Medical and philanthropic means. The international Jury, elected by the Geneva Congress, for the purpose of judging the essays consists of—Holland: Dr. Snellen, professor of ophthalmology, Utrecht. Germany: Dr. H. Cohn, professor of ophthalmology, Breslau. France: Dr. Fieuzal, physician to the Hospice des Quinze-Vingts, Paris; Dr. Layet, professor of hygiene, Bordeaux. Italy: Dr. Reymond, professor of ophthalmology, Turin; Dr. Sormani, professor of hygiene, Pavia. England: Mr. Streatfield, professor of ophthalmology, University College, London; Dr. Roth, honorary secretary and treasurer (*pro tem.*) of the Society for the Prevention of Blindness, London. Switzerland: Dr. Dufour, of the Ophthalmic Hospital, Lausanne; Dr. Haltenhoff, lecturer on ophthalmology, Geneva, and secretary to the Jury; Dr. Coursseant, oculist, Paris. and Dr. Berlin, professor of ophthalmology, Stuttgart. Those essays to which prizes have been awarded will become the property of the Society for the Prevention of Blindness, and of the International Society for the Amelioration of the Condition of the Blind, who will be at liberty to publish them in whole or in part, in several languages, in order to make them useful in the way they consider best. The manuscripts for competition are to be sent to Dr. Haltenhoff, Geneva, not later than March 31, 1884. Every manuscript has to be distinguished by a motto, which is also to be written on a sealed envelope containing the name, Christian name, titles, and address of the author. The envelopes will not be opened until after the award of the Jury.

Wilks on the Evolution of the Stethoscope.—Dr. Samuel Wilks in the *Lancet*, Nov., 1882, p. 882, gives an account of the evolution of the stethoscope. He shows how the present forms are derived from the first instrument used by Laënnec in 1816. Laënnec rolled a quire of paper into a kind of cylinder, and applied one end of it over the patient's heart, the other to his own ear. Finding the success of this plan, Laënnec made various instruments of wood, glass, metals, etc., but finally employed a cylinder of wood an inch

and a half in diameter and a foot long, perforated longitudinally by a bore three lines wide, and hollowed out into funnel shape at one of its extremities ; after a time the sides were cut out to make instrument lighter and more elegant, and later on a difference was made in the size of the two ends ; so that the modern instrument, though not much like a block of wood itself, can easily be traced from one. The flexible stethoscope has also been known for many years, for in 1829 Mr. Comins of Edinburgh, wrote an account of a flexible instrument, which 'can be used in the highest ranks of society without offending fastidious delicacy.'

Almost a Death from Chloroform.—Dr. J. M. Taylor, of Corinth, Miss. (Class of 1851), relates in the *Mississippi Valley Monthly* for Jan., 1883, the particulars of a case in which chloroform was administered to a patient under operation for excision of a mammary tumor. "I kept my fingers carefully on the pulse," says Dr. T ; "the patient was talking very excitedly, and had but a few inspirations of the chloroform, when I noticed a great commotion in the pulse, beating violently and irregularly. Without speaking I pushed the Doctor's hand away, and all seemed to go on well again. He resumed the administration, and the same symptoms were repeated. I again pushed his hand away and all was right. But on approaching the chloroform again the pulse suddenly ceased. I knocked the Doctor's hand away and told him not to give any more chloroform. The respiration continued as natural as it ever was, but there was not the faintest pulsation to be felt, and soon the respiration ceased and the patient was dead. I told the assistants to hold her feet, and I threw her head and shoulders off the table. Dr. McDougal pulled her tongue forward, and we used every means to resuscitate her, and were greatly gratified, after a period of awful suspense, to see her breathe again. Now, the point which I wish to call attention to is the continuance of respiration after the heart apparently ceased to beat. If I had not been watching the pulse so closely and the patient had gotten one or two more inspirations of chloroform, I am satisfied the result would have been disastrous. After full recovery I gave hypodermic injection of

morphine, a large drink of whiskey, and proceeded with the operation."—*College and Clinical Record*, Feb. 15, 1883.

Dr. Louis Elsberg in his address to the Canada Medical Association said :

As to laryngeal rest, you know the larynx is a framework of cartilages, covered by perichondrium, united by ligaments, moved by muscles, supplied with blood-vessels, lymphatics and nerves, and lined by a peculiar elastic membrane and a mucous membrane continuous with that of the throat above and the windpipe below. Although, in by far the great majority of all cases of laryngeal disease, it is the mucous membrane that is affected, either primarily or secondarily, yet each of these constituent structures may be involved, and in each instance rest may become an important—if not the most important—part of successful treatment. Under the influence of rest, inflammatory conditions subside and œdema diminishes ; nervous and nervo-muscular affections, phthisical, syphilitic and malignant ulcerative diseases, and even morbid growths, may be wonderfully aided if rest enters as a factor in their treatment.—*Canada Medical Journal*, Jan. 1883.

THE VALUE OF GOLD MEDALS.

A golden medal was voted to me
By a certain Royal Society.
It was not a thing whereat to scoff,
For sixty guineas was the cost thereof.
On the one side the head of the King you might see,
And on the other was Mercury.
But I was scant of worldly riches.
And moreover the Mercury had no breeches.
So, thinking of honor and utility too,
And having modesty also in view,
I sold the medal—why should I not ?
And with the money which for it I got
I purchased this silver coffee-pot ;
Which I trust my son will preserve with care,
To be handed down from heir to heir.
These verses are engraven here
That the truth of the matter may appear,
And I hope the Society will be so wise
As in the future to dress their Mercuries.

(Written by Southey, when on a Visit to Greta Hall.)

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A LECTURE ON GASTRO-ELYTROTOMY.

DELIVERED AT THE UNIVERSITY MEDICAL COLLEGE.

BY

PROF. WM. M. POLK, M. D.

GENTLEMEN:—At our last lecture we dealt with the subject of craniotomy, and I described to you the difficulties and changes of the operation and told you in what conditions it was indicated. But there are limits to the performance of this operation determined by the size of the pelvis and the seat of the obstruction to the descent of the child's head. If the diameter of the pelvis at the superior strait were less than $2\frac{3}{4}$ inches from behind forward I would weigh very carefully all the objections to craniotomy before I decided upon that as the safest method of delivering the mother of her child. But suppose, for instance, your patient has gotten up a good deal of œdema about the vagina so there is but a limited space to operate in if you desire it, and suppose too she has a pelvis with an antero-posterior diameter of only two inches or less at the superior strait, although the transverse diameter may be ample enough, in such a case you would on all accounts deliberately select the operation of gastro-elytrotomy in place of craniotomy. You would select the operation of gastro-elytrotomy as offering the best chance to the mother without taking the safety of the child into consideration at all; although by this means you may be able to save the life of the child which would necessarily be sacrificed if you resorted to craniotomy.

This brings us to the study of the operation of gastro-elytrotomy; and this is an operation which aims at gaining access not to the cavity of the uterus, but to the vagina, by an opening into it from above the

pelvic inlet, and this is accomplished without cutting or in any way interfering with the peritoneum. The incision is so made as to pass entirely through the abdominal wall and behind the peritoneum, and the vagina is reached by a free opening between the pelvis and the peritoneum and a rent is made in the vagina through which the child is extracted in the space between Poupart's ligament and the pelvic brim on the one side and the peritoneal covering of the uterus on the other, and taking a route above the pelvic brim it emerges from the opening just above the groin in the iliac region.

This you see is very different from the Cæsarean section, for in that operation you cut down directly into the peritoneal cavity and into the cavity of the uterus by an incision made exactly in the median line of the abdomen, and in this way the child is extracted. Now in spite of all the advances that have been made in abdominal surgery within the past ten or fifteen years, without question there is more danger in entering the uterus through the peritoneal cavity than in passing altogether outside of it. Besides when you have completed the extraction of the child through the peritoneal cavity you have still got to unite the edges of the incisions not only in the uterus but also in the peritoneum itself, and after all is closed up there may yet be bleeding from these incisions into the peritoneal cavity, and this makes an additional danger. So you see that the risks of Cæsarean section are infinitely greater than those of gastro-elytrotomy. Now on account of the comparative freedom from danger that the operation of gastro-elytrotomy offers an attempt has recently been made by some of its earnest advocates to thrust it upon the profession as a substitute to take the place of the Cæsarean section in all instances. But this is very wrong, for there are many cases where Cæsarean section would be proper but this operation would be entirely out of place. Gastro-elytrotomy is never for a moment to be considered if you cannot gain access to the uterus through the upper portion of the vagina. So that if you find that you can not enter the cervix because of its degeneration or atrophy, or that you can not reach it because of an abdominal tumor coming down below it or for any other reason, in such cases the Cæsarean section would be by far the best operation for extracting the child. Remember that you must never undertake the operation of gastro-elytrotomy unless you can by it gain access to the cervix, and unless the cervix is dilatable.

Now you may ask whether there are not any other rare conditions than a contracted pelvis or obstructed outlet, where gastro-elytrotomy would be the preferable operation. I can imagine a condition of a child with a hydrocephalic head with or without a narrow or twisted rachitic pelvis where the uterus would not be able to expel its contents and embryotomy could not be performed, and here gastro-elytrotomy might be employed. Or if you should have one of these cases where a transverse position of the child is so often associated with a contracted pelvis, and if at the same time there was so much swelling of the soft parts that you could not perform embryotomy, then you might perform gastro-elytrotomy, though the Cæsarean section might possibly be the better operation here. But both of these conditions are of rare occurrence, and there are comparatively few cases of transverse presentation where evisceration could not be accomplished. I have taken all this time in speaking of the indications for this operation, because it is one that encroaches on the domain of embryotomy as well as craniotomy,

and hence I should put it down as an operation occupying a place as regards danger, coming between Cæsarean section on the one hand and a badly performed craniotomy on the other.

Now before beginning the operation itself it is just as well for you to appreciate the fact that there are some anatomical difficulties to be met with in its performance, and you should understand the best way of overcoming them. Your incision should be made upon a line nearly parallel with Poupart's ligament, and extending from a point just above the anterior superior spine of the ilium to a point just above and to the outside of the spine of the pubis. This incision will be long enough to give ample room for the extraction of a child of ordinary size. Now as you cut downward the structures you will go through successively are the skin, the subcutaneous fat, and then the three great abdominal muscles, the external and internal oblique, and the transversalis; and then you pass through the transversalis fascia, and come down, not upon the peritoneum, but upon a layer of connective tissue occupying the subperitoneal space in the iliac fossa, and you are really beneath the peritoneum and in a space between it and the pelvic fascia. Now if you will make the experiment in the course of your dissections upon the dead subject, you will see how easily you can lift up the peritoneum and separate it from contact with the walls of the pelvis, but in the pregnant state there is really no peritoneum there to lift up, for the uterus, as it enlarges, carries the peritoneum up along with it, and so a space is left through which you can pass directly down to the iliac fossa and then straight to the side of the lower part of the uterus and upper portion of the vagina without danger of injuring any important structure.

The different points for you to remember are these. At the bottom of the iliac fossa lie the external iliac vessels. But these are not liable to be injured. Just above Poupart's ligament is the origin of the deep epigastric artery and a combination of branches which unite to form it. Just below its origin is the circumflex artery which runs along, just above and parallel to Poupart's ligament, to the anterior superior spine of the ilium, and here it sends a small vessel directly upwards to anastomose with one coming down from the lower border of the ribs. The superficial epigastric artery is not large enough to give any trouble. So the only vessels of any magnitude to be avoided are the deep epigastric and the circumflex; but the circumflex lies below and out of the line of the incision. Hence we are narrowed down to the deep epigastric as the only vessel we are in danger of wounding. But suppose we do injure this, what harm can come from it? For the bleeding can easily be controlled by a pair of artery forceps, and there is such free anastomosis here that the circulation will not be interfered with. Therefore this artery need cause you no anxiety. I wish to show you that this is quite a simple operation and not so dangerous a one as it is said to be, and so I point out the various points of danger and tell you how to avoid them. The round ligament of the uterus, you know, crosses the brim of the pelvis just at the ileo-pectineal eminence, and then goes through the inguinal canal, and has much the same relation to it as the spermatic cord in the male, and the danger of wounding this has been urged as an objection to this operation. But if you remember to stop your incision just outside of the inguinal ring you will avoid injuring this. But suppose you do cut squarely across the round ligament, even if the cut edges do not unite again, as they pro-

bably will, no great harm will come of it. So neither this danger nor that of wounding the deep epigastric artery can compare with the single one of injuring the intestines by accidentally nicking them in the performance of Cæsarean section.

Now having told you of the risks and how to avoid them I will proceed to show you the operation itself. Put the patient on her back and have two intelligent assistants at hand to aid you, if you can secure them. The instruments with which you should have provided yourself previously are, a sharp scalpel, a grooved director, a pair of scissors, an ordinary perforator such as is used in the operation of craniotomy for breaking into the child's head, and some sort of blunt instrument which you can introduce safely into the vagina so as to push its upper part over towards the line of the opening made by the incision in the iliac region. The vagina you know comes up above the pelvic inlet in pregnancy, and your object therefore is only to push it over toward the pelvic wall at the same time that you are approaching the vaginal wall from without, so as to bring it within easy reach. Now as you pass down in the iliac region you will find that as the uterus has risen up out of the pelvis the peritoneum has been lifted up with it, so there is no peritoneum present below the level of the upper margin of the true pelvis between the pectineal eminence on the one hand and the ilio-sacral synchondrosis on the other; and from a point opposite the anterior superior spinous process to the pectineal eminence the peritoneum does not come down into the pelvis at all but stretches directly across from the uterus to the abdominal wall well above this line. So in making your incision you pass right beneath the peritoneum, and by pushing the vagina over by means of the instrument I have described you can easily reach it through the opening you have made in the iliac region. Upon this anatomical fact really turns the whole of this operation.

Now before proceeding to the operation I take it for granted that you have seen to emptying the rectum, and have drawn off the water, and left the catheter in the bladder as a guide to the posterior wall of that organ; for to reach the vagina you are going to pass between the posterior wall of the bladder and the anterior wall of the rectum, and you want to know just where these are in order not to wound them. But you will avoid injuring the bladder if you remember that when empty it never goes behind a line drawn from the ilio-pectineal eminence of one side to that of the other.

Now having made your incision and reached the subperitoneal space, drop your knife, and from this point on do not use the cutting edge again, but use your hand or the handle of the scalpel to separate the tissues until you reach the vaginal wall, and then with the perforator open into it, and then introduce your fingers and separate the edges of the opening, and enlarge it by tearing it in the line of the brim of the pelvis, going around the vagina rather than tearing it in an up and down direction. If you can use a Paquelin cautery knife or an ordinary case knife at a red heat it is just as well in place of the perforator for opening into the vagina. Now that you are in the vagina, having taken the precaution beforehand to see that the cervix is fully dilated, if not by natural means then by the use of Barne's dilators, you are able to deliver the child either by version or by the forceps. In making traction on the child it is necessary to have the edges of the incision and the uterus itself held down in place by an assistant so that no traction will be made on the peritoneum and blood vessels which might otherwise

be torn. In this way you can deliver the child without much trouble, and then it is only necessary to see that the placenta is properly delivered; and if post partum hæmorrhage or any other complication occurs it is to be treated on the usual principles. If there is much hæmorrhage from the tear in the vagina you can control it by a tampon in the opening and extending down into the vagina. But I can not imagine how there could be any considerable amount of bleeding if you remember not to use any cutting instrument after laying open the iliac fossa, and are careful to enter the vagina by tearing, or by some such instrument as a perforator or a thermo-cautery knife or a simple case knife heated to redness.

You may ask if there is not some danger of wounding one of the ureters in this operation. The ureter will be in no danger provided you go directly from the incision in the iliac region towards the uterine wall, and then enter the vagina at a point not less than one inch below the junction of it with the uterine body.

Having now gone over the chief points to bear in mind, I will proceed to perform the operation on the manikin and review the chief steps as I go along. You may select the patient's right side, preferably, for the operation because the rectum lies upon the left, and so is less liable to be wounded. But inasmuch as the rectum lies behind the broad ligament it is really quite out of danger, and so you can do the operation on either side you please. Now as you stand ready behind the patient, let the uterus be seized by an assistant and dragged over to the opposite side, so as to put the integument on the stretch at the place where you are about to make your incision. Now find a point one inch above the anterior superior spinous process of the ilium, and with a scalpel cut along a line parallel with Poupart's ligament to a point one and three-quarter inches above and to the outside of the spine of the pubis. The inner end of this incision is just outside the deep epigastric artery, which you are careful not to wound. After passing through the skin and muscular tissues you find yourself in the subperitoneal space, and then you drop your knife and with your hand work your way toward the vagina, which is being pushed over to meet you, and when you reach it thrust your perforating instrument through to make an opening, and when you have entered the vagina tear it wider open, and then puncture the membranes to let the waters escape. Now thrust your hand through the dilated cervix and seize the child and bring it down and out through the opening above the pelvic brim. Here, however, I will deliver by the forceps in preference to the hand. I first introduce the lower blade so as to grasp the under side of the child's head, and then the other upon the upper side, and after having locked the forceps and secured a good hold on the child's head I then begin to make traction, taking care to press the blades of the forceps well down against the side of the pelvis, so as not to tear the cervix and vagina any more than possible; and when you have so brought the head out until you can get your finger behind it grasp it, and at the same time push the cervix back, and so deliver the child.

Having completed the delivery, it then becomes necessary to proceed to close and dress the wound with the same care and on the same principles as you would treat other wounds of a similar character. You should unite the edges by deep sutures so as to bring the opposing sides of the muscles not only, but also of the fascia transversalis, together, and carry the sutures from the upper end of the incision nearly down to the lower end of the wound, and then at this point intro-

duce a large drainage tube so as to bring one end out into the vagina and through it, and then fasten the ends so that they can not slip either way, and finally wash out the wound through this tube every third, eighth or twenty-fourth hour, according to the urgency of the symptoms, and as much oftener as necessary in case puerperal septicæmia sets in.

A LECTURE ON LITHOTRITY

DELIVERED AT BELLEVUE MEDICAL COLLEGE,

BY

PROF. E. L. KEYES, M. D.

GENTLEMEN:—I wish to speak to you to-day about the operation of removing stone in the bladder by crushing, and to tell you of the most recent advances in the methods of performing it both here and abroad.

Some of the earliest efforts at the treatment of this disease consisted in trying to break down the stone into a fine dust, so that it could then be removed through the urethra in the natural way, and all sorts of rude instruments were made to grind it down. But no very serious attempts were made to remove stones by this method until Civiale, in the early part of this century, performed the operation before the French Academy of Medicine with instruments of an improved pattern. He may justly, therefore, be called the father of lithotri-
trity.

The instruments formerly used were exceedingly clumsy. Some of them were made three-pronged, so as to catch the stone and crush it after holes had been bored into it in various directions, and in some the blades were so made as to seize the stone, which was then crushed by blows of a hammer. Finally, however, the screw power was devised, and this is the principle on which most of the modern instruments are constructed. A sliding motion is given to one of the blades by means of a screw, and the crushing force is, therefore, enormously powerful. When it was first suggested to use screw power in the lithotrite, it was objected that if the stone should slip from between the blades the mucous membrane might be caught and the walls of the bladder injured; but in spite of all such objections this is to-day found to be the most convenient device. Sir Henry Thompson was the most serious advocate and exponent of the lithotrite, and he brought the instrument up to its present state of perfection. But an objection to his instrument is, that it is not very strong and it is not generally powerful enough to crush a stone over an inch in diameter. Thompson attempted to remove a stone from the Emperor Napoleon III. in three sittings. In the first sitting he was successful in removing a part, but in the second the patient died. This operation was, therefore, considerably criticised in France, and at the sitting of the British Medical Association, in 1879, the best surgical minds in England decided against lithotri-
trity and argued that the operation for lithotomy was generally the best. Sir James Paget then declared that if he had his life to live over again he would cut more and crush less. But three years ago it was proposed by Bigelow, of Boston, to substitute for the former method an operation which he termed rapid lithotri-
trity. He said that the reason that lithotri-
trity had not heretofore proved so successful as had been hoped was because it had not been the custom to remove all the stone from the bladder at a single sitting, and so broken fragments with sharp edges were left behind for several days and they injured the bladder. It was, therefore, these

sharp, ragged pieces of stone that caused the failures in this operation, and so he proposed the operation of rapid lithotomy by which the whole stone should be removed at a single sitting, and length of time in accomplishing this should be disregarded, and if necessary three or four hours might be taken in removing the stone. The old doctrine which taught that the lithotrite should not be left in the bladder for more than three minutes at a sitting had not been criticized before, but here was a man who boldly said that you might safely work for three hours in the bladder if you chose, provided you only got the stone all out. This announcement of course startled the world and gave rise to much discussion and Sir Henry Thompson had himself been thinking in this way for some time, yet when Bigelow preceded him in announcing his discovery he would not accept his theories. Bigelow had arrived at his conclusions after careful observation and experimentation, and he had found that much larger instruments could be passed into the bladder than had been supposed. Aided therefore by the use of big tubes and an ingenious mechanical apparatus, he found that he could crush the stone and wash out all the fragments in a comparatively short space of time, and the patient would tolerate the operation well. This, then, is the operation which is now almost universally accepted as the best, and is done in all the civilized and in much of the uncivilized world. And it is so simplified as compared with the old operation that almost any surgeon, whether experienced or not, can now do it. In some statistics of this new operation which I collected about two years ago, I found that the average percentage of deaths after its performance was only about six, if I remember correctly—at least the mortality was very low—but when by the old plan the stone was not all removed at the same time, the mortality was about thirty per cent. Hence I do not doubt the falsity of the belief that the time occupied in the manipulation of the bladder regulated the rate of mortality. Nevertheless, my experience is that no man should attempt to perform the operation of rapid lithotomy the first time he has a stone to remove, but he should begin by the old method and select a small stone, if possible, and operate without etherizing the patient, and then he will not be so likely to do harm, and thus injure not only his statistics, but also his own reputation. It requires a certain amount of experience and skill not to seize the walls of the bladder instead of the stone; although the modern instruments are so made that they are supposed not to catch the bladder, yet almost any of them will if not carefully used. If he does not know how the bladder feels in the blades of the lithotrite, a careless operator will be likely to crush a part of it, and the post mortem will show the injury.

I cannot take time to say much about the old method of lithotrity, which consisted mainly in operating without ether, and in breaking up only a small piece of the stone at a time within the space of three minutes, and then having the patient lie on his back while his bladder was being washed out. Several sittings were thus often required for the removal of a single stone. But the new method is the one you should all know about. It is applicable in all cases of stone in the female, and all in the adult male beyond the age of puberty, provided the stone is reasonably small.

In three cases where young male children were operated on in this way only one resulted successfully, while two were failures because the urethra was too small to allow of free manipulation, and so a

cutting operation had to be resorted to afterwards, and in one of these the child died. Hence this operation is not applicable in a male below the age of puberty, while it can be used in a female of any age, because in her you can stretch the urethra to almost any size you choose without doing harm. In a male boy the median or lateral or high operation of lithotomy should be chosen in preference to this.

The number of stones to be removed does not complicate the operation, but a number of small ones is better than one big one, because the large one must first be broken up into smaller ones, each of which is to be crushed separately. The size of the stone is no objection to this method as a rule, but practically one over two inches in diameter cannot be seized and manipulated by any instrument you can get into the bladder. Though so large a stone might be crushed if it were phosphatic in structure, yet it would be difficult to do it, and it would be especially so if the stone were a hard one, because it would probably be shot out from between the blades of the instrument whenever pressure was applied, while the blades could cut into and through a softer stone.

The modern lithotrites are so strongly made and with such a curve at the angle that practically no amount of force can break them, and they will go through the hardest stone. Occasionally instruments have broken off in the bladder, and then not only the stone but the blades had to be cut out by the operation of lithotomy. This accident would oftenest happen in trying to crush an oxalate of lime stone, which is the hardest kind that grows in the bladder, and such a stone of one inch in diameter would occasionally be sufficient to break the instrument.

There are a number of different crushing instruments in the market, but each man should choose an instrument for himself according to his own mechanical ideas. There are, however, certain points he should always look at. The safest instrument is probably one with a smooth male and female blade, because if you catch a portion of the bladder in it you will only bruise or contuse it a little and not lacerate it. But this instrument is rarely used, because it makes a slow operation. The Bigelow instrument is perhaps the best, but I don't quite like the wrist motion it necessitates, nor the character of the screw, and it sometimes gets clogged. This, like the old instruments, has an S curve, and it is very excellent for use in all cases of enlarged prostate and where there is a very long urethra. But remember that in this instrument the top of the female blade is a quarter of an inch from the top of the male one, and it is all very well in using it if you happen to get a piece of the stone alongside of the blades, but when you come to try to pick up a stone from the bottom of the bladder the male blade keeps the bladder well off, and prevents your catching the stone. A better instrument is a smaller one with the blades so made that you can pick up a thin shale stone with it; one as thin as tissue paper, and the blades of this instrument are so thin that if you catch the bladder between them you get an elastic sensation which is very distinctly felt.

You cannot always trust to a patient's sensations to inform you when you have grasped the bladder-wall, even when not anæsthetized. I once went after a piece of catheter that had slipped into a man's bladder, and I found I could not feel it so as to know when I had it between the blades of the instrument, because it was rubber and soft, like the walls of the bladder. But I thought I would pick up something,

at any rate, and it might be the catheter. So I did try, and I felt I had something soft in the blades, so I screwed down on them, and then asked the man if it hurt. He said "No." So I concluded I was not grasping the bladder wall, and I screwed the female blade still closer down, and still he said it did not hurt him. The reason, however, was that the bladder was paralyzed and sensibility was lost. I should have tried to see if I could turn the instrument upside down after grasping what I supposed was the catheter, and if I had caught the bladder wall instead, then I could not have done this. But I did not try this, and trusted rather to the patient's sensations, and I thought from the peculiar feel of what I had caught that it must be the catheter. So I screwed the blades together more and more till I had a firm hold, and then I began to pull the instrument out. It was then evident that what I had caught was attached to the bladder walls, and I thought I had caught up a piece of the mucous membrane with the catheter, as I could not pull the instrument out. I knew it would not do to admit my mistake to the patient, so I determined to try to cut through this mucous membrane, and I screwed the blade down as hard as I could, and then, with a jerk, I ripped out a piece of mucous membrane of considerable size, and with it a little of the muscular fibre of the bladder itself, but the catheter remained behind. The man never had a bad symptom afterwards, and a few days later the piece of catheter was caught and removed by the lithotrite without any trouble. This incident illustrates the importance of care in manipulation, and of not trusting to a patient's sensations to warn you of danger.

Now I might say much about the different varieties of crushing instruments, but I will not. I have here some of the older instruments and also the first and the last Bigelow, and the instrument of Thompson now used in England so much.

But leaving these I have a few things to say about the tubes used for washing out the bladder. The straight tube is very nice and it enters the bladder easily as a rule, but sometimes it bruises the deep portions of the urethra, and so some prefer a curved tube which is attached to the washing bottle. Here is one that I lately devised to take the place of the straight tube, and it is one that will get out the fragments under all circumstances. At the end it is curved so as to make a sort of Mercier catheter.

The operation of lithotomy is simply this. It is commenced very much in the same way as in sounding for stone. The patient lies on his back, and it is better to have his hips a little elevated above the table so that the stone will gravitate to the posterior portion of the bladder. The instrument is then passed down along the floor of the urethra and as it reaches the prostatic portion the handle is carried around so that the heel of the instrument runs along the floor in the flat part of the prostatic sinus, and when it has entered the bladder it works about freely. There should be about three ounces of urine left in the bladder to keep it partly distended so as to give room for manipulating the instrument. You now try to catch the stone by sliding the lithotrite down the floor of the bladder as far as it will go toward the posterior wall, and then by moving it gently from side to side you will probably strike the stone, because the position of the patient has caused it to fall into the posterior portion of the bladder. Now as you strike it you can easily tell on which side it is, and if it is on one side you turn the instrument in that direction, and then open the blades, and

when you are ready close them again in hopes of catching the stone in them. If you catch something, then make a partial turn of the instrument in the other direction so that you may know if you have caught a piece of the bladder, for then you can not turn it over. If you have grasped the stone only, then screw down the blade and break it, and a portion of it will fall to each side of the instrument. Then go back to one side and again get hold of the piece of stone and crush it, and then break another piece and another, and so on until you find no more on that side. Then turn to the other side and do the same, and so you go on till you have crushed the stone into a great many small pieces. Then put in the washing tube with the washer attached, and wash out all the débris from the bladder.

I can perhaps give you a good idea of the ways in which different stones crush or break by means of a bottle of water representing the bladder holding a number of different kinds of stone, and I pass the instrument in and catch one of these and crush it, while you can observe the whole procedure. When I catch a phosphatic stone, which is the softest variety, the blades of the instrument go through it slowly and cut their way easily, and the pieces do not fly off but simply fall one on each side. But a hard stone when crushed cracks suddenly and the sound of the fracture is quite loud, and the pieces fly off with some force and strike the sides of the bladder, but not hard enough to do any harm. This is the case with uric acid or oxalate of lime stones.

I will show you another point. If you get hold of a very hard stone and you begin to turn the screw so as to crush it and it does not yield, you can sometimes crack it, even though so hard that you might break your instrument if not careful, by screwing down the female blade about as far as it will go and holding it so under a great deal of pressure for a moment, and then while you are waiting it will frequently fly asunder of itself. But if not, then reverse the screw for an instant, and then come down again hard on the stone, and it will break asunder.

Now to wash out the fragments of stone fasten the washer on to the silver tube and pass it into the bladder, and as you suddenly force the water in by pressing on the bag, the swashing motion stirs up the pieces in the bladder, and then a suction force draws them up into the collecting glass under the washer, as you see. This process is to be repeated sufficiently often to get rid of all the stone at one sitting and have the bladder perfectly free of any foreign body.

The modern operation, therefore, does not require three or four weeks or months as formerly, but three fourths of an hour is often sufficient, and the patient is often out of bed within a week; and the amount of reaction and of inflammatory trouble set up in the bladder is very little considering the amount of apparent violence that is done to the organ. This is now a legitimate operation, and advances in it are constantly being made, and it is probably to be the future operation for stone at all times of life in the female, and in all cases after the age of puberty in the male, whenever circumstances do not make the operation of cystotomy necessary.

1. HYDRARTHROSIS OF KNEE JOINT TREATED BY CARBOLIC INJECTION. 2. AMPUTATION OF THE THIGH FOR SUP- PURATIVE ARTHRITIS OF KNEE JOINT.

A CLINICAL LECTURE DELIVERED AT THE NEW YORK
HOSPITAL,

BY

ROBERT F. WEIR, M. D.

Reported by H. H. Seelye, A. M., M. D.

GENTLEMEN.—We have here a most admirable patient, in one sense, at least, for she comes in here to be operated on, in a quiet and contented frame of mind, and she is not at all timid and thinks she can go through the operation without ether. This is a case which has excited in all of us who have watched it, a considerable degree of interest, and it is what is sometimes called a dropsical knee-joint, or better, an hydrarthrosis of the knee.

The history of the case is, that one year ago the patient, a colored woman, thirty-nine years of age, married, and a laundress by occupation, fell off from a chair and struck upon the anterior surface of the right knee. There was no marked pain or any acute inflammation following the accident at the time, but soon the joint began to swell without any accompanying pain to speak of, and this swelling slowly increased till the size of the joint became very large. She could walk easily, however, till about six months ago, when the joint began to yield under her weight, and suddenly it would give way and she would fall to the ground, and after that she found that she could not go about without being supported by holding on to things or by crutches. She was admitted to this hospital on December 16, 1882, and the joint was then immensely enlarged. The circumference at the largest point, just above the middle of the patella, measured 16½ inches. The treatment since she was admitted has consisted in the application of an elastic bandage so as to compress the knee joint and keep it steady, but the size of the joint has not very greatly diminished under this treatment, for it really now measures only half an inch less than at first.

Now, as I grasp the leg, you see it can easily be twisted to one side and the other, the movement all taking place below the knee joint. I have now distorted the outline of the joint, and as I put my finger on the inner condyle of the femur you see that I have dislocated the tibia in a direction outwards and somewhat backwards, and the inward dislocation of the femur has been brought about chiefly by the action of the adductor muscles which come down from above, and the dislocation backwards mainly by the external hamstring muscle. As I pull upon the leg I feel that the bony surface of the joint can be separated, and if you will be quiet for a moment I think those of you who are near by can hear the subdued knocking noise that is elicited when I suddenly crowd the structures of the joint together. The condition which I find here, therefore, is this: The capsule of the joint and the synovial membrane lining the joint have become thickened and filled with an abnormal exudation or inflammatory product, and the parts about and external to the joint are also no doubt thickened. The ligaments are very much relaxed and elongated, and this is why the bones can so easily be displaced.

When I first began to treat this limb, I hoped to accomplish much for her relief by means of rest and

pressure about the joint, but the result has not been very favorable thus far. And although excision of the joint or amputation may yet be necessary, I hope that I shall be able to avoid resorting to this extreme measure by removing the fluid from the joint and destroying its functions by less dangerous operative procedure.

The practice of aspirating and washing out and medicating a joint by the injection of irritating fluids, such as the tincture of iodine or carbolic acid, now that antiseptic precautions can be fully carried out, is not so dangerous as it was considered to be when I was a student. Bonnet, of Lyons, was the first to introduce the practice of injecting these joints with iodine in order to set up a new inflammatory process, and now the question with us here has been whether we should adopt this practice and inject the tincture of iodine just as we would the sack of a hydrocele, or whether we should follow after the Germans with Schede, formerly of Berlin, now of Hamburg, at their head. Schede's treatment is to first puncture the joint at its upper and outer portion with a large trocar and canula, let out the fluid, and then inject through the canula a three or five per cent. solution of carbolic acid and wash out the cavity of the joint repeatedly with this under considerable pressure, until the water flows out clear and free from discoloration. Then the tube is removed and an antiseptic dressing is applied and the limb kept quiet by a splint of some sort.

After this treatment in many instances there will be no inflammatory reaction set up, but in other instances there is a sharp reaction attended by much pain and other febrile symptoms. In a third class of cases there will be a reaccumulation of fluid in the joint shortly after the operation, but this will slowly subside again, and there will be little or no pain accompanying it. This is the same sort of result as you will often see following the injection of tincture of iodine or a strong solution of carbolic acid into the sac of the tunica vaginalis when it has been the seat of a hydrocele. In some of these cases of hydrarthrosis, where the first injection has failed, it may be necessary to inject the carbolic acid two or three times, or even, in case this is not successful, the tincture of iodine may have to be resorted to. The principle on which this plan of treatment is based I need say nothing about to you, for it is as old as the hills, and it aims at setting up an acute inflammation in hopes that the products of an older inflammatory process will, by this means, be absorbed.

Dr. Markoe has just been relating to me an experience he once had in treating a case like this. He says that he made the usual puncture into the joint, and he was surprised at not getting out of it the amount of fluid he expected considering the size of the swelling. I am glad he reminded me of this fact, for you will occasionally meet with such cases where, instead of fluid, there will be only a soft fibrinous mass in the joint, the result of an old inflammatory process. But even if you find this condition you do no harm by the puncture, for the principle of treatment is the same as where there is fluid. So in that case Dr. Markoe passed the trocar into the joint in a variety of directions in search of fluid, and no doubt by this means he set up a sufficient amount of inflammation to cause the absorption of this mass of fibrin, and this plan of puncturing the swelling in numerous places is sometimes advised as a means of cure.

In making my puncture I will endeavor to pass my trocar through the outer side of the pouch and so avoid the articular cartilages, and by passing under the

patella I will know that the point has entered the joint. The whole will be done under the spray.

Operation.—No ether was administered, and the patient showed no signs of suffering. A medium sized trocar and canula was thrust through the protrusion made by the effusion at the outer side of the patella, and on withdrawing the trocar the fluid poured through the canula into a pus basin held ready to receive it. It amounted to eight ounces, and was quite viscid in consistence and markedly tinged with blood. After the joint had emptied itself the operation of washing it out was begun. An ordinary rubber douche bag was filled with a one in twenty solution of carbolic acid and held four or five feet above the table on which the patient was lying, and it was emptied through a rubber tube by a syphon action. As the water began to flow it was directed through the canula into the joint, and when the sac was full the tube was withdrawn and the water squeezed out through the canula by an assistant, who compressed the knee with his hands. At the first washing a few little fibrinous masses came away with the fluid, which was also quite bloody. These washings were repeated a dozen or more times until the fluid began to change from a bloody and cloudy appearance to a clearer hue, and then it was decided to cease without spending more time to get it of a perfectly clear color. The canula was then withdrawn and the opening in the skin speedily covered by several layers of folded carbolized gauze, and over this a complete Lister dressing was firmly applied. The operator said, that in operations on joints and in abdominal surgery he still placed great reliance on the carbolic spray, and he himself would not undergo such an operation without it on any account.

NECROSIS OF THE TIBIA INVOLVING THE KNEE-JOINT—AMPUTATION OF THIGH.

The next is also a joint case, gentlemen, and it shows a result that is likely to occur in almost any joint injury. Three years ago this man, who is 54 years of age and a carpenter by occupation, received a blow on the anterior surface of the left knee, and shortly after active symptoms of inflammation set in, with heat, redness and swelling. The joint then became stiff so that he could walk with difficulty, but as it was only moderately painful he could still go to his duties as usual. Since then he has been able to walk quite easily till three months ago when he got very cold one night, and exerted himself more than usual, and after that the joint became the seat of a more serious inflammation than at any time previous, and this eventuated in the formation of an abscess, which two months ago opened externally and has since been discharging a great deal of pus, mingled at times with small pieces of necrosed bone. Several other abscesses have since formed and opened about the joint. On the 19th of last December, the date of his admission, his temperature was 101° and he did not appear to be suffering very much from poisoning by the absorption of septic matter into the system, but his knee joint was in a very serious condition and gave evidences of swelling and fluctuation, and the patella when moved grated against the femur, and the tibia and femur against each other; in other words it was plain that the cartilages of the joint had been destroyed. I found too on exploring one of the sinuses that there was dead bone at the end of the track, and I was convinced that the fluid in the joint was pus. About a week or ten days ago an abscess in the ham opened and

discharged, and through the opening pus oozed on pressure over the distended joint. His general condition had steadily improved while waiting on these local changes.

Now what is to be done for this man? I call your attention to the fact that he is 54 years of age, and no evidences of any disease of the kidneys can be found. Yet if we let him go on in this way the result is to be feared, for, in the dead bone and the fact of a suppurating surface being exposed to the air, we have causes existing which may bring on blood poisoning or exhausting suppuration at any time. My colleagues, Dr. Markoe and Peters, have agreed with me that it is best that the limb should be removed. But before I resort to this extreme measure I will follow the rule, which I may call a golden rule, in all such cases, and that is, before sacrificing the limb to make a thorough examination of the sinuses by enlarging them to admit the finger. So here I will first make an incision on the head of the tibia and see if there is any loose bone, and if I find it sound I will not remove the limb, but so drain the joint as to give the man a chance to save it. Swain, an English surgeon, lays down this important rule: "Always open a joint before you begin to amputate a limb for a joint disease." Now this man's disease has been an acute sup-puration of the knee joint. Had it been only this he might have had a more fortunate outcome of his trouble. He might have recovered with a stiffened knee, for instance.

Let me illustrate this point in regard to saving the limb by a recent case. Only yesterday a young man presented himself here with a good ankylosis of the knee joint, and he said that his trouble started from hurting his knee in falling. He told us that the first thing he noticed wrong was, in walking he would sometimes feel something catch him in the knee, and his leg would give way so that he would tumble down. This peculiar sensation in the knee was probably due to a loosened piece of articular cartilage, and this was removed by a surgeon by means of a valvular incision through which the floating cartilage could be extracted without exposing the joint to the entrance of air. The doctor dressed the wound with a little salve; but it soon became inflamed and the joint filled with fluid. The wound of the operation fortunately opened and allowed the escape of the joint secretions, and this was really his salvation, for it has long been known that if there are any signs of pus in a joint it is better to make a free incision for its evacuation. After this it was sought to obtain ankylosis, and so the man at last got off with only a stiff knee, and that, too, in a very good position.

As I expose this man's leg you can see there, on the posterior portion of the joint, five or six openings through which the abscesses have been discharging. On moving the bones against each other the grating is very evident. Here there has been not only a relaxation and softening of the ligaments of the joint, but a destruction of some of the ligaments and cartilages as well, and this allows of a free lateral motion of the limb at the articulation.

After making my exploratory incision over the head of the tibia I find that it is involved in the diseased portion. Hence there is nothing better to be done than to amputate the thigh. The question now arises, just where shall the amputation be made, and what kind of flaps shall be resorted to. It must be as low down as possible, and yet high enough up to escape opening the synovial prolongation on the front of the lower portion of the thigh which connects with

the sac of the knee joint. This can best be done by making a long anterior with short posterior flap.

Operation.—The patient being etherized and on the table, an Esmarch bandage was put on the limb from the toes to the upper part of the thigh, and the femoral compressed in Scarpa's space by several turns of the same secured by Langenbeck's clamp, when the Esmarch bandage was removed. After making the exploratory incision and deciding upon amputation, the operation was begun under the spray. A long and broad anterior flap was marked out by a curved incision with a scalpel, extending from just above the external condyle of the femur downwards and inwards to below the center of the knee-joint, then upwards and inwards to above the internal condyle, the extremities of the incision being nearer the posterior than the anterior aspect of the thigh. This flap, including the skin and superficial fascia only, was dissected back to a point about two and a half inches above the articular surface of the femur. A posterior flap less than an inch in length was then cut out by an incision straight across, connecting the two extremities of the anterior incision. Next the flaps were held back out of the way while the muscular tissue and the structures overlying the bone were severed by a circular cut made by one sweep of a long amputating knife carried from heel to point around the limb, starting from the anterior aspect. The periosteum was next dissected back an inch or so, and then all the soft parts retracted by a four-tailed bandage held by an assistant, while the surgeon sawed through the bone at its junction with the flesh. This left the muscular tissue to slightly overhang the end of the bone, and the flaps were amply long to allow for contraction, even after an inch or more of the anterior one was trimmed off. No hemorrhage whatever had thus far attended the operation, and now the main arteries were ligated and the tourniquet taken off so as to expose the smaller vessels, which were also either ligated or twisted, according as they spurted or oozed, until all the bleeding was controlled. The flaps were then perfectly cleansed with a carbolized solution and their edges united by catgut sutures antiseptically prepared, and a flexible drainage-tube of chicken bone was inserted, and the whole finally covered with an iodoform and peat dressing, and secured by a bandage of carbolized gauze.

Gentlemen: You see I purposely left the anterior flap too long, so that I can now take off some and still leave an abundance to cover the stump well after the contraction which always follows has taken place. It is always better to have too much than too little flap. The great benefit of leaving a long anterior flap is that then the line of union comes well to the posterior surface of the thigh, so that the pressure of the stump will come upon its smooth surface, while the suture line will be some distance away from the part likely to be pressed upon by the end of the bone. But the disadvantage of a very long anterior flap is, that the danger of sloughing is increased, and it is therefore well to make it as short with as long a posterior flap as you can without bringing the line of union too far forward.

When there is a great deal of troublesome oozing from the stump after the removal of the tourniquet, as here, you can control it by the use of carbolized hot water washings, or by very hot water alone, or by a little firm pressure for a short time before dressing it. The dressing of this stump will be slightly different from what you have been accustomed to see here. We will first cleanse it thoroughly

with a carbolized solution, and after that, put in a flexible bone drain, and then close the wound with catgut sutures that have been soaked in chromic and sulphuric acid to render them more tenacious. An iodoform peat pad, $2\frac{1}{2}\%$, will then be placed over this, and upon this a second pad of peat, saturated with a one in twenty solution of carbolic acid, and lastly the whole will be secured by a carbolized bandage.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, FEB. 28, 1883.

The President, Dr. Shrady, presided. The minutes of the preceding meeting were read and approved.

Dr. Livingston presented a specimen exhibiting the lesions of

"DOUBLE HYDRONEPHROSIS,"

occurring in a child who died from pyæmia. The child was born of healthy parents. It subsequently developed acute inflammation of the knee-joint, a fluctuating tumor appeared which was opened, pus evacuated and a drainage tube inserted. Temperature rose to 102° , vomiting and diarrhœa set in, and five days after the child died.

At the autopsy the abscess was found to extend half way up the thigh, and a portion of the drainage tube which had slipped in was found in its cavity. The femur was necrosed. The kidneys were the seat of hydronephrosis.

Dr. Neuman presented a specimen of

"CARCINOMA OF THE RECTUM."

The patient was 56 years of age; had had three miscarriages and eleven children. There was no history of malignant disease in the family. She suffered every summer from dysentery, passing flesh and bad smelling blood with the stools. She also had attacks of erysipelas and spasmodic asthma. A tumor, supposed to be hæmorrhoidal, began to be troublesome, rapidly increasing in size, becoming painful and discharging blood. One night she felt a sensation as if a pin were pricking her in this region, and on examination found a fish bone protruding from the tumor. Jan. 12th she entered the hospital, complaining of hæmorrhoids and constipation. I found a tumor protruding from the rectum composed of hard cicatricial tissue. I diagnosed it to be carcinoma and operated Jan. 27th. The tumor was deep seated, occluding the anus and rectum. It contained no pus. By the aid of the cautery knife, the tumor was lifted up, as in the operation for excising the tonsils, and extirpated without the loss of a drop of blood. A dressing of carbolated oil, 3 ij carbolic acid to vj of the oil was used. Granulations sprung up quickly, and to-day the wound is entirely healed.

Dr. Neuman presented a second specimen of supposed

"MALIGNANT TUMOR OF THE BREAST."

A year ago he had presented a tumor of the breast removed from the same patient, which on microscopical examination gave no evidence of malignant disease. In less than a year the disease had returned. It was moved to refer the specimen to the microscopical committee. Dr. Wyeth asked what relation the fish bone had to the carcinoma of the rectum. Dr. Neuman re-

plied that he regarded it as the exciting cause. Dr. Wendt inquired if the supposed carcinoma of the breast had been removed from the breast or the axilla. He thought it might be an infiltrated lymphatic gland since it was encapsulated. This was a new tumor, not being formed on the site of the old, and could not appropriately be called a reproduction of the original tumor.

Dr. Amidon introduced Dr. Belfield, and the society voted him a member by invitation.

Dr. Tauszky presented a specimen of

WAXY DEGENERATION OF THE PLACENTA.

The patient, who had been under Dr. Tauszky's care during her pregnancy, had given a history of miscarriage at the eighth month in her previous pregnancies, and in spite of all precautions she again miscarried at this period. No cause could be found until the placenta was examined, when it was found to be nodular and the seat of fatty or more properly called waxy degeneration. The cause of this condition is unknown. There was no history of syphilis and father and mother were in perfect health. Heitzman alone mentions this form of degeneration of the placenta. The child lived. The case was further of interest from the fact that it was one of conception without menstruation, the possibility of which was denied by some. This patient had not menstruated since her first miscarriage and yet conceived. The specimen was referred to the microscopical committee.

Dr. H. N. Heineman presented a specimen of

MEDULLARY CANCER OF THE STOMACH.

The patient, an Austrian, 63 years old; brother died at 73 of supposed cancer; except this family history negative. Patient was well up to two years before admission to the hospital when he began to suffer from pain after eating to such an extent that he would restrain his appetite, which remained good.

On admission to the hospital he was badly nourished and jaundiced and on examination a hard mass was made out in the epigastric region. Patient died February 10th, his appetite remaining good till death and his chief symptoms being pain in epigastrium more marked after eating.

At autopsy almost the entire stomach was found to be involved by flat cauliflower excrescences. These had ulcerated through the peritoneal coat of the stomach. A few small nodules were found in the liver, the kidneys were the seat of hydronephrosis, the lungs congested and œdematous. There had been no vomiting, and the remarkable feature of the case was the continuance of appetite. We must turn to physiologists for an explanation of this singular fact.

Dr. Wendt recalled a similar case in which the cavity of the stomach was almost entirely filled with the malignant mass and yet the patient's appetite had remained good up to a few days before death and he had eaten large meals of solid food.

Dr. Mary Putnam Jacobi presented a specimen of

"SPINA BIFIDA,"

which had been complicated by hydrocephalus. The child was first seen by Dr. Jacobi one month after birth. Child was paralyzed in lower extremities. For the first seven months there were no cerebral symptoms. At this time the child's head began to enlarge, and the eyes were characteristically rolled down, though there was no protrusion of the ball. Simultaneously with the enlargement of the head the child began to emaci-

ate, and subsequently died comatose. I was anxious to have an autopsy to see if there was any connection through the spinal canal between the ventricles and the tumor, but no trace of such was found. The brain, from which the fluid escaped, shows enormous dilatation of the ventricles. There was no softening of the brain at the time it was removed. Death was caused by the pressure of the fluid in the ventricles. The child had no convulsions, and its intelligence was not impaired, though at the age of a year it looked like a child of five or six months.

Dr. Neuman asked upon what treatment the child had been placed. Dr. Jacobi replied that small doses of ergot and iodide of potassium had been given, though there was no impression made upon the disease.

Dr. Wyeth alluded to the case of a child which had been presented at his clinic which was a pathological phenomenon, having hare lip, cleft palate, double inguinal hernia, talipes varus, and prolapsus of the rectum. He thought these abnormal cases came from imperfect development *in utero*.

Dr. E. C. Holt presented an interesting specimen of

"TUMOR OF THE CEREBELLUM"

occurring in a child, and accompanied its presentation by a detailed history of the case. The child was 4½ years old, and suffered from a variety of symptoms, among which were loss of power in the lower extremities, which has been progressive for eleven weeks, when there was absolute loss of power for four weeks. There was present fever, vomiting, anorexia, obstinate constipation, rigidity of the muscles of the neck, head being drawn back. There was no ocular paralysis. Mind unimpaired; spleen enlarged; muscular soreness. On account of the muscular soreness and irregular fever it was supposed at first to be a case of malaria. The child was put on quinine, under which she improved. She however soon relapsed and grew steadily worse, the bowels being very constipated and retention of urine occurring. The temperature was never above 100½°, and the mind was not clouded. There was well marked ataxia. The special senses were apparently normal. She had some difficulty, as her mother expressed it, of "getting out what she wanted to say." She died suddenly, without convulsions, Jan. 4th. On autopsy a tumor of the cerebellum was found, soft in consistency and of a red color, which, upon microscopic examination by Dr. Welch, was pronounced to be a sarcoma.

Dr. Wyeth said the same symptoms mentioned by Dr. Holt were produced by Meniere's disease of the semicircular canals and asked if an examination of the canal had been made *post mortem*. It was interesting in connection with the location of the center of coördination which was supposed to be the function of the cerebellum, though some thought the labyrinth presided over coördination.

Dr. Birdsall regarded the case as one of extreme interest on account of the typical cerebellar gait which was present and the completeness of the report, a case belonging to a class that were usually most imperfectly reported. He thought it doubtful in this case if any lesion of the semicircular canal would have been found. Any lesion of auditory tract would cause a disturbance of locomotion.

Dr. Belfield then exhibited to the Society the application of aniline staining in the detection of bacteria and also a superior illuminating apparatus which aided in the achievement of the same purpose.

The point which distinguished bacteria from animal

cells was the fact that they retained absorbed color under tests which deprived the latter of color.

Dr. Belfield also exhibited the bacilli of leprosy, which existed in every leprosy tissue, but it could not yet be demonstrated that they caused the disease, although if we applied the same standard in judging of the etiology as to trichinæ for example we might appropriately say that they caused the disease, for trichinæ were only proved to be in association with the disease trichinosis, not the cause of it.

Dr. Wendt thought that leprosy and trichinosis were not analogous and could not be judged by the same standard in this matter since a distinct relation of cause and effect had been made out between trichinæ and trichinosis, though not between leprosy and the bacilli present in the diseased tissues.

Dr. Belfield reiterated his assertion that no such causal relation had been demonstrated to exist.

The Society then went into executive session.

BOOK NOTICES.

A Manual of the Practice of Medicine. Designed for the use of Students and the General Practitioner. By Henry C. Moir, M.D. Second Edition. Published by James H. Belding, New York, 1883.

We have before noticed the first edition of this useful little manual. The publication of a second edition is an indication that the book is meeting with professional appreciation. Its arrangement, which aims at condensation, has permitted the insertion of much valuable material from Niemeyer, Roberts, Loomis, Da Costa, Bristowe and others.

It is designed to assist students and practitioners in refreshing their knowledge of disease and establishing the line of inquiry in the pursuance of which correct diagnosis is arrived at.

With little to commend it in its form or literary excellence, it nevertheless fulfils its ostensible purpose, and we are glad to record that it is not hiding its light under a bushel.

SELECTIONS FROM JOURNALS.

RENAL INADEQUACY.

In an address on this subject recently delivered before the Metropolitan Counties Branch of the British Medical Association, Dr. Andrew Clark, Physician and Lecturer on Clinical Medicine, London Hospital, and President of the Clinical Society, stated "There is a certain state of the kidney in which, without any alteration of structure that the eye can detect, it can, nevertheless, not produce a perfectly healthy urine. It is an urine low in density and deficient in solid constituent, principally in urea and its congeners. I call this state renal inadequacy. You may say, 'It seems scarcely wise to introduce a name like that, when probably it is nothing less than an early stage of Bright's disease. Why bring in another name?' I will not say that it is not an early stage of Bright's disease; I do not know. I think it need not necessarily be; but I shall assume that it is, perhaps, a very early stage of Bright's disease. I nevertheless think it of practical value—and we who are here to-night are practical men—to recognize by a distinct name a state which may remain as it is during the whole period of

life, which is nevertheless capable of removal, and which, if unnoticed, may lead to serious injury to the patient. Let me explain. The people who have this renal inadequacy are characterized by three things particularly. First and foremost, they are characterized by a curious inability properly to repair damages done to them either by accident or by disease. I have no doubt you as well as I have often been puzzled to know why, in particular cases, they could not repair a common accident; or why, in a disease such as pneumonia, the exuded stuff was not melted and speedily swept away; why a man who had met with some trifling accident in the wrist or shoulder remained suffering from it. Then, they not only repair damages of this kind slowly, but they are peculiarly vulnerable. They are a people, as a rule, who are always catching cold, and who, when they catch cold, come within the category of the first characteristic—namely, that they do not get rid of the cold. They are the people who, without apparent reason, and without other existing disease, get pneumonias, pleurisies, pericarditis, and the like. Then, thirdly—and, I think, almost the most important thing to be noticed about these cases—you can never be sure of the result of the performance of an ordinary surgical operation upon them. It is this class of people, as I had the opportunity a few years ago, in London, of discovering, that die from a simple operation by hæmorrhage. It is this class of people who have an abscess opened and immediately become what is called pyæmic. It is this class of people who, without his being able to explain it, attracted the notice of that distinguished surgeon Sir James Paget. Some years ago he said, 'Whenever I find a man in ill-health, without definite cause for the ill-health, I feel sure that my chances of success in operating upon him are diminished by at least one-half.'—*British Medical Journal*.

DEATHS DURING THE ADMINISTRATION OF ANÆSTHETICS.

In a paper entitled "Remarks on the Death-rate of Anæsthesia, with an account of six fatal cases," Mr. Roger Williams, F. R. C. S., remarks in conclusion, "I have observed that those who administer anæsthetics too often, do so without any fixed principles to guide them. This is regrettable, because, as many of these cases show, the fundamental laws of the anæsthetic art cannot be disregarded without entailing a deplorable sacrifice of life. I will here endeavor to state, in the briefest manner possible, the most important practical inferences from them. With regard to chloroform then, subject to the attainment of the object in view, too much air cannot be given during its administration; and with regard to ether, too little air cannot be given during its administration. From this, it follows that a long time is required to induce anæsthesia by chloroform; but to produce the same result with ether, a short time is sufficient. Now by a long time, I mean about a quarter of an hour, and by a short time, about five minutes. Surgeons are not unfrequently to blame in this respect. How often one has heard it said to the chloroformist—'Be as quick as you can; I want to commence the operation in five minutes.' In my opinion, this is equivalent to saying—'Kill at least 1 per cent of my patients.' Those kind of inhalers are the best which most facilitate the fulfilment of these requirements. For giving chloroform, one with wire framework, having a diaphragm of flannel, or some similar material stretched over the

top of it, on which to evaporate the anæsthetic, but open at the sides, would be very good; but a piece of lint, or the corner of a towel, properly used, would do as well. A gradual drop bottle is necessary in any case, as only a small quantity of chloroform should be poured on at a time, which requires to be frequently renewed. For the administration of ether, Ormsby's inhaler seems to me to be the best; it was designed to fulfil the requirements just mentioned, and I have found it answer admirably. There is only one other point I will now mention, and that is the importance of watching the respirations during the process. To do so properly, of course the epigastrium must be uncovered. It is of much greater value than feeling the pulse, since, when the latter stops, there is, as a rule, an end of the patient. Mr. Lister has very ably insisted on this. However, I have found it generally neglected at King's College.—*British Medical Journal*.

THE DRAINAGE OF ANASARCA.

It is known that unpleasant results, or rather accompaniments, occasionally occur in the drainage treatment of anasarca, even by Dr. Southey's improved method. Dr. Adam, of Melbourne, (*The Australian Med. Gaz.*, August), thinks that there are leading factors causing the irritation of the skin in cases of anasarca, which result frequently either in simple erythema, erysipelas, or abscess. In the first place, in an oedematous limb the skin-elements become compressed and their vitality is lowered by interference with their nutrition. This is well illustrated when an ulcer forms, cicatrisation will not take place until the oedema be reduced—in other words, until nutrition is restored to the skin-elements, when the sore usually heals kindly, only to break out again as the dropsy re-accumulates. The second factor appears to be the presence of an irritating body—the dropsical fluid—which possesses a weak alkaline reaction. Now it seems probable that any fluid possessing a positive reaction (ether acid or alkaline) flowing over a skin that is badly nourished, and whose epithelium is put on the stretch, will be quite a sufficient irritation to cause untoward complications. Taking this view of the case Dr. Adam, after some previous trials, finally has adopted the following method, which he describes: 'Moderately sized Turkey sponges were thoroughly soaked in saturated solution of boracic acid, squeezed dry, and applied over the punctures, and kept in position by a turn of bandage lightly applied. These sponges require to be removed in the course of two or three hours, and the accumulated serum squeezed out and again soaked and re-applied. In this manner a couple of pints or even more of serum could be drained in the course of twenty-four hours.' In all the cases Dr. Adam tried this plan there was not the slightest trace of irritation of the skin. Of course there is no method but which will have its disadvantages, and this is no exception to the rule. The attention required, although great, is not insurmountable. For any case in which this method would be admissible would want considerable nursing, and no extra labor would be involved by it. Perhaps the greatest disadvantage is that the punctures require to be repeated nearly every twenty-four hours. But this is not so painful as may be supposed, for the skin, by tension and loss of vitality, is rendered less sensitive. Another disadvantage is that in some exceptional cases only a drop or two of fluid follows the puncturing. The cause of this probably is that the serum contains too much albumen, or it may be, as Prof. Spencer calls

it, solid oedema. Dr. Adam's most successful cases as regards draining were those in which the dropsy was due to cardiac insufficiency. Oedema due to Bright's disease as a rule did not drain so easily.—*London Medical Record*.

LEROUX ON HEREDITARY AND CONGENITAL MALARIA.

In an article on this subject in the *Revue de Médecine*, No. 7, 1882, Dr. Charles Leroux concludes as follows: "Owing to a lack of sufficient numerous and definite observations, it is impossible as yet to affirm the existence of congenital malaria, or to determine the rôle played by heredity in the etiology of infantile malaria. The fact, however, of congenital hypertrophy of the spleen, accompanied by certain characteristic lesions of malarial cachexia in the infants of women suffering from intermittent fever, would seem to point to a congenital or hereditary malaria. Some children appear to have at birth an hereditary predisposition to malarial fever, even when not exposed to any causes from without. They are often seized, shortly after birth, with a remittent fever of the same type as that displayed by the mother." The author leaves unsettled also the question whether the theory of heredity is able to explain the intermittent character of certain infantile affections, and the effect upon them of antiperiodic medication.

THE TREATMENT OF PRURITUS VULVÆ.

Professor N. F. Tolochinoff describes (*Vracheb. Vedom.*, No. 18, 1882), the treatment he successfully adopts in endlessly varying cases of pruritus of the female external genitals. In all cases he recommends washing of the latter two or three times daily with a weak solution of bicarbonate of soda (half a tablespoonful in a basin of water with a tablespoonful of eau de Cologne). When irritation, redness, and tumefaction are only moderate, powdering with oxide of zinc and starch (1 to 6), or smearing with zinc ointment (3 ij. to 3 j. of spermaceti ointment) are sufficient. When irritation is more considerable, and erosions and exulcerations are present, he applies in addition 2 per cent. carbolic solution, or $\frac{1}{2}$ per cent. solution of nitrate of silver, or lead and opium lotion (℞ Plumbi acetatis 3 j., tincturæ opii 3 iij., aquæ destill. lb. j.). In cases of simple eczema there are indicated Hebra's diachylon ointment, green soap, and other similar remedies. Pubic lice are best killed by the gray mercurial ointment. When pruritus is very severe, but the changes on the external genital parts are only slight, the best results are obtained from ice-dressing, smearing with carbolised oil (1 to 1), hypodermic injections of morphine, and the internal use of bromide of sodium (3 j. daily). In cases of diabetic pruritus, the best means is the administration of alkaline mineral waters and salicylate of soda; the latter being useful, too, in pruritus accompanying chronic cystitis. In itching from gonorrhœal urethritis, the author cauterises the urethral walls with 10 per cent. of silver solution (by means of a silver or platine probe). In cases of pruritus from colpitis, the latter is treated by the introduction every third day, through a speculum, into the vagina of a teaspoonful of silver solution (1 to 30), with subsequent plugging; the tampons (and solution) being left for twenty-four hours. Their removal is followed by an injection of tepid weak solutions of

lead or borax. Very useful, too, is the introduction of a powder consisting of crude alum and starch (1 to 5), the powder being retained in the vagina by cotton-wool tampons. In cases of cervicitis and endometritis, itching disappears on dilatation of the cervix and an intrauterine injection of tincture of iodine or solution of nitrate of silver. A good palliative means, in cases of pruritus from uterine and vaginal catarrh, is plugging of the vagina with hygroscopic cotton-wool (changed twice in a day), as first recommended by Dr. Gaillard Thomas.—*London Medical Record*.

THE LONDON WATER SUPPLY.

Dr. Percy F. Frankland remarks, with regard to a table, showing the proportion of organic impurity present in Thames water, as delivered in London year by year, from 1868 to 1881: "This table clearly and irresistibly attests the general deterioration which has taken place in the average quality of the Thames water delivered in London. It must further be borne in mind that this deterioration has gone on in spite of both greater storage capacity and much improved filtration on the part of the companies. What is here stated of the Thames applies equally, but in a less degree, to the water of the Lea. Since this, then, is the condition of the water which the companies have the monopoly to purvey, too much caution cannot be exercised in accepting the wholly unofficial reports which are now made in the interests of the water companies, and which are calculated to allay the just cause of dissatisfaction excited by the official and impartial examination by the Local Government Board in the interests of the public. It should not be forgotten that even when their supplies were drawn from the grossly polluted lower Thames, the water companies were able to procure from scientific experts reports of the perfect wholesomeness and unimpeachable purity of their water. Thus, reporting to the Southwark Company upon the quality of Thames water between Teddington and Chelsea, three chemists pronounced the water to be 'as perfectly harmless as any spring water of the purest kind used in common life; indeed, there is probably not a spring, with the exception of Malvern and one or two more, which is so pure as the Thames water.' Again, at a more recent date, the Thames water at Battersea, then in close proximity to the sewer outfall, was described as 'good, wholesome, and proper, free from any noxious impregnation of animal matter, and well adapted to dietetic, domestic, and manufacturing uses.' Until the year 1852, the inhabitants of London were content, or rather compelled, to drink the water of the Thames drawn from the river opposite Hungerford Market, and all legislation intended to alter the then existing state of things was strenuously opposed by the water companies. The consternation caused by the terrible epidemic of cholera in 1849, so aroused public opinion, that an alteration of the source of supply was insisted upon. It is to be hoped that the public will not require an equally severe lesson before they insist that the Thames and the Lea shall be altogether abandoned for the purpose of furnishing water to London, and that the day may not be far distant when the whole of the metropolis shall enjoy a supply of water, as pure as that which is now given to a limited portion of the south-eastern district only."—*British Medical Journal*.

DILATATION OF THE NECK OF THE UTERUS.

M. Chassagny of Lyons, in a communication made to the Paris Academy of Medicine, describes his method of thoroughly plugging the vagina, and producing rapid dilatation of the neck of the uterus. He places in the vagina a bladder, with which an India-rubber tube is connected; this, with the help of a siphon, conveys into it the water contained in a receptacle placed about two feet and a half higher than the pelvis of the patient. The bladder becomes distended by the water, and soon fills the vaginal cavity. This brings on abundant secretion, and induces energetic contractions, resulting in the physiological dilatation of the os uteri, which is quickly completed by the mechanical action of the bladder. The bladder is placed in the vagina, and the occlusion of the vulva is obtained by means of an apparatus which M. Chassagny calls the *Elyptroptérygoïde* (wings in the vagina). It consists of a cylindrical speculum, which holds the bladder; this is forced out as the water enters, and the act of distension separates the valves of the speculum, which, resting on the sides of the pelvis, prevent the expulsion of the apparatus and of the bladder. M. Chassagny mentions, in his pamphlet, several instances of induced premature labor, in cases of contracted pelvis, obstinate vomiting, eclampsia, etc. M. Chassagny describes two cases of vicious insertion. In both cases, he induced labor before the natural period by having recourse to rapid dilatation. There was not the slightest hæmorrhage, and two living infants were born. In another case, where the mother was in the last stages of suffocative catarrh, M. Chassagny effected, in half an hour, the safe delivery of a living child. The mother rallied for a few moments only. In *post partum* hæmorrhage, the bladder, by completely filling the uterine cavity, closes the openings of the vessels, and, by artificially restoring the pregnant state, determines uterine contraction. The water in the bladder slowly flows away, until the uterus is thoroughly contracted.

NEWS ITEMS AND NOTES.

Oliver Wendell Holmes.—As an expression of appreciation of the honor Dr. Oliver Wendell Holmes has won for American medical and general literature during the past forty years, a complimentary dinner is to be given to him at Delmonico's, April 12th, by the medical profession of this city.

Dr. Fordyce Barker is honorary chairman, and Dr. T. Gaillard Thomas chairman of a committee of thirty representative men of all the different interests and sections of the profession, which insures a perfect success, not only as to numbers, but as regards the entertainment in all respects, as the gentlemen who are to respond to the toasts are the most distinguished in their respective professions for their eloquence and wit on such public occasions.

The tickets for the dinner are to be ten dollars, and those wishing to secure them should apply to either of the following gentlemen: Drs. E. G. Loring, F. R. Sturgis, John G. Curtis, G. G. Wheelock, P. F. Mundé, the committee who have this in charge.

Tickets cannot be obtained after April 1st, and to prevent disappointment, it is absolutely necessary to apply as early as possible, as the number who wish to be at the dinner is likely to exceed the capacity of the dining hall.

THE MEDICAL GAZETTE.

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EDWARD J. BIRMINGHAM, A. M., M. D., EDITOR.

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"THE SHELTERING ARMS."

We have before us a copy of a monthly religious periodical, entitled "*The Sheltering Arms*." It appears to be the established organ of the institution known as the Sheltering Arms, and of nearly all of the other charitable associations of the city, the number of societies which make use of it for the purpose of soliciting aid being twenty-two or more. The Protestant Episcopal City Mission occupying an entire page.

The number before us is replete with excellent excellent religious lessons, as to how the young should dethrone pride, humble themselves and give themselves to Christ, and their money to these various societies, endorsed as they are by most of the leading clergymen of the city.

Of the few outside advertisements which go to pay the expenses of the journal, the following is in the largest type and is most conspicuous:

"How to be Beautiful! Eugenie's Secret of Beauty, for the Complexion. It imparts a beautiful transparency and removes all skin blemishes. *Recommended by Physicians.* \$1.00 and \$1.50 per box.

"Unrivaled Veloutine Face Powders; three shades. 50 cents and \$1.00 per box.

"Indelible Lip and Face Rouges. \$1.00 and \$1.50 per bottle.

"The Grandest Assortment of Specialties in Beautifying Cosmetics in the Country!

"F. F. Marshall's Adonine, for Dyeing instantaneously the Hair, the Beard, the Eyebrows and Eyelashes Light Brown, Brown, Dark Brown and Black, without soiling the Skin. Price \$1.50 per box. Tested free of charge.

"Aurora, for Bleaching Hair Golden-blond, without injury, \$1.25 and \$2.00 per bottle.

"Something new! Marie Antoinette Wave.

"An immense stock of genuine Langtry, or English Bangs, from \$3 upwards.

"Human Hair Switches; 4 oz., 28 inches, all long Hair. \$4.00 and upwards.

"Human Hair and Beautifying Bazar."

It is no part of our business, as the editor of a medical journal, to teach religion or even morals, perhaps, any more than it is the business of religious journals to teach medicine; but when a religious journal introduces into its pages advertisements which are temptations to immorality and at the same time calculated to impair health, we find occasion to speak. That such advertisements tend strongly to lead young girls from the path of virtue, especially when apparently endorsed by pious men and divines, is unquestionably true; and that cosmetics and hair dyes often cause serious ill health, including paralysis, is equally certain.

Possibly it may be said in reply that other religious (!) papers do the same thing; and that the publishers ought to be permitted to "do evil that good may come" to the treasury of the Lord and of the publisher. Or it may be said in the language of a late conspicuous public offender: "What are you going to do about it?" Nothing, we reply, except to state the facts, and to suggest politely that the journal in question ought to be scrupulously kept from the eyes of those poor children, many of whom are orphan girls, for whom these societies are asking alms.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, MARCH 15, 1883.

Dr. Fordyce Barker presided. After the transaction of routine business, the scientific paper for the evening entitled,

THE REGULATION OF PROSTITUTION BY LEGISLATION.

was read by its author, Dr. F. R. Sturgis, and discussed by Judge Brady and Drs. Fordyce Barker, Leonard Weber, and R. W. Taylor.

The following is a brief resumé of the paper read by Dr. Sturgis:

After alluding to the vastness of the problem suggested by the subject and the many factors which entered into its solution, the reader stated that his consideration of the subject would be confined chiefly to a discussion of three propositions, viz.: The causes of prostitution, the necessity of regulating it, and the results obtained by legislative action.

The definition of prostitute, a woman who for hire permits the use of her body for a living, excludes the large and most dangerous class who prostitute themselves for pleasure.

Although statistics on this side of the water bearing on this subject are very scanty, it is sufficiently evident that the evil is a growing one, and will continue to increase as a larger proportion of the foreign element is infused by immigration into our population. It is therefore most important that measures looking toward the regulation and restriction of prostitution should be considered.

In devising measures to decrease this evil it is important to consider the causes giving rise to it. Dr. Sanger, whose book on this subject is a lasting monument to his talent for careful research, in an examination of 2,000 cases of the lower class, ascribes the cause of the first lapse from virtue to inclination in 513, destitution 525, seduction 258 drink 181, ill

treatment at home, 124, and the remainder to indisposition to work, and seduction in emigrant ships. Many foreign writers ascribe woman's first lapse from virtue to affection for one man. Acton, the English authority, mentions as causes of prostitution, drinking habits, the tendency of flocking to large cities, and the consequent overcrowding, the invasion of women's occupations by men, breach of promise to marry, remarriage of parents, and immoral literature. But to ascertain all the causes we would have to be familiar with the hidden springs of evil which are now only known by their results.

That man is the principal agent in the production of prostitution is admitted by the writers of three countries. The force of desire in woman cannot be denied, and yet in most women desire is dormant until awakened, as by male affection, intoxication, etc., and the full force of desire is rarely known to virtuous women. In order to make anything like regulation effective, the male should be repressed as well as the female.

After misplaced love, perhaps the most potent cause of prostitution among the middle and upper classes is love of luxury, love of dress among women whose means are not proportionate to their desire to gratify this taste, and the growth toward prostitution from the first lapse of virtue may be compared to that of the male passion for speculation.

Another potent cause is absence of proper home influence either from death of the mother or parental drunkenness, or habits of crowding.

Still a further prolific cause is the increase of luxury. Where luxury most abounds prostitution most abounds. I touch upon these causes because they all play an important part in the regulation of this evil; thus overcrowding is within controllable limits.

The danger of syphilis is not so great from the older acknowledged prostitutes as it is from the younger more comfortable class who have come fresh upon the town, and, contracting the disease, present the active lesions.

As to the necessity of regulating this evil, unless we can show that regulation is absolutely necessary we can do nothing in this direction. Even now the opposition to recognizing and admitting the existence of the evil is very strong.

How many public women are there in N. Y. City to-day? This is a difficult question to answer. Sanger in 1857 estimated that there were 6000 in a population of 700,000. Despres of Paris during the last year published a work in which this estimate was made for the city of Paris. If we take his estimate as a basis for calculating the number in New York to-day we shall have about 11,000 out of a population of a million, and there are six times as many clandestines as known women. It is impossible, however, to obtain reliable information on which to base statistics on this subject.

As to the spread of disease caused by prostitution, again the barrenness of statistics makes it difficult to estimate, but in 1874 I read a paper bearing upon this subject, in which I made the following estimate; out of 46 hospitals and dispensaries, I selected 11 as a basis on which to calculate, and I found that 44 cases in every 1000 patients treated were venereal. From January to August, 1873, there were treated in these eleven institutions 1400 cases of venereal disease. This of course takes no cognizance of private cases. It may be estimated that out of a population of 942,000, 62,000 are suffering from venereal disease, 50,000 of which number are syphilitics.

The proportion of young prostitutes in this city has

greatly increased in the past few years. These younger women, being more sought after soon contract syphilis and from the insignificant appearance of the initial lesions, patients are often infected without consciousness.

As to inherited syphilis, I am not inclined to be an alarmist, and I do not believe as some that as we become civilized we become syphilized, but the danger of diseased progeny is very great. Dr. Gihon in his excellent paper read before the Medico-legal Society last year laid stress upon this source of danger.

The question of regulation. Abroad, with the exception of England, it has been the custom to have public women submitted to police surveillance, and sanitary inspection. England finally took this matter up in the contagious diseases act, and as soon as regulation was fairly established, disease materially decreased. Its working has been fairly good. In answer to the usual objection to regulation viz., that those who expose themselves to danger should suffer its consequences it is urged with truth that the innocent suffer as well as the guilty and often more severely.

Wherever the government has been able to control both men and women measures of regulation have been of very decided service.

As a matter of fact, however, wherever restrictive measures are carried out regarding inscribed prostitutes the number of clandestines correspondingly increases.

The French police have the power to compel a woman caught twice soliciting to inscribe. The regulations regarding examination are very stringent, the woman presenting herself with her card for examination twice a week and if found diseased she is sent to the hospital until well.

In this country at present it is impossible to enforce a law of this kind; public opinion is not prepared for it and would regard it as an infringement of the personal liberty of the subject. I am informed that among the better class of houses of prostitution the inmates are compelled by the proprietors to be examined once a week. Venereal patients at charity hospitals are allowed to go whether diseased or not at their own option. Although it may be impossible to form any such law as is in operation in Paris it might be possible and is very necessary from a sanitary point of view to restrain self-committed patients suffering from venereal disease until they are innocuous. But when we come to the better classes it is impossible to restrain their liberty. In looking at the results of legislative regulation abroad it is admitted that these have tended to restrict disease but have at the same time tended to depopulate the country.

If any attempt is made at regulation in this country it seems to me no sentiment must be allowed to enter into the question. We must calmly weigh what we gain and what we lose by the regulation of this evil. I personally think some regulating measures should be adopted. Strange and seemingly paradoxical as the statement appears, it is nevertheless true that "prostitution is the safeguard of women's virtue."

Dr. Barker, in introducing Judge Brady to open the discussion, said, that while abroad last summer he had been present in Parliament during a discussion of this subject. It was one that had many sides to it and must be considered in its moral, social, and political aspects. No legislative action could be efficient in repressing this evil which was in advance of or unsustained by public opinion.

Judge Brady spoke in part as follows:

MR. PRESIDENT AND GENTLEMEN—Your President has asked me to give some views of the legal aspects

of this subject. I recall the case of a judge of this city who by a mistake of the reporters was credited with saying that houses of prostitution were necessary evils, and the storm of indignation with which this statement was greeted. In the *Westminster Review* during 1869 and '70 elaborate articles appeared considering this question from every possible point of view, and citing all the known statistics. Although there was a bold expression of opinion as to what ought to be done the authors themselves failed to decide upon any plan by which the suggestions made could be carried out. It seems to me that the whole subject should be one of legislative enactment, and that the prostitutes should be placed under surveillance, and when diseased confined to hospitals until unable to communicate their disease to others.

The judiciary generally are arrayed against prostitution in any form. A woman who can be proved a prostitute is regarded by the law as a vagrant, and can be incarcerated for six months. I wish to correct the statement made by Dr. Sturgis that the law regards a woman's body as her own, and cannot restrain her of liberty for its abuse.

The difficulty in enforcing the law arises from the migratory character of this class of women. It seems impossible to administer the law so as to suppress the prostitute, and the class of clandestine prostitutes can not be reached by the law. I doubt if the legislature could be induced to pass an act which would recognize prostitution. It would be political suicide for those who voted for it, and it can not be expected that politicians would aid in their own political death.

The subject must be treated boldly. If reform comes, it must come through the medical profession, as in the present state of public opinion, the law is powerless to suppress the evil.

Dr. Leonard Weber said: After twenty-two years' practice in this city I may be permitted to speak on this subject. If physicians are to work reform in prostitution, it must be done by taking away its evil consequences.

There are three ways to deal with prostitution: First—"To let it alone." This has been tried thoroughly, and failed. Second—"Repression," which has been tried in Spain, in Rome, Bavaria, Austria and Continental cities generally, and proved a complete failure. Third—"Recognition and forcible regulation," and this too has signally failed. We can learn something from the failure of other countries. Something may be done, but we cannot regard the subject from a moral point of view. Syphilis should be recognized without condemnation and treated more actively than is customary. We should have greater facilities for treating it in the way of hospitals, and diffuse a knowledge of its nature, and thus induce the syphilitic to seek aid.

Dr. Weber, in support of the view that the natural secretions can communicate syphilis, cited a case he had met with in which leucorrhœa had been the agent of infection. He believed that by proper treatment syphilis could be ameliorated but never cured.

Dr. R. W. Taylor said: I have listened to the paper of Dr. Sturgis and must congratulate him that with his usual good sense he has refrained from presenting extreme views on this subject. The world has never yet produced a statistician and a syphilographer in the person of one man.

Repression of venereal disease must come through the medical profession by manufacturing proper public sentiment and instructing in right treatment. I say nothing of gonorrhœa or of chancroid but for the cure

of syphilis only three factors are requisite; an otherwise good constitution, a docile patient, and a good doctor. The horrors of infantile syphilis can be dissipated if the parents can command these three requisites to a cure. Instead of this talk about legislation which is impracticable man should be taught to recognize the lesion of syphilis.

I must differ with Dr. Weber as to the contagiousness of the natural secretions of syphilitic patients, all acknowledged authorities are opposed to this view. What is wanted also is more knowledge on the part of the physician. In conclusion Dr. Taylor related two cases in which recognition of the disease by the physician would have saved two persons from syphilis.

Dr. Sturgis closed the discussion with a further plea for the necessity of restraining self committed venereal patients in Charity Hospital until they were incapable of infection.

The Society then adjourned.

LECTURES.

THE PUERPERAL STATE AND ITS MANAGEMENT.

A LECTURE DELIVERED

BY

WM. T. LUSK, M.D.

At Bellevue Med. Col.

GENTLEMEN: We will consider this morning some of the most important conditions existing after the completion of labor. The mother, after her confinement, as a rule, experiences a general sense of comfort and a desire to sleep. Though all the conditions are favorable for blood poisoning now, yet a chill following a few moments after delivery is rarely of any considerable importance. It is generally due to a rapid evaporation and loss of heat from the surface of the skin, which has become bathed in perspiration during labor. But nature takes precautions against a further loss of heat by contracting the surface capillaries, and hence causing an increased flow of blood to, and a congestion of, the internal organs, and so the blood becomes warmed and the chill disappears. When this chill occurs it has no prognostic signification, and all that is necessary to do is to give the patient a warm drink and keep her well covered up.

The temperature regularly rises in the first twelve hours after delivery, from a degree to a degree and a half, within physiological limits. But in health the temperature of the human body is higher in the afternoon, reaching its maximum at about five P. M., but it falls in the morning, and reaches its lowest point between eleven P. M. and one A. M. Now, if a woman is confined in the morning, the usual rise of temperature from a degree to a degree and a half in the first twelve hours, added to the normal afternoon rise, may cause the mercury to run up to 102° or over. While if she is confined in the afternoon, the normal fall coming between eleven and one coincides with the natural post-partum elevation of temperature, and these so nearly counter-balance each other that the thermometer may show only half a degree above normal. It is well to know what are the physiological limits of temperature after the birth of the child, so that you may not be unnecessarily alarmed. Within the first three or four days the temperature is frequently very un-

steady, and from some slight mental disturbance it may go up to 103° or over, and this is of some importance if it stays there; but if it soon falls again, you need not mind it or feel at all uneasy. It is supposed that the increase of temperature soon after delivery is due to the rapid combustion of the uterus, which at the end of a week has diminished from two pounds to a pound and a half in weight. This rapid oxidation of tissue causes an increase in the body heat.

The pulse of the patient falls, as a rule, immediately after delivery, and the normal rate at this time is 60 to 70 beats per minute. You will sometimes find a remarkable slowing, so that it does not exceed 40 beats per minute, and this is always a good prognostic sign, and you may be sure your patient is going to do well. Yet there are many cases with a pulse of 70, 80, 90, or 100 that do well; but you are a little uneasy in such circumstances, and you need to watch your patient carefully.

In all cases you will find a marked tendency to profuse perspiration, and the appetite is diminished, and there is often a decrease in the amount of urine passed, while there may have been an increase in the quantity excreted, and the amount of urea is regularly increased, while sugar is sometimes present also. The sugar may be accounted for in this way: When the breasts have filled with milk, if they are emptied by the child no sugar will appear in the urine; but if the child does not remove the milk, the sugar in it is absorbed in the blood, and then reappears in the urine, where it is of no significance.

After the birth of the child, the capacity of the mother's bladder is greatly increased by the pressure of the gravid uterus being taken off from it, and hence she does not appreciate how full it is, and you must ask her frequently to pass her water or she will forget to do it, and then there will be an enormous accumulation of urine in the bladder.

As a result of the lochial discharge and of the increased exudations from the skin, lungs, bowels and kidneys, there is a very great loss of weight soon after confinement, and at the same time there is a smaller amount of food ingested, and hence it is that a patient will often lose one-twelfth of her entire weight. The uterus diminishes in size as a result of the contractions of its muscular fibers previous to, and during and after labor. As the ovum is expelled the uterus closes down on its contents, and so the veins and sinuses are compressed, and hence the supply of blood to the organ is diminished and its nutrition is thus interfered with, and so its fibers undergo fatty degeneration not only after labor is completed, but also to some extent during and previous to labor. Not all the muscular fibers of the uterus are destroyed at once, but some of them retain their functions for several days. But the long muscular fibers gradually undergo fatty degeneration, and are converted into numerous minute oil globules which are absorbed in the system and so disappear. It is a question whether all the muscular fibers thus disappear, and so whether, in the course of six weeks, the old uterus is entirely gone and a new one has taken its place. Just after confinement the organ weighs about two pounds, but at the end of a week it has diminished to one and a half pounds, and by the end of the second week to three-quarters of a pound, and at the end of the sixth week it weighs only a couple of ounces. After birth the cavity of the uterus measures seven to eight inches in length, but at the end of a week it measures an inch less, and by the end of another week two inches less, and by the end of six weeks it is only about three inches in length, and

after six to nine weeks the lochial discharge has ceased and menstruation has begun, and meanwhile the sinuses and vessels of the uterus have nearly closed up, and the veins over the placental site have become occluded. During the latter part of pregnancy the large giant connective tissue cells wander through these venous sinuses, and many of them become blocked and obliterated by them. But after delivery more of these cells are caught because of pressure from without, and the coagulation of blood along the vessel walls, and so only a central canal is left which itself finally comes to be completely filled with cells. Then pus corpuscles begin to make their way through the coagula and through the connective tissue cells which radiate from the walls to the center of the vessels, and the coagula break down and become absorbed, and the vessels contract and at last are obliterated. When the decidua vera is stripped off after the child is delivered it leaves behind a very thin layer adherent to the walls of the uterus, and composed chiefly of glandular matter and lymph cells, blood globules and epithelial cells, and spaces. But as the uterus contracts the mucous membrane is compressed and these structures become obliterated, and the whole becomes covered over with epithelium, and at last the process of repair and involution is completed.

After confinement the cervix uteri is usually stretched out and so elongated that it measures two to three inches from the internal to the external os, and two or three hours later the cervix offers a slight sense of resistance to the finger, and it begins to become somewhat firm; but it is still difficult to determine the line of boundary between the cervix and the vagina. But twelve hours after delivery this is quite marked. As the cervix returns to its natural size the longitudinal and lateral folds of mucous membrane again form the trunk and branches of the arbor vitæ. The cervix remains patulous for ten or eleven days, so that you can pass your finger through the os internum, and the os externum remains patulous for some time longer. From the cervix issues a rather copious discharge. The anterior lip is shorter, fuller and larger than the posterior, and it becomes covered over with swelled vessels.

The vagina is smooth and greatly distended after delivery, and the vulva, after the first labor, very rarely becomes so small as before. But there are exceptions to this rule, and frequently you will find the parts as small as if there had been no labor.

These are the principal points of distinction which make up the symptoms of the puerperal condition, and it may sometime be for your interest in a medico-legal point of view, to apply them in order to know when a woman has been recently confined. They are, to recapitulate, a relaxed condition of the abdominal walls, some albumen in the urine, striæ on the breasts and abdomen, colostrum extending from the nipples, lesions about the vulva, a ragged hymen, a relaxed condition of the vagina and neighboring structures, a patulous condition of the cervix, and tears of the cervix, the uterus large and hard and to be felt high above the symphysis pubis and contracting when rubbed or kneaded by the hand, and by pressing a finger up into the cavity of the uterus you can feel the mouths of the vessels filled with thrombi which had remained open during the attachment of the placenta. If you remember these points and their significance, you will not be likely to be led into error.

After the birth of the child if the patient has emptied her bladder and rectum, the uterus occupies

the median line of the abdomen and rises only three or four inches above the symphysis pubis. But if the bladder and rectum are full the uterus will be dragged up a distance of six or seven inches above the symphysis pubis. You will often see the uterus after birth, described as lying obliquely with the fundus more to the right side, but this condition, when it exists, is usually due to the partial filling up of the rectum or bladder, or to her lying more on one side, or to a compress having been used to keep the uterus contracted. But such a compress is much more apt to push the uterus to one side than to act on the organ itself. So when the woman lies on her back, and there is nothing to push the uterus to one side, the chances are in favor of its occupying the median line. This is only of importance because then you can come to some conclusion as to when is the best time for the patient to get up.

On the third or fourth day, in most women there is a filling of the breasts, and they become distended with milk, and with this there is a sense of pain and uneasiness, and a swelling of the glands in the axilla, and uncomfortable sensation in the arms, and now and then she experiences chilly sensations and a feeling of malaise, with headache and a quickening of the pulse, and in these phenomena you have all the symptoms of what is known as milk fever. But throughout this the thermometer shows no marked rise of temperature, not going above $100\frac{1}{2}^{\circ}$. There may be an unusually great amount of pain in the breast with a higher range of temperature, but this is only a temporary rise and it soon disappears spontaneously. But if on the third or fourth day I find a persistent temperature of 102° or 103° , even though within twenty-four hours it falls to the normal point, I know that there is mischief going on somewhere, and in time puerperal fever will probably appear. And if the patient is lying in a hospital where the atmospheric conditions are such as to induce a slight degree of septic fever, I would be on the watch for it after such a high temperature has once existed.

After birth the child makes an effort at respiration and the pulmonary circulation begins, and then the cord is tied and cut and after four or five days it dries up and separates, and leaves behind a vascular spot which forms the navel after it is healed up. There is always, in the new-born child, a vascular net work extending one or two lines above the navel along the cord, and where this capillary circulation ceases a line of demarcation always takes place and the cord falls off. Then these capillaries ooze for a time, but soon contraction of the navel takes place and it all heals up.

Meconium is passed from the child's bowels for the first day or two and then normal fæces, and in a few days the stomach begins to secrete and it is possible to digest a little of some protein nitrogenous or fatty substance, and the child can take milk. The head which may have been distorted by its passage through the pelvic canal returns to its normal appearance in three or four days. There is a desquamation of the skin in the first three or four days, and this gives rise to the very characteristic red appearance of the new born child; and on the seventh or eighth day you will not uncommonly find the skin has a jaundiced appearance, especially in those children born in hospitals. But this has no significance unless it is associated with some abnormal condition, such as the stoppage of a bile duct, when bile appears in the urine and fæces. But the liver in these cases is usually free, and there is no absorption of bile into the blood, but the jaundice is probably due to the rapid destruction of red blood corpuscles in the vessels of the circulation, and so the

coloring matter of the blood is set free and stains the tissues. We find this jaundiced hue most in cases where the normal development has been interfered with, and sometimes in cases of septic poisoning, but in itself it is not usually of any great importance.

When attending a patient in confinement, the first thing to do after washing the baby is to see that the mother has a good sleep. Most of them are disposed to go to sleep after the exhaustion of the labor, but they are often prevented because all the family and all the servants want to come in and see the baby. But you must either prevent this proceeding or shorten it as much as possible, and insisting on emptying the room of all visitors within an hour or so, and then let no one come in or in any way disturb the patient until she has finished her sleep. If too much is constantly going on about her this natural desire to go to sleep disappears, and then she becomes nervous and restless. Where a patient is confined who has already had a number of children, this natural sleep is sometimes interfered with by the occurrence of after pains. Where a labor proceeds very slowly the muscular fibres of the uterus contract down sufficiently during delivery, but if the labor is a rapid one, as it is more apt to be in multiparæ, these muscular contractions continue to take place after the birth of the child, and these give rise to what are known as after pains, which are associated with a great deal of suffering, and hence the patient cannot go to sleep. In such cases, when you depart you can leave $\frac{1}{6}$ to $\frac{1}{3}$ gr. morphia, and tell the nurse to give it to the patient if she does not soon go to sleep. The morphia does not interfere with the uterine contractions but it only allays the pain and so induces sleep. If the patient feels weak after awakening, you may give her a little hot bouillon or hot tea, and sometimes she will find this very refreshing. But do not give her any solid food or ice cream and such things, as they would probably be undigested and cause colic.

Before leaving the patient take care to have all causes of excitement excluded and the room darkened and an abundance of fresh air admitted. Then after the lapse of ten or twelve hours go back and see if she has passed her water. The desire to make water is rarely marked, and the woman will not attempt to pass it unless told. So you should tell the nurse to put the bed pan under her after you have departed, but at the same time you should go back and see if the water has been passed because it is sometimes hard for the patient to compress her bladder and she finds that she can not urinate while lying on her back. If she is set up, however, she can pass it without difficulty. But I do not think this is a very safe expedient, for the patient should be kept strictly on her back for four or five days, because you can not be sure whether the thrombi which now fill the uterine sinuses are hard or soft, and if by a sudden motion of the patient one of them should get loose and pass into the circulation then she might speedily die. So it is best to keep her on her back, and then if she does not pass her urine voluntarily you can draw it off with a catheter. You will not usually find it very difficult to pass the catheter under the bed clothes, because you can easily feel the urethra with the finger in the vagina, but the parts are so soft that you may have some difficulty in finding the orifice. But if you are doubtful of succeeding by the sense of touch, you had better take a light so that you can see what you are about. If you are practising among the higher classes, however, you had better not take a candle, for this is a confession of inexperience on your part, and it will lessen the confidence of both the

patient and her family in your ability. So it is well whenever you have a chance among the poorer classes and in hospital patients to try and learn to pass the catheter under the bed clothes. But in doing this remember one thing, and that is, that the lochial discharge rapidly undergoes decomposition and after the third day you can smell the odor of it, and if you carry any of this into the bladder on the catheter you will be likely to set up a cystitis, so you must always be careful to first wash off the vulva and thoroughly carbolyze the catheter before introducing it.

The question will next arise as to what the patient can have to eat, and much nonsense has been written and spoken on this subject. It used to be the practice to give her nothing but slops, but then later it was said that this was all nonsense and there was no reason why she should not eat all solid substances she wants. But normally the woman usually has no appetite after the first two hours after confinement, at which time she is very hungry, but this hunger soon entirely disappears. I think you will do well if you remember not to starve her, for then there will be little or no milk in her breasts for the baby's food, but give her gruel and milk in abundance if she bears them well. But some will tell you that they can not take milk for it makes them bilious and heavy. But you can tell such patients that there is nothing peculiar in a woman after confinement to render her bilious from taking milk. In addition to these, beef broths, and bouillon, and soups from which the fat has been removed, and toast, and such easily digested articles of diet should be the chief food of the patient for the first two or three days. I have never seen a patient take beef steak voluntarily within the first three days unless it was forced on her, for during this period the stomach does not digest such things very well and the meat excites a catarrh of the stomach, and indigestion and flatulence and colic are the result, and relief can only be obtained by a hypodermic of morphine. But after three or four days the appetite returns and then the woman can eat almost anything. On the third day see that the bowels move, and after this the appetite is generally good, and she can eat easily digested food such as steak and chops and bread and oranges and ice cream, etc. Nurses are always in the habit of prohibiting fish. I do not know as there is anything in it, but fish does seem difficult to digest at this time, and so it is just as well not to use it.

Some patients will ask you if they can have their hair dressed. There are many women who think that combing the hair after delivery is a cause of puerperal fever, and if a patient contracts this disease and it is found that you had ordered her hair combed they will seem to hold you responsible. But there is no reason why the patient should not have her hair dressed if she desires it, but if she objects to having it done it is best to omit it.

See to it that the room is not too warm and the patient is not too thinly covered, for there is a profuse perspiration which is normal after confinement; but at the same time see that she is not imprudent, and that she does not get her feet out of bed and catch cold.

The plan of giving a purge on the third day is a good one, and it has been the custom to do so from time immemorial. But some one will tell you it is the worst thing you can do. I, on the contrary, think there is very good reason for giving it, because there are very few women who go through the latter part of pregnancy without a large fæcal accumulation, and a purge will often bring away more than a chamberful

of fæces, and this accumulation if not removed is likely to cause inflammatory troubles and dyspepsia. Women differ very much in their sensitiveness to laxatives. Some will do well with a simple soap suds injection or a drink of Hunyadi water in the morning, or one or two blue pills in the evening, and this is often all that is necessary. But when the bowels are very sluggish the pill Dr. Barker introduced is an efficient one.

R. Ext. colocynth. Co..... gr. v.
Ext. hyoscyami.....
Hydrarg. chlorid. Mit ää..... gr. ii.
Ext. nux vom gr. i.

M. Rub up and divide in pills No. ii.

This brings away an enormous discharge sometimes, and if you are attending a very pretty young woman this sight will at least be a matter of surprise if not of æsthetic pleasure to you.

SELECTIONS FROM JOURNALS.

THE GULSTONIAN LECTURES ON THE STERILITY OF WOMEN. By J. MATTHEWS DUNCAN, M.D., LL.D., etc.

LECTURE I: PART I.—ITS NATURE AND AMOUNT.

Sterility is generally considered to imply the condition of a woman who, under ordinary favorable circumstances for reproduction, does not bring forth a living child. But the term is used with many other meanings, and I shall not make a definition, because I have not the right or the power to enforce adherence to it, and because, meantime, it is indispensable to have the word for various uses; and, with the use of appropriate qualifying words, ambiguity may be avoided. Fecundity is a condition unique in gynæcology in this respect, namely, that it requires the combined matter and forces of two duly developed individuals to produce it. Sterility, therefore, may depend on error in one or in other, or in both. The sterility of man as compared with that of woman is a simple matter. It depends on failure to produce semen; the production of semen more or less incomplete or imperfect; or of morbid semen, that is, semen conveying disease; or on failure to deposit semen properly. With a view to investigation, semen can be subjected to chemical and microscopical analysis; the depositing organ can be examined, and the conditions of the deposition can be ascertained. In women, the co-ordinate substances and functions are hidden and much more complex, and in her there are great organs and functions which have in the male no equivalent representative. In the present lectures, the sterility of man is not a subject for consideration, but one point in it cannot be passed over without some discussion, viz., its numerical amount. Much of our knowledge of the sterility of women consists in numerical statements with regard to amount under various circumstances, chiefly in marriages; and all such statements have a certain positive value for the physician, and still more for the political economist. But it is plain that, when inquiring into the amount of sterility due, not to unions or marriages, but to women, we must exclude what is due to the male. Some good notion of the amount of this latter sterility is, therefore, indispensable. Several investigators have attempted the solution of the question in recent times; but I refer only to the new work of Gross on *Male Sterility*. "It is not at all uncommon," he says, "for a physician to assume that a man who is potent and

able to ejaculate is capable of procreating. As a result of the omission to examine the emitted fluid, and carefully to explore the male organs, little is known of the relative frequency of sterility in the two sexes; and gynecologists, with the exception of those mentioned below, do not appear to have made any contributions to the solution of this important subject. I have been able (he continues) to collect 192 cases in which an examination of both husband and wife demonstrated that the former was in fault in 33, or 17 per cent? Of this number, Manningham records 1 in 30; Pajot 7 in 80; Moudot 1 in 10; Kehrer 14 in 40; Courty 1 in 10; Noeggerath 8 in 14; and I have myself found that the male was deficient in 1 example in 8. The cause of sterility was: azoospermism, that is, want of spermatozoa, 31; aspermatism, that is, the absence of semen entirely, 2. These facts show that the husband is at fault, according to Gross, in about one case out of every six." The matter is, however, still in a very insecure state, as may be shown by the statement of facts and considerations which must have important bearings on the question; but which, so far as I know, have been entirely neglected. Thus, it is assumed, by the examination of the male and the female, that we can decide whether one or the other, or both, are at fault. Now, no doubt, impediments, or complete barriers to reproductiveness, may be found in individuals of either sex; but, in the great majority of cases of sterility, no impediment or barrier can be discovered by the most careful and minute investigation. This is verified by comparative observations in animals and in plants, wherein such inquiries can be carried to a completeness not attainable in the case of men and women. It is held that the man is not at fault if he duly ejaculates microscopically perfect semen; but this is certainly not a warranted conclusion, as facts in human and comparative physiology, to be hereafter stated in these lectures, will show. In making the estimates of male sterility, no account is taken of the fact that the faulty condition of the man's semen may be only temporary. It is forgotten that sterility may be due to faults in the semen, even though conception has taken place and pregnancy has been established, the fœtus fading and dying prematurely from some inscrutable causes, or being monstrous, or perishing from disease implanted by the male. It is forgotten that both parents may be simultaneously at fault, and this with or without discoverable cause—generally without discoverable cause. Speaking of the sterility induced by domestication and that of hybridity, Darwin remarks that, in both, the sterility occurs in various degrees, and in both, the male element is most likely to be affected, but sometimes the female more than the male. In another place, speaking of the liability of plants to be affected in their fertility by slightly changed conditions, he says it is the more remarkable as the pollen, when once in process of formation, is not easily injured. The plant, he adds, may be transplanted, or a branch with flowers and buds may be cut off and placed in hot water, and the pollen will be matured. Pollen, once mature, may be kept for weeks and months. The female organs are more sensitive, for Gärtner found that dicotyledonous plants, when carefully removed, so that they did not in the least flag, could seldom be fertilized; this occurred even with potted plants, if the roots had grown out of the hole at the bottom.

Whatever may be the causes of sterility in women, there is an universal profound belief, which no investigations have shaken, that in the human species the paramount source of sterility is in the female. I know

of no scientific statement worthy of confidence as to the comparative influence of the two sexes. The data of Gross, which I have quoted, contributing as they do towards the settlement of this question, are of importance and value in themselves, though very far from substantiating the conclusion as to the amount of male sterility which he enunciates. Of the sterility of women in whom, from gross and well-known causes, conception is impossible, these lectures take no account. Among such are cases of absence of the uterus and imperforate vagina—conditions so rare that, in the present state of our knowledge, they do not affect statements as to women generally.

In describing sterility, it is common to qualify it as absolute or as relative. No author on human sterility uses the term, without qualification, as including relative sterility; but, when used without qualification, it includes at least absolute sterility. Absolute sterility, sometimes called congenital, including all cases where there is no child, no miscarriage, no abortion, however early, comprises two sets: first, those where there is no conception; and, secondly, those where the impregnated ovum disappears in the tube or in the uterus without leading to what is recognizable as an early abortion. Some cases of women aborting every month are well known. There is discharge of a highly developed decidua every four weeks, and there may be no trace of an ovum in it; and this monthly discharge is arrested by suspension of cohabitation. But there may be many abortions earlier than this without these conditions, and of such nothing is known. They are classed along with those cases of absolute sterility where it is supposed that no conception takes place. In cases where there is no conception, there may be no possibility of conception, from failure of the ovary to prepare and mature an ovum. These varieties of absolute sterility are well illustrated and easily made out in the history of animals, and still more of plants. Sterility, when absolute, implies a failure to produce a viable child, while there may be evidence of conception—that is, of the commencement of the production of the embryo. A woman may be sterile because the ovum perishes *in utero*, or becomes unnaturally developed, as in myxoma of the chorion and some monsters, and this premature death and unnatural production may be owing to ovuline imperfections derived from the male or the female. A woman may be sterile because the womb does not afford to the ovum due accommodation or nourishment, or neither; or because the womb ejects it prematurely from its cavity, and these unnatural conditions may arise from local or constitutional causes. In absolute sterility, and in sterility not absolute, there is no production of a viable child; no addition is made to the population, and all such sterility is sometimes, by economists, considered absolute; for, indeed, in the point of view of population it is so, but to me it appears desirable to restrict the term "absolute sterility" to those cases where there is no evidence even of conception. "Sterility" indicates a larger group, including that of absolute sterility, and all those other cases where no addition is made to the population.

There is another great department of sterility no less important than the kinds just mentioned, where a woman may produce one, or even several living children, but in number not according to her condition, and age, and length of married life. This is called relative or acquired sterility. The gardener may have a plant producing not a single flower, absolutely sterile; or producing flowers and setting seeds, but bringing none to maturity, or if to maturity not to perfection;

a sterile plant which cannot continue its species. But he may also have a plant which produces flowers and matures perfect fruit, but in such small number as not to save it from the charge of sterility; and this is relative sterility. In woman this is often seen in cases of production of a single child; an only-child sterility, if such a seeming contradiction in terms can be permitted. A woman may be relatively sterile, from producing, according to her age, only a small number of children with ordinary intervals between the successive births, or from the number being rendered small by the extraordinary delay and loss of time between the successive births, or in other ways. All kinds of sterility may be congenital or acquired; it is therefore undesirable to use these terms as indicative of conditions. For instance, an absolutely sterile woman—one who never conceives—may be so not merely from congenital causes, but also from disease acquired in advanced life. Or, again, a relatively sterile woman may be so not from an acquired cause, but from conditions which, in her, were congenital.

The amount of sterility in women, including the relative kind, is found by counting the number of productive and unproductive marriages of women within the reproductive age—say, generally, from fifteen to forty-five. Lever, giving no numerical details, says, five per cent. of married women are wholly unprolific. West found the proportion of sterile marriages, among his patients at St. Bartholomew's to be one in every eight. Hedin, a Swedish minister, noticed in his parish of eight hundred souls, that one barren woman was not met with for every ten fertile women. Frank and Burdach roughly state that one marriage in five is unproductive, but they give no data. Simpson made an inquiry into the sterility of married women in Grangemouth and Bathgate. Of 210 marriages in Grangemouth, 183 had offspring, and 27 none; about one marriage in ten was without issue. Of the 27 unproductive marriages, all the subjects had lived in wedlock five years, and the female had been married before the age of forty-five. Of 402 marriages in Bathgate, 365 had offspring, and 37 none; one in eleven being unproductive. There were at the same time living in the village 122 wives and widows, and of these 102 were mothers, and 20 not mothers; or about one in six had no family. In all, there were 467 wives and widows; 410 had offspring, and 57 none; or about one marriage in eight was unproductive. Of these last 57, six had not been five years married, and other six were above forty-five when married. Subtracting these 12, we have 455 marriages, 410 being productive and 45 unproductive; or one in ten without issue. Simpson found that, among 495 marriages of British peers that lasted five years or more, the husband being under fifty-seven, 81 were unproductive; or one in six. Ansell found that, among 1,919 marriages of spinsters in the upper classes, the average age being twenty-five, and not counting as childless those who had merely still-born children, there were 152 without issue; or eight per cent.—nearly one in twelve. In this collection, all the parents survived the child-bearing age; and he considered that there was no further chance of child-bearing if the female was over forty-eight, and had had no child for two years; or if over forty-seven, and had had no child for three years; or if under forty, and had had no child for ten years.

I have taken the registers of Edinburgh and Glasgow for 1855, and have ascertained the number of first living children in that year. With this I compare the number of marriages in that year. It is evident that the

number of first children only should be counted, for they indicate all the wives who are not sterile. If one living child is born to a marriage, that marriage is not sterile. Further, it is evident that, although the first births in 1855 were not all pertaining to women married in that year, it may be assumed that, if the marriages are nearly the same in number for a few contiguous years, any of the first births in one year will give pretty accurately the fertility in contiguous years. From this fertility, sterility can be computed. In 1855, there were, in Edinburgh and Glasgow, 4,447 and 3,722 first living children, leaving 725 marriages sterile, or one in six. But in these figures are included 75 marriages which did not take place until after the women had passed the age of forty-four. This will damage the physiological value of the statement, as these 75 could not be expected to be fecund. Of women between the ages of fifteen and forty-four, there were married 4,372. Among women of the same age, 3,710 had first living children; 662 marriages were sterile, or one in six; in other words, 15 per cent. of all the marriages between fifteen and forty-four were sterile. This statement from Edinburgh and Glasgow has to be corrected for the dead-born; these not being counted. We have thus good statements of sterility, which do not differ much from one another; in St. Bartholomew's, one in eight; at Grangemouth, one in ten; at Bathgate, one in ten; among British peers, one in 6½; Ansell gives one in twelve among the upper classes; in Edinburgh and Glasgow, one in seven, excluding those who have borne dead children. The highest estimate (omitting the peers) is the last, and it is probably the only one in which living children are used to the exclusion of dead as the index of fecundity. Were dead children included, there would be a great reduction: at least 4 per cent. The lowest estimate of sterility is that of Ansell, where a woman having a still-born child is held as fertile; and the women are amongst the best in the community, those living in easy circumstances, and making use of the protection of life-assurance. Were it otherwise, the estimate of sterility would, no doubt, be higher. We have thus estimates of sterility varying from one in seven to one in twelve; and considerable confidence may be had in the statement that about one in ten is the true amount.

I know of no estimate of those who are absolutely sterile, that is, who do not conceive, or who, if they do conceive, give birth not even to an abortion. But they are a large number in the better classes; for within the last five years there have consulted me, mostly on account of sterility, 504 absolutely sterile women married between the ages of fifteen and forty-five, and of these 337 were more than three years married. Though this shows a large number of cases in existence, it gives no amount of estimated frequency among the married. The following table gives a classification of these 504 married and absolutely sterile women according to age at marriage, and number of years married.

Age at marriage.	Years married										Totals
	Under 4	4 to 8	9 to 13	14 to 18	19 to 23	24 to 28	29	30	31	32	
15-19	12	15	15	4	7	2	1	—	—	—	60
20-24	70	66	27	24	13	9	—	—	—	—	219
25-29	47	31	20	8	6	—	—	—	—	—	114
30-34	17	20	8	4	1	—	—	—	—	—	59
35-39	6	13	4	—	—	—	—	—	—	—	23
40-45	7	3	—	—	—	—	—	—	—	—	9
Totals...	167	111	84	40	29	11	1	—	—	—	504

The economist makes many estimates, such as the

deficiency of offspring in actual marriages, or the deficiency of actual births below what they might have been if all the women in the population had been married at the most favorable time for child-bearing. The solution of these and similar questions is an object of greater interest to statesmen than to physicians; they demand for their solution much calculation, and need not be entered on here. The degree or amount of relative sterility in average individuals varies, of course, according to the age of marriage, and it is not to be estimated by the deficiency below what is possible in child-bearing, but below the average amount of fertility in marriages at the various ages, or below what is not excessive—what can be done without injury to the average mother's health. The average individual woman must be found and considered, for individuals vary extremely. It is not a rare observation, and I have one before me, where the easy birth of a single child exhausted the fecundity of a healthy woman twenty-five years of age at the time of the birth, and completely ruined her general health during the remaining child-bearing period of life. This woman was examined by many physicians, and all concurred in finding no cause of weakness and inability but child-bearing. On the other hand, Ansell records the case of a woman married at twenty-one, who in twenty-seven years gave birth to twenty-five children who all reached adult age, and the mother died of old age at eighty-eight.

Only-child fertility, or one-child relative sterility, occurs in two forms—as exhaustion of the fertile energies, leaving the general bodily health vigorous, or as exhaustion of both sexual power and general constitutional strength. It is a relative sterility which is familiar to the public from its frequency and its importance in social respects. In 1,767 fertile marriages of women of the age of twenty-five years, allowing ample time for the exhibition of fecundity, Ansell found 131 cases of one-child relative sterility; or one in every thirteen fertile marriages. The amount of this relative sterility may be approximated by comparing it with the average fertility of the same women in Ansell's table, which was nearly six; or, in other words, the relative sterility of these 131 only-child women was 655 children. Instead of having 131 children, they would have had 786, if they had even reached the average fertility of their 1636 sisters; and they would have had still more if they had reached a normal fertility instead of this average fertility; meaning by normal fertility, what they might have had without injury to health, judging them by other women.—*Brit. Med. Jour.*

THE TREATMENT OF SYPHILIS. BY J. MARION SIMS, M. D.

More than forty years ago, I practised medicine in Montgomery County, Alabama, near the Creek nation of Indians. Syphilis was then very prevalent among them, and their medicine-men had the reputation of speedily curing it. Their remedies were, of course, decoctions of native herbs. It was generally known that queen's delight (*Stillingia sylvatica*) was one of their principal agents. I had supposed that, when this tribe were removed west of the Mississippi in 1837, their secret of curing syphilis had gone with them; but, when I was in Alabama last year, I learned from my brother-in-law, Dr. B. Rush Jones of Montgomery, the following facts touching this question.

There were, he said, seven or eight years before our civil war, several obstinate cases of secondary syphilis

in and around Montgomery, which resisted the usual remedies in the hands of our best physicians. They went the round of the doctors, and could not be cured. At last, one of these was advised to consult a colored man, Lawson, belonging to Mr. N. D. Barnett, a cotton-planter residing in Montgomery County. In a state of despair, he went to see Lawson, put himself under his treatment, and in a few weeks he was perfectly cured. He returned to town rejoicing at his recovery, and soon others of his fellow-sufferers followed his example, went to consult the colored man Lawson, and were likewise cured. These cures by an obscure negro man, a slave, when the highest representatives of science had failed, were much spoken of in both town and country, and attracted the attention of Dr. George W. McDade, a very intelligent and accomplished physician, whom I have known since his early boyhood. Dr. McDade, feeling the greatest interest in the subject, went to see Lawson, who had made these marvellous cures, and obtained from him the formula he had been using so successfully.

Soon after this, Dr. McDade happened to meet Dr. James Freeny, who gave him the following history of the so-called Indian method of treating syphilis. Horace King, a mulatto slave, resided among the Creek Indians for several years before they were removed west of the Mississippi river (1837), and had learned from them their method of treating syphilis. While Horace was engaged in building a bridge at Tallassee, about twenty five miles from Montgomery, in 1852, he heard that there were many cases of syphilis on Mr. Gipson's plantation near by, and that Drs. Freeny and Banks were the attending physicians; and he called on Dr. Freeny, and told him that he had learned a method of treating syphilis from the Creek Indians, which was universally successful, and that he would like to show it to him. And for this purpose he proposed to take the worst case on the Gipson plantation for the experiment. Drs. Freeny and Banks selected a certain number of very bad cases, and turned them over to Horace; and they watched from day to day his method, while they continued their own plan with the other cases.

Horace's selected bad cases recovered more rapidly than Dr. Freeny's milder ones, and then Dr. Freeny adopted the Indian method in the other cases on the Gipson plantation, and has not pursued any other plan since.

So thoroughly convinced was Dr. Freeny of the superiority of the Indian remedy, that he wrote to Dr. Warren Stone, Professor of Surgery in the University of Louisiana, urging him to give it a trial in the wards of the great Charity Hospital of that city.

Dr. Freeny failed to enlist the interest of Professor Warren Stone in the matter, and he made no further effort to bring it before the profession, except by speaking of it to his brethren in his immediate neighborhood.

After Horace's success on the plantation of Mr. Gipson, and the adoption of his method by the two well known physicians Drs. Freeny and Banks, Mr. Nicholas D. Barnett, a large cotton-planter, sent his servant Lawson, a very intelligent man (before alluded to), to Horace King to learn his remedies, and the method of preparing and using them. Horace readily imparted the desired information, and Lawson returned home, and put the treatment to the test among the negroes on his master's plantation. It was as successful in the hands of Lawson as it had been in those of Horace King.

After a while, other planters in Mr. Barnett's neigh-

borhood followed his example, and set apart confidential servants to take charge of syphilitic cases, and treat them with the Indian decoction. And thus several adjoining plantations had each its negro doctor, all using the same method with equal success.

This was in a rich section of Montgomery County, where there were many large cotton plantations in juxtaposition; some of one thousand acres, some of two thousand and more, having from one to two or three hundred slaves on each, while there were others of less size with fewer slaves.

On some plantations—notably, on Mr. Barnett's—the syphilitic cases, male and female, were sent to a hospital specially set apart for the purpose, and there quarantined till they were cured. They were, during the period of treatment, wholly cut off from all communication with the other negroes on the plantation. This was in the time of slavery, when the intelligent and humane master had the right to protect his people against infectious diseases of all sorts. Syphilis was thus controlled, and small-pox effectually stamped out, because the sanitary state of the plantation was intrusted to medical men of the highest intelligence, who were authorized by the master to do all that was necessary for the health of the community.

Dr. McDade says: "It is very remarkable how few cases of secondary syphilis, scrofula, and consumption, existed in those days among the slaves, compared with what we now find. The two latter were then almost unknown among the negroes; but since emancipation they are very common."

"Is secondary syphilis the parent of scrofula and consumption? Certainly, these were rarely seen among the negroes while in slavery; whereas they are now encountered every day. Secondary syphilis was then less frequent among them than now, because their masters took every precaution for their early treatment and cure. But now the negro is free to contract this loathsome disease, and to scatter it as he may. You may ask, Why are they not treated? I answer, Many never apply for treatment; and, when they do, they often disappear before they are cured. And many of them are too poor or too improvident to apply for treatment. Physicians, always the conservators of the public health, never here refuse to treat a case of syphilis because the subject of it is a freedman, poor and improvident."

Professor Samuel D. Gross read an exhaustive paper on the connection between syphilis and scrofula and consumption, before the American Medical Association in 1875, advocating the view that the two latter were the offspring of syphilis, and it would now appear that the history of these in the negro, in slavery and in freedom, goes far to establish the correctness of the views so forcibly set forth by my distinguished countryman.

Dr. McDade says, "that the remedies used by Lawson on Mr. Barnett's plantation, were the same as those used by Horace King. They consisted of ten or a dozen indigenous roots, a handful of each, with a certain quantity of salt, alum and iron slugs put into three gallons of water, and boiled down to one gallon. Of this the patient took a half pint three times a day. There was also a decoction of roots for washing the syphilitic sores. After obtaining these prescriptions, it was a long time before I made any trial of their virtues. I was deterred by the fact that it would be difficult for any patient to drink and retain half a pint, three times a day, of such a vile decoction. The horrors of syphilis could alone inspire a man with courage to take it. However, I saw that those who did were

invariably relieved, whether in the first, second, or third stage of the disease."

"Instead of adopting the so-called Indian remedy as I found it, I begun by eliminating the alum, salt, iron nails, and slugs, and all the roots and herbs that I knew must be absolutely inert. I selected the few among them known to possess medicinal properties; and, instead of making a decoction as had been done before, and which had to be made in large quantities every day or two, I had them prepared in the form of fluid extracts, which places the remedy on a scientific basis, and insures uniformity of action. The following is the formula that I and my medical friends have been using for many years."

"Fluid extract of *Smilax sarsaparilla*, fluid extract of *Stillingia sylvatica* (queen's delight), fluid extract of *Lappa minor* (burdock), fluid extract of *Phytolacca decandra* (poke root), aa $\frac{5}{8}$ ij, tincture of *Xanthoxylum carolinianum* (prickly ash), $\frac{5}{8}$ j. Take a teaspoonful in water three times a day before meals, and gradually increase to tablespoonful doses.

"In making the fluid extracts, there is some risk of getting a remedy less efficient than the original Indian decoction, because the manufacturer may use roots that have been kept too long, and lost some of their active principles, while the decoction used on the plantations was always made of fresh roots just gathered from the woods. In making the fluid extracts, we should therefore be careful to have them made from roots recently gathered." While Dr. McDade makes fluid extracts of four of his ingredients, he makes a tincture of the fifth. I do not understand why he did not order a fluid extract of that also. I simply give the prescription as it was given to me by Dr. McDade and Dr. Rush Jones.

Stillingia sylvatica has long been used in the Southern States as an antisymphilitic remedy by both the profession and the laity. Professor Thomas Y. Simons, of Charleston, was the first to call our attention to it (*American Medical Recorder*, 1828). His favorable report was subsequently confirmed by Professor Henry R. Frost, of Charleston, and by Dr. R. Lopez, of Mobile, Alabama (*New Orleans Med. and Surg. Journal*, 1846). Dr. Frost thinks the active principle of the *Stillingia* is somewhat volatile, and says that the root loses much of its activity when kept long. I know that the odor of the recent root is much stronger than the dried. I presume the *Stillingia sylvatica* and the *Smilax sarsaparilla* are the efficient agents in McDade's compound fluid extract. Dr. McDade says: "I could detail many cases illustrating the wonderful antisymphilitic powers of this remedy; but I will give you only two. 1. A young negress contracted syphilis from her husband, who resided on a neighboring plantation, and visited his wife generally about twice a week. This was long before the war (1861). They were both treated by the late Dr. Alfred McDonald, and they were apparently cured. But they had several children subsequently, and in rapid succession, all of whom died of syphilis soon after birth. The husband and wife were then treated by the Indian decoction, and were permanently cured, as shown by the fact that they had several healthy children afterwards at full term, who grew to manhood and to womanhood. None of them ever showed any signs of syphilis, nor have any of their children. Those of them who have died, died of other diseases of a climatic character."

"2. A negro girl, twenty years old, belonging to Mr. Cobb, had syphilitic iritis. This case had resisted all treatment by the best physicians of the country. She was nearly blind. She was taken in charge by Mr.

Barnett's colored man, Lawson, who gave her the Indian remedy, and she was perfectly and permanently cured, as she never afterwards showed any symptom of the disease. These cases occurred more than twenty-five years ago; and have been under my observation ever since; so you will see that the cures are permanent."

"Mr. Barnett has pursued the same method on his plantation since emancipation that he did during slavery. His man Lawson uses the same compound decoction now that he did in olden times, and cures many cases every year on Mr. Barnett's plantation, and on those adjoining."

Dr. McDade has used his compound as an alterative with great success in scrofula, and he thinks it would be worth trying in some forms of cancer.

Dr. Rush Jones, residing in the city of Montgomery, has a larger field of observation than Dr. McDade, residing in the country, and has really had a larger experience with McDade's antisyphilitic fluid extract than anyone else; and he speaks most favorably of it. He has been treating syphilis for more than forty years, and he says he now has but little dread of undertaking the worst cases, since he has adopted the use of McDade's formula. He repudiates mercury and the iodide of potassium entirely, and says they are unnecessary when McDade's formula is used.

Dr. Rush Jones says: "It is a remarkable fact that I do not see more than one case of syphilis in women to fifty cases in the male. I have inquired of a number of physicians in regard to this fact, and their experience coincides with mine. How can this be accounted for?"

I am not familiar with the literature of syphilis, and do not know if the fact alluded to by Dr. Rush Jones has been observed in other parts of the world. If so, it seems to me to have an important bearing on the practical application of the Contagious Diseases Acts. And so would the complete history of the working of the quarantine and isolation of infected negroes on the several cotton plantations in Montgomery County, Alabama, during the time of slavery and since emancipation, if we could obtain minute and reliable reports on the subject.

I am no authority on the subject of syphilis; and, if any apology were necessary for this communication, it is this:

I was at the meeting of the London Medical Society on November 26th last, and heard the discussion on the papers of Dr. Drysdale and Dr. Routh on syphilis. From this, it appeared that we now differ as widely on the subject of its treatment, as we did fifty years ago. And this gave me the idea of writing to Dr. Rush Jones and Dr. McDade for the facts which I now lay before the profession.

I have known Dr. Rush Jones all my life, and I have known Dr. McDade, and Dr. Freeny, and Mr. Barnett, for more than forty years, and have perfect confidence in any statement they might make, or I would never have said a word on this subject. I think great credit is due to Dr. Freeny and Dr. Banks for giving the colored man Horace King an opportunity to demonstrate the value of the Indian decoction in the treatment of syphilis on the plantation of Mr. Gipson. For its success there brought it, with their endorsement, prominently before the community, and extended its use to the plantations of Mr. Barnett and his neighbors.

Too much credit cannot be given to Dr. McDade for investigating the subject, and giving us a formula at once scientific and efficient; for it has proven efficient in the hands of Dr. Rush Jones, Dr. McDade, and

many other physicians who have been using it for several years past.

I should be pleased to see the name of McDade used by the profession hereafter to designate the formula and the method of treatment herein set forth. The remedy will doubtless be extensively used, at least for a while; and I sincerely hope it may prove as efficient here as it has in the hands of my friends in Montgomery, Alabama.—*British Medical Journal*.

PSORIASIS OF THE NAILS. BY HERBERT A. SMITH, M.R.C.S., Eng.

A condition frequently met, and but little dwelt upon by authors, is psoriasis of the nails, occurring in patients in the humbler walks of life, and affecting in general the toe nails, as a result of irritation following on taint, or uncleanness and pressure when the nails are not trimmed—treatment is uncalled for in the absence of inflammatory action. It is in patients of gentle birth, moving in good society, of the female sex, and when the thumb and finger nails are affected, the extremities of which assist in performing delicate and complicated co-ordinated acts of manipulation in which the sense of touch is peculiarly concerned, that treatment is in demand. The causes of this condition may be brought under three classes—1, syphilitic; 2, parasitic (Hilton Fagge); and, 3, atrophic, with which last I shall alone deal.

M. M., a lady of gentle birth, who had never suffered from any nervous or nutritive lesion antedating the present, came under my care for atrophic psoriasis of the thumb-nail. The interest of the case centers in its history and treatment. Five months after receiving intelligence of the death of her husband—an Indian officer killed in action while marching through the Peiwar Kotal Pass in the Cabul-Kandahar campaign—she noticed inflammatory swelling at the end of the right thumb. It commenced with first accelerated then diminished sensation (common and special), soreness, vesicular eruption, and, lastly, shedding of the skin of the distal half of the palmar surface of the second phalanx of the thumb. After the cuticle healed, the nail became affected, the matrix was tender to touch, the nail assumed a series of ridges, was exceedingly brittle, separated in places from the skin, and greatly hypertrophied and "heaped up." The initial irritation over, the history of its growth repeated itself in the oyster-shell-like appearance of the nail, and as such, fully grown, it came under treatment. This consisted in primarily paring off, by fine dissection, the whole of the nail as far as the lunule was visible; secondly, in destroying the subjacent redundant tissue (cause of ridges) by strong carbolic acid (painless); and, thirdly, in the internal administration of arsenic and iron, and local alteratives, as *R. Ung. picis liquidæ, ung. hydrarg. ammonio-chlor., pp. æq.: liq. potassæ arsenitis q.s.* This was continued with one temporary intermission for two months, all irregular layers of skin being rubbed off, and the advancing edge dressed nightly with the ointment. Thus far the nail, in growing again two-thirds, has kept, and promises keeping pace, *pari passu* with the adherent flesh; the ridges and lamination have disappeared, and, saving a slight wavy irregularity, an evenly grown, well shaped, and useful appendage is promised. The treatment has been assisted by the use of a gutta-percha splint modeled from the other thumb-nail and padded with lint (its web protected by oil-skin), since the growth beyond the visible lunule—the dry bed of the nail be-

ing moistened occasionally with glycerine. The pressure afforded has prevented subjacent granulations, and "trained up the nail in the way it should grow."

The cause of this condition I consider to be nutritive disturbance of the trophic and peripheral ends of the digital branch of the radial nerve supplying the seat of lesion, induced by shock; the defective innervation being expressed by inflammatory action, and by the vesicular eruption of the skin and matrix of the nail, the hyperplasia following on this being the cause of the subjacent ridges and lamination during the continuance of the morbid action, by tilting the under surface of the nail, the growth continued irregular throughout such action.—*Brit. Med. Jour.*

MEDICAL NOTES AND NEWS.

Obituary.—Died, March 2d, 1883, Dr. Abelardo Bellido De Luna, at the residence of his father-in-law, W. W. Naramore, 479 West Twenty-second street, æt. 33. Dr. De Luna was born in Havana, Cuba, and was educated in the College of San Francisco de Asis, Havana, and in the College of La Empresa, Matanzas. He came to the United States in 1863, making his residence at Bridgeport, Conn., and took his degree in medicine at the Bellevue Hospital Medical College in 1869. In 1871 he married Miss Susie W. Naramore. Dr. De Luna was a very industrious worker in his profession, and an active member of several medical societies, including the County Medical Society and the New York Academy of Medicine, having occupied the position of secretary to the surgical section of the latter society for several years. He was also at one time attached to the Board of Health in the capacity of inspector.

He translated into Spanish, for the Messrs. Appleton & Co., the work of Dr. Gaillard Thomas on "Diseases of Women." He was assistant editor of "La Cronica Medico-Quirurgica," published in Havana. In July, 1881, in connection with his father, Juan Bellido De Luna, he began the publication of a Spanish illustrated monthly entitled "El Mentor Ilustrado," the publication of which is still continued. In December,

1882, he was employed by William Wood & Co. to edit a medical journal in the Spanish language, entitled "El Medico Repertorio," but he only lived long enough to prepare two numbers for the press.

Dr. De Luna had a large and constantly increasing practice. His manners were genial and attractive, and his character without reproach. He was withal a most conscientious writer and practitioner, and whatever he undertook to do he did thoroughly and well.

Enteric or Typhoid Fevers.—"In North America it is endemic from Hudson's Bay to the Gulf of Mexico. In new and sparsely settled districts, where the land is gradually, strip by strip, so to speak, brought under cultivation, the malarial fevers prevail; after a time, as populations increase, the malarial diseases and typhoid fever occur side by side, the one often modifying the symptoms of the other and complicating its course; and finally, when the land has been gradually taken up and drained and tilled for some generations, and when the population has grown dense and villages and cities abound, the malarial diseases, true agues and remittents, come to impress communities but faintly, or they disappear altogether; but enteric fever grows very common, and asserts itself as the predominant endemic disease in proportion to the neglect of the sanitary measures by which alone it can be kept in check in populous localities.

"The mode of life of the individual is also without influence. Enteric fever is as common in the houses of the affluent as in the most destitute and crowded localities. In fact, the presence of stationary wash-stands in bedrooms, and the arrangement of bathrooms and water-closets near sleeping-rooms, expose the well-to-do to dangers of infection that the less fortunate escape."—*Wilson on continued fevers.*

Dr. Murchison in his elaborate work on the continued fevers of Great Britain, (pp. 452, 453) endeavors to prove that Enteric Fever arises from "Sewer Emanations." He says: a privy outside a house is much less dangerous than a badly appointed water-closet within.

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PRESIDENT GARFIELD'S WOUND.

Recently Dr. William Hunt, senior surgeon to the Pennsylvania Hospital, in the annual address delivered by him before the Philadelphia Academy of Surgery, took occasion to review the criticisms made by Esmarch upon the treatment of the late President Garfield.

The style of Dr. Hunt's remarks are inter-colloquial and of a serio-comic character, but they are none the less pungent and conclusive. They may be somewhat freely summarized as follows:

Esmarch.—The first physician who saw the President—Dr. Townsend—carried his fingers immediately into the wound without washing or disinfecting his hands, and thus carried infection into the wound. (Dr. Townsend was not one of the surgeons who subsequently attended the President. The wound having been thus poisoned by Dr. Townsend, before the other surgeons saw it, upon him, and not upon Dr. Bliss and his colleagues, must rest the responsibility of the President's death. Just at this point therefore Esmarch might have closed his criticism. Ed.)

Hunt.—The hands of American surgeons are generally clean; and as a rule, railroad stations do not keep twenty per cent. solutions of carbolic acid on tap.

Esmarch.—When Drs. Agnew and Hamilton arrived, July 4th, a renewed examination was made with probes, flexible bougies, etc., and without antiseptic precautions. From which examination they became convinced that neither the liver, kidneys, intestines or peritoneum had been injured. They ought to have known this without such an examination.

Hunt.—As no such examinations were made by either of the gentlemen at this time, or by any one else, Professor Esmarch must give them credit for the exercise of average surgical skill in drawing their conclusions that the viscera named were not wounded, if indeed it is true that they were not.

Esmarch.—The permanganate of potash, which was, after a time, substituted for the carbolic acid as a wash for the long sinus, on the ground that the patient was exposed to the danger of being poisoned by the acid, was an injudicious substitution.

Hunt.—This is a matter of *opinion*, which could as safely be left to the surgeons at Washington as to the surgeon at Kiel.

Esmarch.—Antiseptic principles were not fully carried out in the details of the dressings.

Hunt.—This is a question of *fact*. The surgeons say they were fully carried out; and they alone can speak intelligently, inasmuch as the precise and full details were never given to the public.

Esmarch.—In military surgery there are examples enough of recovery from similar injuries.

Hunt.—Esmarch admits that the body of one of the vertebræ was perforated, and that the splenic artery was wounded. There is not one example upon record where a ball has been *known* to have passed through the body of a human vertebra and the patient has recovered. No such *specimen* has been described as having been seen, or can be found in any museum. There is no recorded example of recovery after a gunshot wound of the splenic artery. Esmarch admits both of these lesions in the case of the President, and therefore admits that there were two injuries from neither of which is it known that a person has ever recovered.

Esmarch.—Stags, as hunters say, are occasionally shot through the body of a vertebra; but they run away and get well—because, he adds, they are not probed by meddlesome surgeons.

Hunt.—If they ran away and got well, how does the hunter know that the ball passed through the body of a vertebra? and how does he know that they did not die of a lingering and painful illness—of pyæmia or septicæmia. Do the hunters furnish any specimens, or autopsies of these supposed cases? If not, what sort of testimony is this hunter's story for a scientific discussion?

If, however, it were proven, as it is not, that stags thus injured made a complete recovery, because they were not probed and poisoned by meddlesome and septic surgeons, it must be admitted that they recovered without carbolic acid or any other form of antiseptic dressing.

(If such a case could be shown, is it not a fact that the vertebra of a stag is much larger than the vertebra of a man, and that a perforation of the same diameter would for this reason be less likely to cause death? Ed.)

Farther than all this, to make the cases in any sense parallel, the splenic artery, in the case of the stag, should be wounded also, and there is no pretence that a hunter has seen a recovery from both of these lesions.

Esmarch.—The ball was encysted, and therefore conveyed no poison. The bacteria were carried in by the surgeons. (Esmarch means, of course, Dr. Townsend.—Ed.)

Hunt.—Bacteria are found in abscesses which never had any communication with the external air; and which have never been touched by probes or surgeons. Every student of medicine knows this, and Esmarch is a dull reader of the literature of his own countrymen if he does not know it. Sepsis often exists independently of external lesion.

Esmarch.—The pus ought not to have been "squeezed" out.

Hunt.—It never was "squeezed" out; and you, Professor Esmarch, have no authority for saying it was.

Esmarch.—American surgeons do not seem to give heed to what we—*Stromeyer* and I—have told them, namely, "to do no harm" in gunshot wounds.

Hunt.—American surgeons have had considerable experience in gunshot wounds, and scarcely need the advice of their German brethren upon this point.

Esmarch.—They should have done as Langenbeck did in the case of "our Emperor," let the wounds alone, and like him the President might have recovered.

Hunt.—Now, my dear *Esmarch*, do you seriously compare a few scattering duck shot in the face and arm of the Emperor with President Garfield's terrible bullet wound?

Esmarch.—Some American doctors think that President Garfield's surgeons did not do enough; that they ought to have probed and cut until they found the ball, and then have taken it out. In this they show their great ignorance of the whole subject of military surgery. I think they did too much.

Hunt.—In view of these two wholly opposite and conflicting opinions entertained by *Esmarch* and some American surgeons, it seems fair to assume that President Garfield's surgeons did just enough.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY March, 14, 1883.

Dr. Geo. F. Shrady presided. The minutes of the preceding meeting were read and approved.

Dr. Northrup presented a specimen of

CONGENITAL CYST WITH ABSENCE OF URETER.

removed from a male child 4½ months old. The right kidney was twice its normal size. Also a second specimen of kidney the seat of pyelitis and containing a calculus. The child during life had had no symptoms referable to the urinary tract, having well marked consolidation over both lungs and diarrhoea but nothing to indicate the condition of the kidneys. The right kidney was twice its normal size and contained pus cavities and a calculus. The lungs showed the lesions of lobar pneumonia. Dr. Northrup in this connection cited Civiale's statistics as to the frequency of calculi in the kidneys of children. He then presented specimens of enlarged bronchial glands which were of interest as showing how great irritation might arise from the pressure of enlarged glands. The patient had the symptoms of whooping cough and croup. There was broncho-pneumonia, a periodic spasmodic cough, diarrhoea, and laryngeal dyspnoea. *Post-mortem* the liver was found to be enlarged but the heart and other organs were normal.

Dr. Livingston remarked that he had seen a case similar to that last presented as regards the condition of the glands which pressed on the bronchi and œsophagus but gave rise to no cough or difficulty in deglutition.

Dr. Partridge presented a specimen of

PURPURA HÆMORRHAGICA.

occurring in a four months old child who had died at the Nursery and Child's Hospital. There was no hereditary history. The child's mother was in excellent health. Twelve days before death it was seized with bloody vomiting and epistaxis, was stupid, and did not nurse well, looked pale and sallow, the stools

became bloody and small ecchymotic spots appeared scattered through the subcutaneous cellular tissue.

March 9th.—Has occasional attacks of epistaxis, temperature normal, numerous hemorrhagic spots, passes little water and only when wrapped in hot blankets.

On autopsy the heart was free from clots, there were no coagula in the larger vessels, the liver was fatty, there was a small calculus in left kidney, the urine in the bladder was normal, there was effusion of blood under the capsule of the kidney. The blood was non-coagulated and contained bacteria.

Dr. Livingston, who had made the post mortem examination, remarked that though it would be at once conjectured that the bacteria found in the blood were those of putrefaction, they were not, but belonged to the class present in cases of purpura hemorrhagic. As to how this disease occurred was a question still wrapped in vagueness.

Dr. Partridge in reply to a question said that exhaustion was the immediate cause of death. The urine was not examined for blood during life but after death that in the bladder was ordinary alkaline urine.

Dr. Gerrish said that the cases he had met with had been characterized by bloody urine, and hemorrhage from the gums. In one case that he recalled blood oozed from every part of the body. He regarded milk diet and ergot as the best treatment.

Dr. Wyeth presented five specimens. First a radius taken from the left arm of a boy of ten years. He had suffered an accident to the wrist joint which had been followed by necrosis. The dead bone had been removed by the subperiosteal operation and had been reproduced.

The second specimen was the femur of a woman 67 years old which had been sent to him by Dr. Wm. Selden, of Norfolk, Va. The patient had sustained a fracture of the femur at 62. The diagnosis was fracture of the neck within the capsule. She was put in bed and kept quiet, and in a year was able to walk without crutches. There was shortening of three-quarter of an inch to an inch and at autopsy the condition exhibited in the specimen was found.

The third specimen was one of two cartilages removed from synovial bursæ of the knee joint, post mortem.

The fourth specimen was a femoral hernia made up of omentum. It demonstrated that hernia can cure itself. In this case it became incarcerated but not strangulated, and corked up the hole through which it escaped. Dr. Wyeth remarked that this was the third case he had met with of omental hernia in the male uncomplicated by intestinal hernia.

The fourth specimen was the remains of an English gum catheter, a portion of which had been allowed to slip into the bladder, by a patient with paralysis of the sphincter and complete anæsthesia of urinary tract, resulting from an accident to the spinal column.

The fifth specimen consisted of a lot of phosphatic calculi, removed from a patient with pyelitis and cystitis.

The case of reproduction of the radius Dr. Wyeth thought bore a close analogy to that of reproduction of the clavicle he had presented last year. In no department of surgery had there been greater advances within recent years than in the reproduction of bone.

Dr. Shrady alluded to a case he had had three years ago in which he had performed the subperiosteal operation in fracture of the humerus with the result of complete reproduction of the bone.

Dr. Bridson inquired as to the time it took in Dr.

Wyeth's case for the reproduction of the radius.
Dr. Wyeth replied about five weeks.
Dr. Ferguson presented a specimen of

ANEURISM OF ARCH OF AORTA.

Patient native of the U. S., æt. 45, an inmate of N. Y. Hospital. The most marked symptom was frequent spasmodic attacks of dyspnoea. There was no history of violence, no œdema of the lungs. The respiration would become suddenly embarrassed, the cardiac action rapid, the arterial tension high, the face cyanotic. The urine on examination showed a trace of albumen and granular casts.

March fifth. T. 98, R. 18, P. 76. Left radial pulse less strong than the right. The dyspnoea became so severe that laryngotomy was performed and a straight catheter inserted for $5\frac{1}{2}$ inches into the trachea and respiration thus established. There was however no permanent relief. Temperature went up to $104^{\circ}\frac{10}{100}$, pulse to 108, respiration to 25. An unsuccessful effort was made to introduce a larger catheter, but œdema of the lungs developed and patient died.

On autopsy a small amount of serous fluid was found in both pleural cavities. The aorta was atheromatous, and the seat of an aneurismal tumor $2 \times 1\frac{1}{2}$ inches. The innominate artery communicated with the sac of the tumor. A clot had taken up half the calibre of the left subclavian artery which accounted for the unilateral weakness of the radial pulse.

The society then went into executive session.

LECTURES.

THE DIFFERENT METHODS OF ANTISEPTIC WOUND DRESSINGS.

A LECTURE DELIVERED AT THE NEW YORK HOSPITAL.

BY

ROBERT F WEIR, M. D.,

Reported by H. H. Seelye, M. D.

GENTLEMEN:—I wish to-day to answer the occasional inquiries of a certain number of the gentlemen who are accustomed to attend the operations here, as to just what is meant when I speak of antiseptic dressings. I shall, however, try to make these remarks eminently practical, and will tell you how we in this hospital, or rather, I should say, how I am in the habit of dressing wounds, not only in the patients whom I have under charge here, but also in those in my private practice. I would not mean to say that I claim for myself any originality in my methods of applying antiseptic dressings, for I follow almost exclusively the theory of the great master Lister as developed by him and his disciples. In 1877 and 1878, when my attention was first directed to this subject, the battle was being fiercely fought between the supporters of the germ theory of putrefaction and the defenders of the older doctrines. But the question has been settled now in favor of the new theory; and you know that since then many other diseases have been found to have their cause in the presence of certain germs, as relapsing fever, in man, and in the splenic fever in cattle; and it has been shown lately that tuberculosis in all probability depends upon the same cause. So it is now generally accepted as a fact that putrefaction is due simply to the presence of bacteric life in the tissues,

and also that if you destroy bacteric life you will at the same time put a stop to putrefactive change.

We have, however, learned that in ordinary cases bacteric life is not found in the body, nor yet in an abscess, till it is connected with the air, either directly or indirectly, and it has long been known that subcutaneous wounds, such as in tenotomy, that is to say wounds so made that no air can enter the deep parts, are not followed by suppuration. It is therefore an ascertained fact that air in a wound is a common cause of putrefactive inflammation, and that where no air can enter there is no putrefactive change. I say, therefore, that you are forced to believe that this putrefactive change is due to one of two things, you must either say that germs in the wound are the cause of it, or else that there are gases in the air, and the most important of these is oxygen, which coming in contact with the wound give rise to putrefaction. To prevent this putrefactive change, therefore, you are bound either to use such means as will kill these germs, or else such as will arrest the entrance of gases into the wound.

Experiment and observation have, however, positively shown that putrefaction is always associated if not increased by bacteric life, and that the agents that are capable of arresting this bacteric life also arrest the putrefactive change.

The question before us then is, what can we do to arrest putrefactive change? There are a number of things which have been long known to which we can resort; but we have now a better agent than any of these, thanks to the great Lister, who has found that carbolic acid is the best thing now known to apply to surgical dressings to prevent putrefaction. There are other drugs which have been introduced recently as aspirants to this fame, but none of them have diminished the reputation of carbolic acid. In our wards here we confine ourselves to the use of only two or three of these best antiseptics, namely: 1st, Carbolic Acid, 2d, Iodoform, and, 3d Corrosive Sublimate. There are others in use elsewhere that are claimed to act as efficiently, but I will not stop to mention any of them now except naphthaline, which is perhaps one of the latest brought forward. What we want in a perfect antiseptic, in addition to its power upon bacteria, is, 1st. that it shall not be volatile, for rapid evaporation would require frequent dressings; 2d. that it shall not be irritating; and, 3d. that it shall not be poisonous if absorbed into the circulation. Unfortunately, you cannot have all these conditions filled in any one of our present dressings. Carbolic acid is volatile and poisonous; iodoform is not volatile and not irritating, but it is poisonous; and corrosive sublimate is poisonous and irritating but not volatile. Besides these, boracic acid, boro-glycerine, acetate of alumina, and others are used to a greater or less extent abroad; but all are lacking in some of these desirable qualities.

You have seen sufficiently in this clinic and in those of other surgeons, the use of carbolic acid, to have formed a pretty clear idea as to how it is managed. If the antiseptic dressing is fairly and justly employed the principle on which it is based should be carried out implicitly, and that is, that the wound should be thoroughly protected by the antiseptic from the inception of the operation to the completion of the healing process. So, working out on this line, Mr. Lister kept the opening in the wound covered by an antiseptic spray until after the surface had been closed and secured by sutures and dressings, so that no germ floating about in the air could get into the wound without first passing through this spray and having damage done it by the action of the carbolic acid. The majority of

surgeons still adhere to the use of the spray, but some have departed from the rule, yet a number of surgeons who have lately abandoned the use of the spray, in its stead, keep the wound thoroughly irrigated with a solution of carbolic acid. But this irrigation of the wound with carbolic acid has its dangers, for if you pour a solution of it into the wound, you run more risk of its absorption into the circulation than you would from using the spray. Mr. Lister thinks it better to keep the wound covered with the spray than to wash it out with a carbolized solution, and the spray alone is sufficient. But many make use of carbolized washings in connection with the spray though he says that washings should not be employed with the spray. But if the spray is omitted, then thorough washings should be used, and when the dressings are changed then the spray should be brought into play again.

In using carbolic acid it is found that solutions of one part of carbolic to twenty of water are the safest to arrest bacteric life. But when using the spray we are very apt to employ a weaker solution, about one in thirty, which when diluted by the steam from the spray producer is reduced to about one in forty. You will understand why this weaker solution is resorted to when I tell you that it is because we are more likely to use it than carbolized washings in such operations as opening serous cavities and joints where the serous membranes might otherwise be too much irritated. An objection to the spray that is made is, that it is irritating to the surgeon while operating, and many who wear glasses are inconvenienced by the spray collecting on them and dimming them so that they cannot see as well. And this may account for the fact that so many of the older surgeons are opposed to the use of the spray.

Now, having commenced the operation, say without the spray, and washed out the wound with a solution of one in twenty, the question arises, how can we control the hæmorrhage and the immediate accidents of the operation without interfering with the point of union of the wound? We formerly used silk for ligatures and left them to nature to care for, and sometimes they would not cause any inconvenience, especially if they had been carbolized, but would become coated over by lymph, but when suppuration took place the silk acted as a foreign body and so was likely to delay healing of the wound. Mr. Lister, therefore, to avoid this difficulty, fell back upon catgut, which he found would become softened in water, and could be made supple, and at the same time resistant, and could also be impregnated with carbolic acid and so be made antiseptic like the other applications to the wound, and at last it would become disintegrated and be absorbed. The history of the catgut ligature is this: It was found that it could only be conveniently used as a ligature when it was tied in three knots, for with two it would become untied; and it did not hold long enough in tying large arteries in continuity, because it would weaken and give way before clots would have time to harden sufficiently to occlude the vessel which they encircled. The weak point of the catgut ligature, therefore, was, that it was not strong nor durable enough. So Mr. Lister, in 1877, promulgated to us the fact that, by the addition of some quality given to the solution by chromic acid, he could make the ligature soaked in it last for from eight to ten days. The solution he prepared as follows: Take of

Chromic acid.....	1 part.
Carbolic acid.....	200 parts.
Water.....	2,000 parts.

Dissolve the carbolic acid in the water, and then add the chromic acid, and then put a quantity of catgut equal in weight into this solution and leave it to soak for forty-eight hours, then remove it and place it on the stretch to dry, and then preserve it till ready for use in carbolized oil of the strength of one to five. To catgut prepared in this way there were still complaints. In tying large arteries, as for aneurism, it was still found not to hold long enough, and from having been steeped in oil it was rendered so slippery that it was not easy to tie a knot so firmly that it would remain tight. Hence a better ligature was demanded, and last March another sort was introduced to us which possessed very great merits. This catgut ligature is not kept in any solution to preserve it, and you can carry it about, dry, with you in your pocket case and have it always at hand, while the other kind had to be carried about in vials which were inconvenient. It is besides infinitely stronger than any catgut yet presented to our notice and it does not easily slip. These desirable improvements are effected by the use of sulphurous acid. The catgut is first dipped in a solution of chromic acid of the strength of one part to one thousand and left for twelve hours, and then it is taken out and dipped in a solution of sulphurous acid, where it is left for another twelve hours, after which it is removed and dried. It is cut off in lengths to suit, and when ready for use is put in a one to twenty solution of carbolic acid and left to soak for a short time. Ligatures prepared in this way have been on trial now for only six or eight months, so that they have not yet been thoroughly tested. But I know from my own experience that they will remain in the wound undissolved for six to eight weeks, and this is practically too long for most operations. So to remedy this defect we have here adopted a weaker solution of sulphurous acid for preparing them. We place them for twelve hours in a one to one thousand solution of chromic acid, and then leave them for three hours in a fifty per cent. solution of sulphurous acid, and afterwards dry them and keep them ready for use. This ligature will dissolve more readily in the wound, and though it is not yet perfect, yet it marks a great advance on the old catgut ligature.

Hence, in our use of Listerism, we have thus far offered you two improvements in the management of wounds: first, in the employment of the spray, and second, in the preparation of the ligature. Now we have made a third advance in antiseptics by sewing up the wound with sutures of carbolic silk. We simply thread a needle with ordinary silk, and at the time of the operation dip it in a one to twenty solution of carbolic acid, and it is ready for use. So now we have gotten down to the closure of the wound under antiseptics save for one thing more, and that is, drainage. We must secure some way for the secretions which collect in the wound to come out; for, if we do not, they will cause pain by reason of pressure, or will become absorbed into the circulation, and give rise to an elevation of temperature. We must, therefore, supply an exit for these discharges. We owe the introduction of the most perfect form of drainage to M. Chassaignac, a celebrated French surgeon, who proposed the use of rubber tubes for this purpose. We employ here black or red rubber tubing in preference to white. The black and the red are the best, and I should advise you to use one of them rather than the white if you can. The white are not so good because the sulphur, which they contain in a larger amount, irritates the wound and delays healing. There are other substances also that can be used for drainage, such as

strands of catgut ligature, or horse hair, or spun glass twisted, or, if hard pushed, you may employ a quill or a glass tube. I will show you how to prepare a rubber tube for drainage. Cut the tube bevelled at the ends, and not square off, then make openings along its side with a curved scissors to collect the discharges from the sides of the wound. It is secured outside the wound by means of a safety pin or an ordinary needle, so that it cannot drop back into the cavity of the wound. This is a point of considerable importance in cases of abscess or wounds into the joints or serous cavities, for if the tube disappears you will have a hard time fishing for it, and it is liable to form a dangerous element if left unremoved. These drainage tubes are put in in such a way as to drain the wound very thoroughly from below. They should not be changed every day or two, but should be left in for four or five days, and then they can be drawn out, and the discharges will drain through the hole which is left for eight or nine days longer, or until it heals up. After the prolonged use of drainage tubes, I have seen the sinuses remain open for months afterwards. Unfortunately, taking the drainage tube out on the fifth day renders it necessary to change the dressing, which is sometimes undesirable. Hence, the question arose in the minds of surgeons: Can we not devise some better means of securing drainage without removing the dressings? So Neuber, of Kiel, in Germany, undertook to make a drain that would not require removal, and now we have and use here a number of drains that are completely soluble if left in a wound. They are made of chicken bones. After the meat has been taken off from the bones and they have been well cleansed, they are put in a strong solution of muriatic acid, which takes out the hard mineral parts and leaves the bones quite flexible like rubber. They are then kept in a one to five solution of carbolized oil until ready for use. Then holes are cut along the sides of the tube so that the discharges from the sides of the wound can percolate through. They are introduced and secured in position in the same way as rubber drains, and, after being left in for from five to seven days, they disappear, from having become absorbed. Or, if they do not, then another condition will sometimes obtain, and that is, the wound will heal over the drain, and the bone, being undissolved, will be left in position, and will become coated over with lymph and feel quite hard for a considerable time, but at last it will quite disappear.

Now I have brought you up to the point of dressing the wound. Here we have to secure antiseptis and rest of the wound combined as far as possible, and so we must use dressings that will not have to be frequently changed; hence they must be such as will readily absorb the discharge and at the same time will arrest putrefaction. But when we come to select an absorbable dressing, we find that there is considerable variation of opinion in the minds of surgeons as to which is the best. Lister does not apply any dressing containing carbolic acid directly to the wound, because carbolic acid is irritating both to the wound and to the skin about it. So he uses what is called a "protective" to place over the wound and protect it from the carbolic acid in the dressings. This protective is a small piece of oiled silk covered over with copal varnish and a little carbolized dextrine to make it stick. When applied over the wound it does not cover up the ends of the drainage tube, but holes are cut in it for the tube to pass through, or else the ends are left projecting from beneath the edges of the protective. Over this Lister then places sundry layers,

seven or eight at least, of gauze impregnated with carbolic acid. Some surgeons take a wad of absorbent cotton and dip it in a solution of carbolic acid and clap it directly over the wound and confine it there, supposing that this will prevent the entrance of any germs.

But this is not antiseptic surgery, for carbolic acid is very volatile, and a few hours after such a dressing is applied it is no protection, because the carbolic acid has all evaporated and disappeared. There is only one thing that will prevent the carbolic acid from evaporating from the dressings, and that is to cover them with a piece of rubber cloth called "Mackintosh," from the man who manufactures it in England. This is a certain form of the same kind of rubber cloth as is used for sweat bands in hats, or for the thin rubber water proofs that ladies now wear so much.

The Mackintosh is generally placed just under the outer or eighth layer of gauze, and its care is, first, to check evaporation, and second, to prevent the discharges from coming immediately to the air, without having to travel first over a large surface of carbolic acid. Finally all is confined in place by a roller bandage of carbolized cheese cloth. This then is the Lister dressing complete.

We are now using here a modification of carbolized gauze suggested by von Bruins. He said that a much more serviceable and easily prepared gauze could be made by impregnating cheese cloth with the following solution:

R. Resin.....	400 parts.
Castor Oil.....	80 "
Carbolic Acid.....	100 "
Alcohol.....	2 litres.

This is sufficient for thirty yards of gauze. The older method is to prepare the same solution, but substitute two litres of benzine for the alcohol. All that is necessary is, that this gauze, as well as Lister's, should be prepared pretty fresh. So for your own convenience it is well to have some of the solution ready prepared on hand, and when you wish to use it take your material and pour upon it some of this solution to moisten it, and then roll it up in a rubber cloth and keep it thus ready for the next day's use. This is a great improvement in the antiseptic method carried out according to Listerian ideas.

I said to you that there were other substances in use as dressings and as absorbent materials, and now I will tell you about these. One of these dressings, which we used here a year ago, was jute, which had been impregnated with carbolized acid. This was employed in place of the carbolized gauze, but we found that it soon became too weak, and besides it was very inflammable and dangerous to use near a light at night, so we gave it up. We are now trying dressings of sawdust and peat, and we find that they work with satisfaction. Ordinary sawdust is an admirable absorbent of discharges. We make it up into bags or quilted pads, and place these over the wound after first covering it with a layer of gauze, and then we can impregnate it with whatever antiseptic we wish; but we are now using iodoform and corrosive sublimate chiefly. After placing a small pad over the wound we put a larger bag, similarly impregnated with an antiseptic, on top of this and secure it by a bandage either with or without a piece of Mackintosh over it. With the corrosive sublimate solution as a dressing for the pads we use the Mackintosh, but not with the iodoform dressing. The advantage of using such thick dressings of sawdust or peat is that we can keep them on a long time without changing, because they will hold a large

quantity of the discharge, and also that firm equable pressure can be resorted to.

Peat, which is not so easily obtained as sawdust, was brought to our notice about a year ago by Neuber, who accidentally discovered its excellent qualities as a dressing. A man who had been severely wounded and not having had a surgeon at hand, had covered the wound with a dressing of the common peat found in that neighborhood, came to him for advice several days after receiving the injury. On removing the dressing he was surprised to find the wound looking so well and free from odor, and he noticed too how spongy, soft and light the peat dressing was, and then he found that it would absorb water to a vast extent and more than anything else he knew of. It occurred to him that it would make an admirable surgical dressing if properly prepared.

It is a species of ordinary peat or turf which is used for fuel. It is not found here, but it is very much like the peat which is found in our cranberry bogs. All that we use for surgical dressings is imported, and it is found to be slightly antiseptic, so that the dressings when soaked with the discharges from a wound do not putrify. We, however, always add antiseptics to it.

Neuber and Esmarch, working together in Kiel, Germany, have had very marked success in treating wounds with an iodoform dressing. It has now been in use for about two years, and at first it was employed very freely, and from half an ounce to an ounce at a time was spread over a large wound. But such large quantities are not necessary and they increase the dangers of poisoning by absorption, and hence only very small amounts can be safely used; and forty-five grains to a dram are now considered sufficient for dressing any wound, and this amount is free from the danger of poisoning.

Sundry attempts have been made to conceal the disagreeable odor of iodoform, and you will find that this is accomplished best by the addition to it of the oil of eucalyptus, or by tonka bean, or the oil of bergamot, or thymol; but none of these are completely satisfactory. In making the dressing of a wound previously washed with a carbolic solution and closed by sutures, the iodoform should only be applied in a pad of peat or sawdust impregnated with a two and a half per cent. of iodoform, and over this a large bag of the same dipped in 1-20 carbolic acid, and the whole should finally be secured by a bandage. The iodoform should not be confined beneath cloth that is impermeable to gases, for if it is, or if it is bound on too snugly, it is said that there is more danger of poisoning. But I think that the risk of poisoning depends more upon the quantity used than upon the way it is applied. By using it too freely I lost one patient, and so I am a little afraid of it, and I now restrict its use to small operations where less than one drachm will suffice or where other means cannot be used conveniently. It has this great merit for a dressing: It is using an antiseptic in its strongest and most potent form, and no Mackintosh is necessary, because the discharges are sufficiently disinfected by coming in contact with this powerful antiseptic.

Von Bruin's formula for preparing iodoform gauze for dressings is the following:

℞ Iodoform Gauze.....q.s.
impregnated with

℞ Resin4 parts
Glycerine.....1 part
Alcohol.....20 parts
Iodoform10 to 40 per cent.

Iodoform Cotton is made by:

℞ Absorbent cotton.....500 parts
and impregnate it with
℞ Iodoform.....50 parts
Ether.....250 parts
Alcohol.....1,000 parts

Iodoform Peat is prepared thus:

℞ Peat.....q.s.
Iodoform.....2½ per cent.

Mix thoroughly.

The bichloride of mercury dressing, which possesses two great advantages, was recently introduced to us by Delacroix, who said that one part of the bichloride to 2500 of water was sufficient to arrest bacteric life. Its advantages as a dressing are, 1st.—it is not volatile, and 2d.—if it acts as a poison from absorption into the system, you can easily determine this poisoning in its early stages by the effect produced on the gums and salivary organs, and so rectify it before any damage is done. That it is not readily absorbed is shown by the statistics of from two to three hundred cases, where it was used, and in only two of these a slight degree of salivation was produced. Besides, it is cheap, and does not irritate the hands as does carbolic acid, and it has no odor. This dressing has not yet been long enough used to have its merits thoroughly tested, but if future experience establishes the advantages which it seems to possess, it will doubtless be used in preference to others. It is used upon gauze, or in bags of peat, jute, or sawdust. The first piece of gauze or pad in the dressing is wetted with the bichloride solution and put on next to the protective or dry impregnated gauze, because otherwise it sometimes irritates the skin around. The solution we use here is a little stronger than that used by M. Delacroix. We found that an application of a solution of one part to 2000 of water was not sufficient, so we increased the strength to that now used by two European surgeons, Drs. Max Schede and Kümmel. We have found that a solution of from 70 to 80 grains to the pint is the best for practical use. But we employ two solutions of different strengths here. One contains 76 grains of corrosive sublimate to the pint, and is a one per cent. solution; and the other 96 grains to the pint, making a one and a quarter per cent. solution. The sponges are cleaned and the wound washed, and the first layer of gauze or the first pad in the dressing are impregnated with the stronger solution, but the outer dressings and the outer pad and the bandage securing it are moistened with the weaker solution. The instruments should not be put in either.

The *Corrosive Sublimate Gauze* is prepared as follows:—

℞ Gauze (free from oil) q.s.
Impregnate this with:—

℞ Corrosive Sublimate.....1 part.
Alcohol.....400 "
Glycerine.....40 "

M. Ft. Sol.=20 grs. to Oj.

Jute, Peat and Sawdust Dressings are prepared thus:—

℞ Jute, Peat or Sawdust.....q.s.
Moisten thoroughly with:—

℞ Mercury Bichloride.....1 part.
Alcohol.....400 "
Glycerine.....40 "

M. Ft. Sol.=20 grs. to Oj.

In all these different dressings where a large amount of absorbent material is left on for a long time, it is sometimes of advantage to wet the ordinary bandage with water glass, so as to make it more firm and more easily to be retained in position.

I have now given you in sufficient detail the chief points necessary for you to understand these different methods of antiseptic dressing, and I hope that you will make use of them in your practice hereafter. I think that you should carry out the principles of antiseptic surgery implicitly in all your operations.

I shall now proceed to do a simple operation for necrosis of the tibia, and afterwards I shall ask the house surgeon to dress it with a peat and bichloride of mercury dressing, so that you can see for yourselves how it is done. The patient can then perhaps be allowed to go for several weeks without changing the dressing and without compromising his safety. By watching this operation you will see the principles of which I have just told you, carried out practically.

NECROSIS OF THE TIBIA.

The patient is 14 years of age, and three months ago he sprained his ankle in jumping from a horse car. Rapid swelling took place and this was followed by ulceration, and finally three openings formed leaving sinuses, through which I can now pass a probe down to the bone. When I cut down upon it I do not know whether I shall find this bone loose or not, for it is unusual to get complete separation of dead from the living bone so early as three months after the injury. But I think what we have here is a necrosis of the cancellous structure and this is apt to become more easily separated than the compact portion of the bone. I propose now to lay open the part by a deep incision and take out all the dead bone, and then put on a peat corrosive sublimate dressing, and I hope that then the patient will go on improving steadily without needing much changing of the dressings. Where such a process of suppuration has been going on for some time exposed to the air it is not easy, in fact it may be said to be impossible, to get an entirely antiseptic condition of the wound.

Lister suggests for this purpose, where sinuses etc. exist, the injecting of a one in twenty or even a stronger solution of carbolic acid, and Volkmann, of Halle, says, that the tracks should be well scraped out and the cavity of the wound afterward washed with a one in twenty solution. Chloride of zinc of the strength of forty grains to the ounce used as a wash to cauterize the wound has also been suggested. This is sometimes a good plan of treatment, but nine times out of ten you will meet with disappointment if you try it.

Before using the knife here I will inject a bichloride solution into one of these sinuses, and as I do so you see the water issues from both the others, which shows that they communicate.

Operation.—The left ankle was swollen and had three sinuses upon it, one on the inner aspect, one on the outer, and the third on the inner and anterior portion. A probe could be passed into one and out of either of the others. The operator now made an incision with a scalpel extending about two and a half inches along the inner and anterior surface of the ankle, cutting between two of the sinuses. After dividing the skin and superficial structures the knife was reversed and the handle used to tear apart and separate the remaining tissues until the bone was exposed. Now it could be seen that the tracks from all the fistulous openings led down to the central portion of the end of the tibia, where the bone was felt to be dead, and not enclosed

in any proper involucrum. Portions of the necrosed cancellous structure were scraped away with the handle of the scalpel, and then the firmer parts were broken off with the mallet and chisel, and removed with a dressing forceps. After taking out one large piece of necrosed bone and several smaller masses the carious portion adjacent to the sound structure was scraped off with a scoop until only healthy bone was left. A large and direct opening through the bone into its center was thus left as an outlet through which any diseased portions yet remaining in the deeper parts of the bone might find a way of escape. The wound was now washed out by injecting it with the bichloride of mercury solution, and then a drainage tube of prepared chicken bone was introduced transversely through one of the sinuses and the lower edge of the wound. The cavity was now packed with prepared strips of cheese cloth, wet with sublimate solution, and over this was placed a mass of several layers of gauze moistened with the bichloride solution, and then a pad of peat, and all was confined in position by a roller bandage. This completed the dressing of the wound.

Gentlemen:—One advantage of this apparently cumbersome though really light dressing is, that you can make a considerable amount of pressure without any danger of obstructing the circulation, and this pressure will be evenly distributed, and it carries out the desirable condition of keeping the limb at rest, because the dressing can remain unchanged for an indefinite period.

Since antiseptic dressings have come into common use the mortality after surgical accidents has been remarkably diminished. Thus in the cases of compound fracture of the larger bones which we had in this and in St. Luke's Hospital before antiseptics were used the mortality was from thirty to thirty-five per cent. but now two and a half per cent. is considered a large mortality. I had over seventy cases of fractures of the leg, arm, and forearm, without a single death since employing the carbolic acid treatment. But then in my zeal to show what this method of treatment would accomplish I at one time lost three consecutive cases of compound fracture from railroad accidents. In thirty large amputations performed under antiseptic precautions at the Roosevelt Hospital and here I have not had any deaths, when the mortality had previously been forty per cent. However it takes a larger number of statistics than I am able to give you from my own experience to prove the value of antiseptic methods; but most of the great surgeons all over the world have had such success that they are pronounced in their favor of them. Even the few others who still cling to the older methods and yet claim equally good results, will be found as a rule to use a sort of mixed antiseptic treatment. But the great point in favor of antiseptic dressings is, that the merest tyro in surgery can have large success under their use.

SELECTIONS FROM JOURNALS.

THE GULSTONIAN LECTURES ON THE STERILITY OF WOMEN, Delivered at the Royal College of Physicians, February 16th, 1883. By J. MATTHEWS DUNCAN, M. D., LL. D., etc., Physician-Accoucheur and Lecturer on Midwifery at St. Bartholomew's Hospital.

LECTURE I: PART II.—NATURE AND AMOUNT.

There are several tests of relative sterility secondary to that implied in the frequent question "How many

did she bear?" These subsidiary tests are based on the ascertained course of natural fertility, and show deviations from this course of relative sterility. The inquiry that may be made by these tests implies a knowledge of how many children a woman will naturally bear, or is likely to bear, and the natural order of births. They are as follows: 1. When, after marriage, did she begin her career of child-bearing? 2. How rapidly did the children follow one another, or what was the interval between successive births? 3. When did child-bearing cease, or what was her age at the birth of the last child? 4. How long was the child-bearing period of life, and what was the interval between the beginning of the first pregnancy and the last? In studying population, these subsidiary matters are little regarded, for the statesman has a direct interest only in the mutually related questions: How many are born? How many might have been born? What is the health of those born? The answers to these inquiries give him the actual relative circumstances of the population, and in the case of a population this includes absolute sterility. He may only regard the increase or diminution of the sterility of the people as indicating the health of the progeny so far as it relates to fertility, and thus control that effect by raising or lowering the age of marriage. On the other hand, the physician having the care of the health of individuals and not of the people, has his chief interest in these subsidiary matters, which the statesman may not utterly neglect, but may leave to the care of the medical philosopher.

The importance of the question, How soon after marriage does a woman bear her first child? is evident, and it will be found to be more a test of sterility than it appears at first sight to be. Whitehead, in his observation of 541 married women of the average age of twenty-two years, makes the average interval to be eleven and a half months. Sadler says that married families do not become fruitful, on an average during the first year, but a great number of cases which he says he has collected with a view of determining this point, give three-fourths as producing the first child in an average of one year after marriage. From the Edinburgh and Glasgow registers of 1855, I was able to make out this point in 3,722 cases (Table II.)

TABLE II.		TABLE III.	
Showing the Interval between Marriage and the birth of a First Child.		(from Ansell.) Showing the Interval between Marriage and the Birth of First Children.	
Years married.	No. of births.	Year after marriage.	No. of first children.
Less.	608	1	3,159
1	2,300	2	2,103
2	437	3	421
3	133	4	137
4	61	5	69
5	32	6	26
6	27	7	21
7	12	8	11
8	5	9	7
9	5	10	7
10	1	11	5
11	3	12	4
12	4	13	3
13	2	14	2
14	—		
15	1		
16	—		
17	—		
18	1		
Total.....	3,722	Total.....	6,035

But in these extracts from the registers there are two sources of error, which prevent the exact comparing of the results with Ansell's table, for twins are excluded, being placed in the column of secundiparæ and, still more important, the large number of mothers whose children are still-born is excluded. Twins affect especially young, immature, quickly breeding mothers; their omission from the primary births, therefore, will delay the estimated time, and a similar delay will result from the omission of women having dead children; for such women, when they bear a first living child, will appear in the primiparous column with an overestimated and erroneous retardation of primiparity. The Edinburgh and Glasgow table gives the mean interval of seventeen months between marriage and the birth of a living child. It shows that fecundity is not demonstrated by a living child in the majority of cases until a year of married life is past. Nearly two-thirds of the whole begin with families in the course of the second year. It also shows that there is no ground of presumption of sterility until the fourth year of married life is entered upon; for, while of those three years married and less than four, 133 bore a first living child, there were only 154 who did so in all the subsequent years taken together. Of the whole 3,722 women, only about one twenty-fourth began bearing children after four years elapsed. Ansell's table includes first still-born children; he has corrected it for twins, and gives the data in 6,000 cases. It is therefore, better than the preceding and any others that I know with regard to this point. (Table III.) Ansell's table gives a mean interval of nearly sixteen months between marriage and the birth of a child. The majority of the women in Ansell's table bore first children before the first year of married life had passed, nearly seven-eighths before the expiry of two years. It also shows that there is no good presumption of sterility until the fourth year of married life has been entered upon. Of those three years married, and less than four, 421 bore a first child, and only 292 did so in all the subsequent years taken together. Of the whole 6,000 women, only about $\frac{1}{21}$ part began bearing children after three years, and only $\frac{1}{35}$ after the fourth year. It may, therefore, be held that married women delaying the commencement of fertility beyond six months are already exhibiting a degree of relative sterility; and this conclusion is quite in keeping with the rest of our knowledge upon the subject.

The second question proposed is, how rapidly do the children in a family follow one another? or, what is the interval between the births of successive children? Authors on population used to hold that breeding women never exceeded in rate of prolificness a child every two years; but this, like many other of the observations on which theories have been founded, has been proved to be false. With our present knowledge, we can assert that women who breed, do so at an average rate of a child every eighteen months.

Table IV is compiled from the Edinburgh and Glasgow registers.

This table makes the average interval twenty months, but this requires several corrections. This table, like the next made up from Ansell, is not correctly described as giving the average interval between the births, but the average interval between marriage and the birth of a child. Ansell's table does not require correction for twins or dead children, and its value may be judged by the statement, indefinite though it be, that it is based on more than 25,000 observations in the upper classes.

TABLE IV.—*Showing the Average Duration of Marriage at Birth of each Successive Child, and the Average Interval between the Births of the Successive Children.*

Number of children.	Number of mothers.	Duration of marriage in months.	Average interval between successive births.
1	3,722	17	—
2	2,893	38	19.0
3	2,534	64	21.3
4	1,982	90	22.5
5	1,543	115	23.0
6	1,221	137	22.8
7	848	162	23.1
8	641	181	22.6
9	425	203	22.5
10	222	225	22.5
11	152	235	21.4
12	61	246	20.5
13	34	263	20.2
14	11	281	20.1
15	6	280	18.7
16	2	336	21.0
17	2	252	14.8
18	1	252	14.0
19	1	204	10.7
Average			19.9

The average interval, as calculated from these, is eighteen months between births of the successive children. Ansell's table may be studied further, with a view to a statement of the average interval of those who have not excessive families, but the natural, or normal number; for those mothers who have shown excessive fertility, either by a high number of births, or by excessively rapid births, so long as child-bearing continued, are mixed up in each successive row of figures with those that are normal, or nearly so. Looking at the rows of figures of families from four to ten, showing intervals of from twenty to twenty-one months, we are safe in stating the average interval as above twenty months, and, probably under two years. It may, therefore, be held that the married woman who, during child-bearing life, does not have a child every twenty months, is exhibiting relative sterility.

The third question is, when did child-bearing cease, or what was the age at the birth of the last child? Now, it is a rule to confuse the child-bearing period of life with the period during which women menstruate. This is a great mistake. It is only a part of this that is, in married life, occupied by child-bearing, except in rare cases, not one of which has ever come under my observation. When a woman begins child-bearing, she generally, under favorable circumstances, continues a career of fertility steadily till the last child is born. The registers tell us when women actually begin to have children, and I have already made use of such information; but we have no data nearly sufficient to decide what is the average age of commencing fertility. We have the average commencement connected with marriages, not the average age of commencing fertility as considered apart from marriage; we may, however, be sure from what we do know, that it is not the age of puberty, that it is not the age of commencing menstruation, that it is not the age of commencing nubility, at which procreation is commenced with the greatest advantage to mother or progeny. It is evidence of good conduct in the race, that we cannot get sufficient data, there being very few unions permitted in early life. Most of our women are, fortunately, married within the limits of nubility. Nevertheless, it is desirable that we should find out what is the mean age of commencing child-bearing, that is, supposing that all were subjected to the condi-

tions from the earliest period: of this, however, we have no information. Regarding the time of cessation of child-bearing, we have exact information. It shows well the distinction that must be made between the cessation of menstruation and the cessation of procreation. Menstruation ceases at from 45 to 50 years of age; child-bearing ceases at an average age of 38. This cessation arises from no imperfection or decay of organs, but it may be due to that, nevertheless. It is highly probable that its main cause is the cessation of functional vigor and activity, for it is delayed in women who have begun their fertility late in life. On the subject of the cessation of child-bearing, our best information is again derived from Ansell, whose calculations are based on 4,800 observations, restricted to those in which both the father and mother survived the child-bearing age alike—a point which was determined in accordance with the scale I have already given. The chief governing rule is not to suppose a woman under 44 years of age to have borne her last child until she has been ten years barren—making it quite safe. The quinquenniad from 39 to 43 was that in which the largest number ceased to bear; 38 is the mean age of mothers, married at a mean age of 25, at the date of the birth of the last child. The productive period begins earlier, and it is protracted to a later age in cases where the children are numerous than where they are few. This protraction is shown by the following table:

TABLE VI (from Ansell).—*Showing the Mean Age of Mothers at the Birth of their last Child in Families of different numbers.*

Number in family.	Mean age of mothers.
1	31.08
2 or 3	34.21
4 or 5	37.04
6 or 7	39.21
8 or 9	40.61
10, 11, or 12	41.74
13, 14, or 15	42.83
16 or more	44.32

Women have, in their career, with a view to our present subject, many stages in life. There is the age of puberty, or of commencing menstruation; and this is to be distinguished from the age of commencing child-bearing, regarding which we have no data. But the age of commencing child-bearing, though it may be identical with that of commencing menstruation in individual cases, is certainly not nearly so in the mass of women, being fortunately considerably delayed. Then, after the age of commencing child-bearing comes the age of nubility, the age at which a woman can enter married life with the best chance of having a healthy and not excessive family. After the age of nubility comes the age of cessation of child-bearing, which is thirty-eight for women married at twenty-five. Women may bear children after this age, or after the cessation of menstruation altogether, but such cases are exceptional. The last stage in the career is generally the cessation of menstruation at the age of from forty-five to fifty. There is a mean age of puberty; a mean age of possible commencing procreation; a still further advanced mean age of commenced procreation; a still further advanced mean age of nubility, or fitness for procreation; a still further advanced mean age of cessation of procreation; and, lastly, there is a mean age of cessation of menstruation, and of possibly procreation. Most of these stages of woman's life have their analogues in females among the lower animals, and some of them in the life of plants.

Writing regarding the age of cessation of child-

bearing, Whitehead makes the following pertinent remarks: "The mean age of the individuals recorded in the preceding table, at the time of the last delivery, 1,586, gives an average of forty-one years. The average age of the same individuals at the time of the last menstruation is forty-seven years, so that a period of nearly six years is indicated during which, although the menstrual function continued to be more or less efficiently discharged, aptitude for procreation did not exist. They were all placed under favorable circumstances for the continuance of child-bearing so far as regarded their matrimonial position. A like period of uterine quiescence is observed before child-bearing begins."

To the question how long does child-bearing continue? it is easy to give some answer; for if the average age at the commencement of child-bearing is twenty-six, and the mean age at the termination is thirty-eight years, the average duration of the child-bearing period is twelve years. The proof of fertility will be the number of pregnancies multiplied by nine months, added to the intervals multiplied by nine months.

It will vary from one child sterility, with nine months of the child-bearing period of life, to ten-child fertility, with a child-bearing period of life of 171 months, or about fourteen years. In the case of twenty-child fertility, the period of child-bearing is very much less than thirty years, because women of this great and excessive prolificness hurry their children into the world and get through the high number. From Angell's statement of 4,899 married women whose ages at the birth of their last children were known, both parents surviving the child-bearing age of the mother, I have constructed Table VII to show, as near as the figures will give it, the whole length of the child-bearing life. The com-

TABLE VII. (from Ansell)—Showing the Average Age at Cessation of Child-bearing in families of different number, and the Time occupied in Child-bearing, estimated at the rate of eighteen months for each child, in families of less than ten children; the mean age of mother at commencement of child-bearing, being twenty six years, and the parents both surviving the child-bearing age of the mother according to the scale of Ansell (p. 50.)

Number of family.	Number of cases.	Mean age of mothers.		Time occupied in child-bearing.	
1	244	30 years and	6 months	1 year and	6 months
2	401	32	11 "	3	" "
3	425	34	5 "	4	" "
4	485	35	10 "	6	" "
5	505	36	11 "	7	" "
6	494	38	" "	9	" "
7	490	39	" "	10	" "
8	467	39	8 "	12	" "
9	387	40	6 "	13	" "
10	312	40	10 "	14	" "
11	230	41	1 "	15	" "
12	170	41	7 "	15	" "
13	115	42	5 "	16	" "
14	43	41	10 "	15	" "
15	34	42	8 "	16	" "
16	10	43	6 "	17	" "
17	10	43	5 "	17	" "
18	6	44	" "	18	" "
19	1	45	" "	19	" "
20	1	45	" "	19	" "

mencement of child-bearing at twenty-six years of age, is in all cases assumed; because it really was the mean age in Ansell's collection. This table affords further valuable information as to the duration of the child-bearing in families which reach the normal limit of about 10; and we see that it is about fifteen years. A woman, then, may be regarded as relatively sterile, who, married within the years of nubility, that is, from

twenty to twenty-five, ceases to have children within fifteen years from the birth of her first child.

Now, let us try to answer the comprehensive question: How many children does a woman bear? On the answer to this depends the settlement of the amount of sterility. It cannot be satisfactorily answered directly, on account of the paucity of data; but such answer as I shall give, is corroborated by the various subsidiary answers I have just furnished. I shall not enter on subjects (important politically) such as the number in actual families, the number of marriages, etc., because, these are foreign to our present inquiry. In the District of St. George's-in-the-East, the Statistical Society of London found among the poorer classes 80 mothers (this is the only table I know) who had been married at ages varying from 15 to 19, and who had lived in wedlock at least 31 years of the child-bearing period of life. These 80 fertile wives had borne on an average 9.12 children. Considering the undoubted existence of individual sources of error all tending to diminish the average amount, we may safely say that using the data of St. George's-in-the-East, that 10 is about the average fertility of marriages lasting during the whole child-bearing period of life. The average age of marriages in England is 25, and consequently the production should be less than 10 if a woman were living in fertile wedlock from 25 to the end of the child-bearing period of life—not all the child-bearing period of life. The actual fertility of these marriages in England if only nine in ten wives have living children, is, according to Farr, 5.2; but with a view of contrasting the data in St. George's-in-the-East with Ansell, these figures require correction, for the condition of living in wedlock till the end of the child-bearing period is omitted. If that condition were not omitted, there would, of course, be a large increase of fertility of wives in England. Ansell's collection includes 1,767 spinsters married to bachelors at the mean age of 25, and living in fruitful wedlock till the end of the child-bearing period, as calculated by a scale already given, and the production was 5.7, a figure which I regard as indicating less fertility than that of Englishwomen generally. The fertile wives of England, without the condition of persistency in married life to the end of the child-bearing period, bore 5.2 children. Ansell's mothers in the upper classes married at the mean age of 25, living in wedlock till the end of the child-bearing period, bore six children. The fertile wives of St. George's-in-the-East, living in wedlock to the end of the child-bearing period, bore above nine children. Each of these statements is some corroboration of the others; and keeping in view some further evidence, they seem to justify us in holding that a healthy woman living in wedlock during all the child-bearing period in life under the most favorable circumstances, should have a family of ten. Women under such circumstances bearing less than ten are relatively sterile. Further evidence to the same effect is got by referring to the data derived from the registers of Edinburgh and Glasgow. There I found among the fertile wives married at various ages a fertility of between seven and eight. Now, as many women are married some years after the best period for commencing child-bearing, we may, by making allowance for such delay, raise the number from between seven and eight to ten, the number indicated by the St. George's-in-the-East table.

There are many women who bear families above ten, and it is desirable to devote to them special consideration. Such families are, on the whole, abnormal or excessive. I have spoken of the occasional calamitous

character of only-child fertility; but there is a mass of evidence rising to show that a family in the average female rising above ten begins to be excessive, and is increasingly so as the figure increases. It may seem paradoxical to bring the consideration of excessive families into a lecture on sterility; but in the next lecture the paradoxical character of this will appear.

The bearing of a first child is well known to be dangerous and often fatal to the mother. After this, she comes into the period of child-bearing, which is the safest, and which continues while she has a natural or ordinary degree of fertility. The danger of primiparity is, for a fertile woman, inevitable; but the special danger of multiparity is only when the family is excessive, and this danger is good evidence of excessiveness. At the same time, the danger has been demonstrated to arise with the increasing elderness of the mother.

Our next table is Table VIII. This table does not give the actual mortality, but only such as may be compared with one another with a view to making out the peril attending confinements of different numbers.

In the sequel, I shall give further evidence as to the excessiveness of families above ten. This is based, not on danger to mothers only, but on the nature of the production; that is, the occurrence of twins, of weakly children, and of idiots.

TABLE VIII.—Showing a Comparative Percentage of Deaths in Successive Labors.

Number of pregnancy.	Number of mothers.	Number of deaths.	Percentage.	Or 1 in
1	3722	254	6.82	15
2	2893	60	2.07	48
3	2534	64	2.52	39
4	1982	39	1.97	51
5	1543	31	2.01	49
6	1221	28	2.29	43
7	848	10	1.88	53
8	641	15	2.34	42
9	425	13	3.06	32
10	222	9	4.05	24
11	152	5	3.28	30
12	61	1	1.64	61
13	34	4	11.77	8
14	11	—	—	—
15	6	1	16.66	6

—*Brit. Med. Jour.*

ON PREVENTION OF LACERATION OF THE FEMALE PERINÆUM.

Mr. Alexander Duke, M.K.Q.C.P.I., Obstetric Physician to Dr. Steevens' Hospital, Dublin, remarks: "The best preventive treatment of laceration that I have found (and which I dare not claim as original, though I find no notice of it in the text-books on midwifery) is this: When I find the head fairly engaged in the pelvis, and advancing with each pain, I take my seat by the patient's bedside, and, having lubricated my left thumb, or the two first fingers of my right hand, I introduce either into the vagina, and, at the onset of a pain, draw back the perinæum firmly, but gently, towards the coccyx, relaxing the tension gradually as the lessens till the next ensues, and so on till I can draw back the perinæum with very slight effort. I thus tire out the muscular structure, and produce sufficient relaxation for the head to pass.

"In most cases so treated there is no danger of the perinæum, but when the pubic arch is narrow, (which can be easily determined,) I take the additional pre-

caution of raising the patient's left hip, and, supporting it on a hard pillow, while the shoulders are kept low, fomenting the parts, using inunction of lard or vaselin, and taking particular care to direct the head forward by pressure, with my left hand below the coccyx, or a finger in the rectum, leaving the perinæum untouched. It has always seemed anomalous to me that the perinæum should be expected to dilate on such short notice, namely, 'the process of extension,' while dilatation of the os and cervix occupy such a considerable time, even with the additional help of nature's hydrostatic dilator, viz., the bag of waters.

"The drawing back of the perinæum produces no additional pain to the patient, as it is done during an uterine contraction, and I feel sure that if nurses and students were educated as to the proper way of preparing the perinæum previous to its distension with the presenting part, we should see and hear less of lacerated perinæum."—*British Medical Journal.*

PRACTICAL PATHOLOGICAL WORK.

Mr. H. A. Reeves, F.R.C.S., Assistant Surgeon to the London Hospital, draws attention to the treble and double staining of tissues and tumors for microscopical purposes. He mentions several new coloring agents: "The new dyes are Phloxim and Erythrosim. I do not yet know their exact composition, but feel almost sure they are obtained from resorcin, as in many physical and chemical respects they resemble rosin. They stain rapidly and deeply, in weak aqueous solutions, and stand spirit well. Connective substances and the protoplasm of cells is, in rapid staining, preferred by them to nuclei, which, however, stand out on the stained groundwork very clearly. Phloxim is the more beautiful and pleasant color to work with. Both are soluble in water or spirit, and weak solutions stain quickly. If sections be placed in weak solutions for several hours, the nuclei often take on the stain. Phloxim and Erythrosim, as supplied to me, are darkish red powders by reflected light, the former having a faint purplish-crimson color, and the color of the solutions in a test tube, *i. e.*, in transmitted light, will vary according to the strength. Any of the dyes herein mentioned may be obtained direct from the agent of the Badesche Anilin Fabrik, 22, Bush Lane, E. C., or from Messrs. Wright, Layman & Umney, or in small quantities from Mr. Cooper, chemist, Oxford Street, W. Messrs. Brooks, Simpson & Spiller, Broad Street, E. C., also keep several of them. Murexide has—so far as I have been able to find—not yet been used in microscopy. It is given up by the dyes in favor of rosanilin, and is consequently not in demand, and therefore not easily procured. It is a brownish-red powder, and very slightly soluble in cold water, not soluble in spirit, but readily soluble in boiling water. On cooling and filtering, the sections are immersed for five or ten minutes, when it will be found to furnish a good ground stain for double dyeing. With acetate of zinc, murexide gives a yellow stain. Maroon, phosphine, cerise and mauve are all useful and unused colors; phosphine yielding a good ground stain of a rich golden yellow, and may be used with advantage in double staining. The rest resemble most of the other anilines in picking out the nuclei, but they also stain the other structures. Dilute aqueous or alcoholic solutions stain rapidly, and may be fixed. Induline is also a new aniline color, and may be used as above. It is a dark powder, and gives an agreeable, pale-bluish purple stain; and, if used after carmine or picrocarmine, the cell body

and intercellular substance will be preferred by the induline, and the nuclei connective fibres by the others. It dissolves in warm water or dilute alcohol." For treble staining, Mr. Reeves has had the best results when using methylanilin, violet and iodine, and malachite or methyl green combined. For double staining, he employs roseine and green.—*British Medical Journal*.

CASCARA SAGRADA IN CONSTIPATION.

J. Fletcher Horne, F.R.C.S., writes: "*Cascara Sagrada*, *Rhamnus purshiana*, is a small tree indigenous to the Pacific coast of North America. The fluid extract I have used is that prepared by Parke, Davis & Co., Detroit, and procurable of their agents, Messrs. Burgoyne, Burbridges & Co., London. Its use, in my hands, seems to be indicated in almost all cases of constipation, particularly in cases of torpidity of the liver, with scanty dry stools and indigestion. It seems to act as a stimulant to the muscular fibres of the intestines, through its action upon the sympathetic nerve, this increasing the vermicular movements of the intestines, thus resembling *nux vomica*. I have used it in several cases of obstinate constipation with very satisfactory results. I generally give twenty drops three times a day in sweetened water for ten days or a fortnight; and then, gradually reducing this dose, the patient is able to establish a habit of regularity. Given in doses of a teaspoonful, it acts as a gentle purgative, without producing any griping tenesmus or nausea; but its action is slow, and, in this sized dose, seems to lose its good property of curing the constipation. With children, with smaller doses, I have had equally good results."—*British Medical Journal*.

CORRESPONDENCE.

REMEDY FOR DYSPEPSIA.

DUNKIRK, N. Y. March 17, 1883.

Editor MEDICAL GAZETTE:

Your article on a "Remedy for Dyspepsia" in your issue of March 10, 1883, struck a responsive chord in my breast. There are doubtless many in this country who, like Mr. Carlyle, suffer from dyspepsia and other ills which impair their usefulness mentally and morally, as well as physically, who could improve their health by horseback exercise, were it not that "the maintenance of a horse far transcends their means."

To such persons let me recommend an efficient and comparatively inexpensive substitute, viz., the bicycle or tricycle. It is a fair inference that Mr. Carlyle could have afforded to buy a horse, but could not afford the expense of keeping one.

A good bicycle or tricycle can be purchased for about the same price as a reasonably good horse, and with this first investment the expense practically ends, while the exercise is not only as good, but better than horseback riding.

I speak advisedly from a four years' experience of the bicycle. My health has improved, a persistent insomnia from which I had long suffered has disappeared, and the expense for "keep" and repairs has not exceeded two dollars a year.

I am satisfied that the bicycle is a practicable road vehicle, especially convenient for physicians' use, that

the exercise of riding it is thoroughly beneficial, and that it is a good thing to recommend to patients who need gentle, pleasant out-of-door exercise. The same is true of the tricycle, which has some advantages over its two-wheeled relative, in that it is easier to learn to ride, has better luggage carrying capacity, and can be used by ladies.

I believe that the foolish prejudice against these vehicles is disappearing, and I hope my professional brethren may be led to use and recommend them as generally as is done in England, where the tricycle has among its special advocates no less an authority than Dr. B. W. Richardson.

Yours truly,

GEO. E. BLACKHAM.

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SPECIAL NOTICE.—The date on the cover of last week's GAZETTE was incorrect, being March 31st instead of April 7th. Subscribers will please make the necessary correction at once, in order to avoid confusion in the future. The date was correctly printed on the first page of the text.

ANEURISM OF THE ARCH OF THE AORTA.

A CLINICAL LECTURE DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS.

BY

PROF. FRANCIS DELAFIELD, M. D.

CASE I.

GENTLEMEN:—This patient is a colored man 40 years of age and the history which he gives is not a very marked one. He says he has had an uncomfortable feeling in the chest for the past two years, but only within the last two months has it been very decided. He is now troubled with a sensation of weight and oppression across the chest and extending backward to the shoulders, and this is worse at night and prevents his sleeping well, and for the past two weeks he has had to lie on the left side altogether. On walking fast he experiences a little additional pain in the left side. These symptoms, with a little nausea on getting up in the morning, are all that trouble him, and otherwise he considers himself well.

Such a history would lead you to look for one of three things: 1st. Some trouble connected with the heart of the nature of a real organic disease; or, 2d. Some functional disorder of the heart. For you can have such symptoms as these from a simple functional disturbance without any actual organic change in the heart, or such a lesion may be present. In the 3d. place you might look for an aneurism of the arch of the aorta, for this lesion will sometimes at first give you such symptoms as we have here. So I will now examine first into the condition of his heart, and then of the aorta.

When you look at this man's chest you can see distinctly the pulsation of the heart both over the apex and in the epigastric region. The apex is situated a little farther to the left and a little lower down than it should be. But besides the pulsation in the epigastrium and at the apex there is also one up here, at the

left edge of the sternum between the cartilages of the third and fourth ribs, and it is synchronous with the heart beat. That is a point at which we ought not to get the beating of the heart. The heart's action is regular and it is beating a little faster than it ought to, but not much. The percussion note over the region of the heart is not very different from what it should be. There is a little difference in the appearance of the veins on the two sides in the upper portion of the thorax. On the right side you can hardly see the superficial cutaneous veins, but on the left side you observe that they are a little enlarged. The veins in the arms are of about the same size on the two sides, but they are perhaps a little larger and fuller on the left. On listening over the heart I find that there is a double murmur, loud enough to be heard all over the præcordial region, and the murmur synchronous with the second sound of the heart is louder than the one with the first sound, but both are loudest at the point in the third costal interspace close to the left side of the sternum where I found the cardiac pulsation most marked. Both the radial pulses are full enough, but the left is a little weaker than the right, and it is on the whole a very fair pulse. Both the carotids can be felt without any difficulty. The percussion note and the breathing sounds are good enough behind.

This man's history then was such as to lead us to examine his heart, and we have found that its beating is perfectly regular and its force is good, and there is the proper relation maintained between the contraction of the ventricles and the radial pulse, and there is no palpitation or other functional disturbance of the heart. We have also found that the heart is somewhat increased in size, and this increase affects probably the left ventricle and is of the nature of a moderate hypertrophy. On listening over the heart we have found that there are two murmurs heard with the first and second sound respectively, but the point of maximum intensity of the two murmurs does not correspond either to the apex or to the base, but with the third intercostal space at the left of the sternum, and at this same place there is a distinct pulsation perceptible, synchronous with the action of the heart and which does not properly belong there. Examination of the lungs is negative. The veins on the left side of the thorax are a little fuller, and the left radial artery is not quite as strong as the right, but the pulsation in the carotids is natural.

These are all the objective signs we can get from the man's history and the physical examination.

Now what is the matter with him? An aneurism at the sinus of Valsalva is suggested, and probably at the one on the left side. Yes, that would be possible, and being there the aneurism must be of such a character as to press forwards and to the left. But would you be warranted in making the positive diagnosis of an aneurism in this position from the symptoms and physical signs which we get here?

Remember that to make a positive diagnosis of aneurism of the aorta is a very serious matter, and it is of great consequence to the patient whether he has that lesion or simply a valvular disease of the heart. If we suppose an aneurism of the left sinus of Valsalva the swelling would have to get behind the pulmonary artery and be pressed over to the left side of the chest where we would get the pulsation, and so if he has an aneurism of the aorta at all that is the most probable place for it to be developed from, judging from the position at which we get the pulsation here. But you could not be sure that this man has an aneurism, and

you had better not tell him that he has until you get more evidence. I should be altogether unwilling to make a positive diagnosis at present. It would be possible here with these signs to have an aneurism of the aorta, and it would also be possible for him to have only a disease of the aortic valves, for in some valvular lesions we do not get the points of maximum intensity of the murmurs just where they ought to be. So he possibly has only insufficient and rigid and roughened aortic valves which give these two murmurs.

I think, therefore, that the diagnosis lies between these two conditions, and either one or the other will make itself evident in the course of time. If it is an aneurism of the aorta it will doubtless go on increasing and so make itself evident within one month from now in spite of all we can do, but if on the other hand it is simply an aortic valvular lesion it will probably be no worse at the end of a month, and very likely under proper treatment he will improve in every way. So to settle the diagnosis we have only to patiently wait for further developments.

CASE II.—This man is 47 years old and a carriage-maker by trade. He says that he has had a cough off and on, at intervals for the past twenty years. He catches a cold easily and then the cough is worse, and he raises a stringy whitish phlegm on coughing. The cough is accompanied by a pain which he locates in the centre of the upper portion of his chest, and lately this pain has been growing worse. For the past six months he has been losing flesh, but his strength remains good, and he feels pretty well. He sleeps well at night, but for the past year he has usually been waked up at about five o'clock in the morning with a spasm of coughing accompanied by severe pain in the upper portion of the back and thorax. After the paroxysm of coughing is over and he has expectorated freely he feels great relief. His appetite is still very good.

As we strip this man's chest and look at him, you see he is somewhat emaciated, but not much. The contours of his thorax are natural enough, but we are struck by the appearance of this large cutaneous vein on the upper portion of the right side, while the corresponding one on the left side is not well marked. The veins in both forearms seem to be unnaturally full. There is also some fullness of one of the large veins on the right side of the neck as compared with the same one on the left side, and when I press on this superficial vein on the right side you see how rapidly it fills up and how prominent it becomes, while this is not so marked on the other side. The pulsation of the heart is not at all distinct. There is a little visible epigastric pulsation, but the apex beat is not to be seen, and I cannot feel any apex beat either. But I can feel a diffused impulse of the heart. The heart's action is not as forcible as you would expect to find it in a man as accustomed to muscular exertion as he is, but it beats regular enough. There is no murmur and no peculiarity in the sounds of the heart, except that the first is not as loud as it ought to be as compared with the second sound. When I percuss his chest you see at once that there is a difference in the percussion note on the two sides under the clavicles. On the left side there is good pulmonary resonance, but on the right the sound is duller over the whole of the upper portion of the chest. There is a little area of localized dullness corresponding to the second intercostal space at the right border of the sternum, and a little below this is a point of tenderness where the man complains of pain as I percuss over it. There is also a difference in the breathing sounds on the two sides. On the right side of the chest there is that sort of tu-

bular breathing which approaches that sound heard in the trachea or larger bronchi with the stethoscope, and it resembles bronchial breathing to some extent. It is usually called tubular breathing, and is due as a rule to pressure of some kind either on the trachea or a bronchus of large size, and if it is heard only on one side it looks toward the probability of pressure upon the bronchus going to the lung on that side. Behind, the only change here is, that the breathing is not quite as loud on the right side as on the left, and I do not get that tubular character at all.

We have here, then, a man 47 years old, and a carriage-maker by occupation, who tells us that for the past twenty years he has been subject to attacks of coughing and expectoration, with pain over the upper part of the sternum. But these attacks have not troubled him much until lately, when they began to make him feel so sick that he has come to us for relief. In addition to the cough, he has found that for the last six months he has been gradually losing flesh, but his strength still remains quite good. Besides this, he has lately found that at about five o'clock in the morning he gets a pain in the back and shoulders, so severe as to compel him to get out of bed; and then he has a prolonged fit of coughing and a profuse mucous expectoration, after which he feels relief. Otherwise, he feels quite well, and is able to keep at his work.

When we examine his chest, we find that his heart is apparently normal, but it does not contract quite as forcibly as it should. The left lung seems to be entirely normal, but on the right side of the chest there is a little dullness at the right edge of the sternum, at the point where it joins with the second and third costal cartilages, and on listening to the breathing, I find that it has at this point a little of a tubular character, but it is not as loud over the right side behind. There is no difference in the voice sounds on the two sides. Again, we notice that the veins in the upper part of the right side of the thorax contain more blood than those on the left side. The man is a little hoarse at present, and this is ascribed by him to a cold which he has.

The question, then, with this man is whether this is simply a case of a slight attack of bronchitis or trachitis, from which he will easily recover in a short time, for this is the common history of a catarrhal inflammation of the trachea, or whether he has been developing lately a far more formidable disease. There is no question in my mind but that ten years ago he had nothing but an ordinary bronchitis, but it is a question whether, for the last year or six months, he has not been developing something else. I am afraid that he has, and that he is now beginning to suffer from an aneurism of the arch of the aorta. You may say that he gives very few symptoms on which to found such a statement, and this is true. Yet, in my own mind, the chances are at least eight out of ten that he has an aneurism of the arch of the aorta. You will often find, as here, that you will have to make out your diagnosis with the aid of very few physical signs. I think there is here probably a small aneurism either of the ascending or transverse portion of the arch of the aorta, and most likely at the point where the ascending joins with the transverse portion, and the symptoms show that it is beginning to press both on the descending vena cava and on the right bronchus. It is not exerting much pressure as yet, but if it is an aneurism at this point, it will only take a few months for it to develop further symptoms. So we will try to keep him coming here from time to time, in order that we may watch its development and establish our diagnosis.

The only thing in the way of treatment for him at present is to put him on the ordinary treatment we use here for aneurisms of the arch of the aorta, and that is, five grain doses of the iodide of potassium three times a day.

A CLINICAL LECTURE DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS,

BY

PROFESSOR. T. M. MARKOE, M. D.

AN ANEURISM IN THE NECK.

GENTLEMEN :—I have here a case in which the points of interest are few and simple. The patient is a man of middle age and in good health, and there are no antecedents to his present trouble. For the past three or four years he has had trouble with a swelling at the root of the neck. This swelling pulsates and forms a small sized tumor just above the sternum and toward the right side of the neck, and it is clearly and perceptibly expansive at every pulsation, and, in my judgment, it is certainly an aneurism. But the question is, where is the seat and origin of the aneurism? It seems to lie just behind the sterno-clavicular attachment of the sterno-mastoid muscle on the right side, and as I place my fingers on opposite sides, it separates them by a forcible expansion. But here is a very curious feature, the expansion of the tumor is perceptible on all sides, and when I try to appreciate it with my fingers it at first seems quite forcible, but as I make pressure the whole tumor soon disappears and I can only feel the pulsation above and below my fingers. What that means I do not yet know. Both the tumor's walls can be so compressed that I can feel no pulsation between my fingers, yet the moment I take them away it swells out again and the expansive pulsation returns. As I press upon the tumor with my finger, the sac seems to be pushed away and obliterated, but when instead I hold my fingers lightly on each side, it grows larger and the pulsation returns. I can feel the pulsation at the right of the carotid artery, and perhaps it is from the top of the innominate.

It would seem, as far as I can tell, that this is the condition of things. While I make pressure which obliterates the pulsation in the sac, I do not at the same time obliterate the pulsation in the carotid or in the subclavian artery. These two phenomena must be studied side by side. The explanation seems to be that somewhere about the root of the carotid artery or the distal extremity of the innominate we may suppose an opening to exist which connects with a flask-like body reaching up into the neck, and as I press upon the swelling either my finger reaches the neck of this flask and prevents the blood from entering it, or it obliterates it by pushing the whole sac below the upper extremity of the sternum or behind the clavicle.

Now, what can be done for this man? I should hesitate to recommend an operation. He has already been under treatment, and the sac was at one time kept constantly compressed by a smooth cork placed at the supra-sternal notch and held there by a piece of adhesive plaster, and at the same time he took the iodide of potassium internally. He thinks that six months of such treatment restrained the growth at least, if it did not actually diminish its size. But for the past six months he has left off the cork and the disease is now again progressive. We cannot do anything here in the way of curative treatment. But if I was sure that this was a succulated aneurism com-

municating with one of the larger arteries, I think I should try the galvano-cautery needles for the purpose of obliterating the sac by inducing coagulation of the blood, as I have seen this does good in some cases. As it is, I should advise him to wear the same appliance as before, and follow up the same course of treatment.

VESICAL IRRITABILITY.

Patient is a young man, and says that six months before his present trouble began he had an abscess on the scrotum, between the testicles, at the root of the penis, and it was three or four months in healing. A year ago he began to pass a little blood from the bladder almost every time he urinated, sometimes in clots and sometimes in fluid form, and it did not settle down in the bottom of the vessel as blood usually does, but floated about. There was no pus or mucus mixed with it. Until two weeks ago he had to pass his water about every two hours, but nothing else troubled him. Lately, however, he has complained of pain at the end of the penis after urinating. He has not noticed that these symptoms were made worse by exercise. The stream never stops suddenly while passing water. He passes it more frequently during the day than at night.

This story is a very instructive one in the fact that the patient has passed blood from the penis almost every day for a year. That is the prominent symptom for which he has applied for relief. He says that he also has a pain in the end of the penis, and he passes his water too frequently, and that rest makes him better. In short, we have here the symptoms of vesical irritation not well marked except in one symptom, and that is, the constant passing of blood with the urine. Under these circumstances, and with the absence of knowledge of any inflammatory process going on in the bladder, we are thrown back upon the probability of the symptoms being due to some mechanical irritation, such as a stone in the bladder. That might be sufficient to abrade the surface of the bladder and so produce a hæmorrhage. We can not elucidate that point unless we pass a sound to see whether or not there is anything there. He has been under treatment by astringents, but they have not been beneficial.

On examining his genitals I see that the abscess of which he has told us was situated at the septum scroti, but it is well healed up and has left no traces of there having been any disorganization of the deep structures, and it has left only a slight scar.

As now I try to introduce the sound, it passes easily into the bladder, and when I feel about with it I find no evidences of any stone, and the bladder is pretty tolerant and permits free movement of the instrument in it. I do not pretend to say that this single exploration is exhaustive, but to settle the matter I should want to pass at some other time a Thompson's catheter, for the shape of that instrument is such that it might detect a stone that could not be reached by the one I have used. Yet I feel pretty certain there is no stone here. We are reduced therefore to an explanation not mechanical but vital. The evidence of the trouble here being vesicular in origin is not very clear. But the slight clots passed on making water may mean that there has been a coagulation of blood within the urethra. Such clots sometimes take place as a result of hæmorrhages in the bladder itself, but as a rule they mean a urethral hæmorrhage and that may be the explanation of them here. That is, there may be a prostatic leakage or a prostatic hæmorrhage with irritation at the neck of the bladder, and this makes him

nervous. Some change here has taken place in the mucous membrane at the prostatic portion of the bladder which makes it congested and this gives rise to a slight hæmorrhage on urination.

Acting on this idea my advice would be, after regulating the sexual life of the patient and the amount of exercise he should take and his habits of diet, to try the remedy which I have most reliance on for such cases, and that is, to do the very thing you have seen me do this morning, and to pass through the neck of the bladder a large steel bougie twice a week, leaving it in each time for about five minutes. I believe this is the best treatment he could have. Vaseline and oil are the only things I would apply locally. Iron tonics, such as the muriated tincture of iron with strychnine, is all that I would add in the way of general medication. The sound I passed was a No 9, but I would pass larger ones hereafter, and try a No. 12 next, and gradually increase the size, and so see what can be done to cure him.

ADENOID TUMOR OF THE NECK.

Here is another specimen of that large and interesting class of diseases we have seen so much of lately, a tumor of the neck. He has had this tumor for two years, and it did not start from any injury, but began as a small hard lump about as large as a walnut, and an inch in diameter, and it is located just below the lobe of the right ear at the angle of the jaw, where the upper chain of the lymphatic glands of the neck is situated. It has since grown to its present features, and it is now somewhat larger. There have been no symptoms of inflammation in any part of its progress, and it has displaced the healthy tissues lying about it. About one year after its first appearance it began to show itself on the inside of the mouth in the lateral walls of the pharynx. When I open his mouth I can see the tumor on the right side of the pharynx pushing the tonsil and the superior constrictor of the pharynx and the velum pendulum palati downward, and only the upper fibers of the superior constrictor of the pharynx are pushed inward. As I press upon the swelling with my fingers in his mouth I cannot tell whether there is any fluctuation or not, but I think there is a pseudo-fluctuation which is sometimes very deceptive. That there is really no fluctuation has been proved by tapping the tumor with three different sized needles, and no fluid was found. It is therefore a pseudo-fluctuation that I get, that is, the sort of fluctuation you get in a semi-solid mass like an œdematous scrotum, where the swelling is semi-tense in contradistinction from the condition in a hydrocele. Sometimes it is very difficult to determine the difference between a fluctuation and a pseudo-fluctuation in a tumor, and there is no rule to go by but experience. The man is well in all other respects, and this growth has not interfered with him in any way.

The question of course arises as to the nature of this tumor, as to the probability of its being malignant of non-malignant. This tumor has been growing for two years without invading distant parts. Benign tumors do not travel about, but this is one of the characteristics of malignant growths. Yet I am not prepared to say that this is or is not a malignant growth.

Extirpation of a tumor in this locality is an operation which in most cases I would hesitate to do, on account, of proximity to important structures. I am hardly prepared to say what I would do here, but I should not court the operation, and I should not recommend any until some symptoms presented themselves making the operation an alternative. I am not

sure yet that this tumor is malignant, and I hope it is not, and I should rather let it alone at present, and if circumstances develop making interference important, then the question of extirpation will have to be considered. Meanwhile, all that can be done is to build up the patient's general health as much as possible.

A COLD ABSCESS OF THE THIGH.

Here is another tumor but not on the neck. It is on the right thigh, just below the buttock, and it is oval in shape and nearly as large as a fist. He noticed it first last year. The tumor is movable and lobulated like an ordinary fatty tumor, but that it is not of this character has been proved by the fact that a needle has been inserted and fluid drawn off. It is, therefore, a cystic tumor of some kind. The first think in estimating the importance of a cystic tumor, in this neighborhood especially, is to find out if it is connected with any other diseased process. So I want to know whether this is a cold abscess or not. The fluid drawn off to-day looks like and corresponds in every way to the thin pus you would be likely to find in a cold abscess.

The first thought that naturally strikes you when you discover such a cyst as this, is the possibility that it may be a result of a hip-joint disease with some destructive change about the joint. But I should say, from the free motion of his limbs that there was not much likelihood of that being the case here. He says that the first thing he noticed was a pain in the hip and this has been nearly constant ever since.

Now, as he lies on his back, I find I can flex his right thigh on the trunk to about a right angle before meeting with any resistance, but if I try to flex it farther he raises the right side of the pelvis from the table to accommodate himself to the position; but there is free motion at the left hip joint, and the thigh can be flexed so that it touches the anterior abdominal walls without lifting the pelvis from the table. Nevertheless, the motions at the right hip-joint are pretty free, and I do not find evidence enough to make out a diagnosis of hip-joint disease.

It is possible that this cyst might have had its origin in a deep seated bruise or injury at this point. At any rate with as much use as he has of that joint, and the slight history he gives, I think we must consider this cyst to be a cold abscess due to something extraneous to a hip-joint disease. I would advise treating it by evacuation and dressing it antiseptically, and if necessary make a free opening and dress it so that it will heal from the bottom. But I prefer to begin by evacuation with a needle.

ORIGINAL ARTICLES.

TONSIL HÆMOSTATIC OR ESCHAROTIC.

BY

A. CLENDENIN, M.D.,

Fort Lee, N. Y.

This instrument was devised by me 1874—to fulfil a need long felt—for an estoppage of hæmorrhage after guillotining of tonsils. The guillotine used by me had been Doctor Physick's, with the modification of barb teeth or jaws for the holdment of part to be excised, and although the bleeding was not consequent upon too deep cutting, nevertheless I have had profuse and persistent bleeding, resultant in some cases of the



Fig 2.



venous obstruction with temporary congestion, and again when the patient had a hæmorrhagic diathesis. There are three remedies used: 1st, the galvanic cautery; 2d, the ligation or torsion of vessels; and 3d, digital pressure. Independent of the chance that a battery, etc., may not prove to be in satisfactory working order, there is not only trouble in its application, but horrid disgust to patient and all in the smell of scorched flesh.

In torsion or ligation of small vessels their hardness to find is trying to the patience and endurance of surgeon and patient. The result has been the most general abandonment of these expedients by many operators, at least when the bleeding is, as it usually is, from numerous and small orifices. Astringent gargles, hot or cold, may be tried, but the most general practice is the third, viz., the passage and pressure by the index finger of the surgeon, sometimes covered by a stall saturated with styptic. This, too, is tiresome to the surgeon, and is obstructive to the patient, who will involuntarily pinch the finger in his futile efforts to swallow. It will possibly be too soon removed with a recurrence of bleeding, and fear on the part of the surgeon to leave as soon as he would otherwise like to do.

Antecedent to double tonsillotomy upon the son of Charles West, of Englewood, N. J., October, 1874, I had this instrument made by Cyrus Prash. In this case bleeding occurring only from the left tonsil, its application was not needed. Therefore, whilst the one bowl, enclosing in its concavity (with inverted edges) a piece of silk sponge saturated with Liq. sub. sulp. ferri, was applied over left tonsil, the other bowl came in application to the outside, beyond the line of the carotid and jugular. The instrument was removed in 90 seconds and the bleeding found to have ceased; but during its retention in position the patient could close the lips, had some use of the tongue, and could swallow; the rise and fall causing no displacement of the bowl, and there being comparatively no discomfort to patient.

In fig. 1 the ovoid bowls are face to face, but separable, as in the application just spoken of, and, as seen in fig. 2, they are reversible when needed for double application. Into these bowl pieces the rod at sharp angle passes with nut on the inside left loose enough, in tonsil application, to maintain its enholdment by moving with the same; no matter what the rise and fall of the spring end may be with swallowing, etc. The bowls are made of hard rubber and their connecting rods of soft tempered steel, so as to be bendable at any down angle and at any opening to regulate the pressure by springs. The connecting ends are fixable in cylinder by set screw for the varied bearing of one or both arms. The hand piece is square for good finger hold and is of hard tempered spring steel—with one turn. The end cylinders into which the bowl pieces slide, will be seen to be open at both ends,

with the object aforesaid—of enabling the shortening of one arm and the lengthening of the other if so required by points of bearing.

The surgeon may elect to remove one of the arms and to hold the spring end (which makes a good handle) whilst he applies styptic or caustic, but the advantage of having the spring end loose, is the ability to swallow and remove mucus, etc.

This instrument was at the annual meeting of the Bergen County Medical Society, April, 1882, shown to my co-members as having been used satisfactorily by me in nine cases for the estoppage of bleeding after guillotining of the tonsils, and also in one of three cases of cancer of the tongue. In two cases the tongue was removed, but in the case where this was used—John Burns, of Coytesville, N. Y.—there was no tongue removal because of the advanced stage of the disease with involvement of sub-lingual and maxillary glands, and the age and enfeeblement of patient. I found it very useful by localizing the applications of caustic potash. I have since used it in cauterization of the tonsils and of the uvula—the last case being that of Mrs. William Allison, Under-cliffe, Eaglewood—whose yearly recurrent “Quinsy” had kept her tonsils in such an hypertrophied and abnormal condition, as to require the knife or caustic. She chose the latter and I applied it by wetting the sponge to softness and then squeezing them out as dry as possible, and after they were replaced in the bowls I poured on their centers of exposed surface a little melted caustic potash. It hardened immediately and was ready for application, having taken hold of the sponge fibre, but leaving room for the passage on its sides of tonsil discharge—which the sponge absorbed—thus preventing any outflow of caustic on contiguous parts. The application made in this way enables me to consume the caustic and leave none to run from the tonsils on removal of instrument. When, after one minute, the spring was compressed, the sponges absorbed all moisture from the tonsils and the uvula showed no cauterized surface; but there was destruction of $\frac{1}{8}$ inch in depth of tonsil tissue as shown by the slough. As a precaution, Mrs. A., was at the moment of withdrawal of instrument given flax-seed tea with which to gargle. In the first attempts which I made to use the caustic potash, I applied to sponges some that had deliquesced. They were so shrunken and hardened immediately as to be useless, and ready to fall out of bowls. Experiment taught me to use it as I have stated.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK COUNTY MEDICAL SOCIETY, MARCH 26, 1883.

Dr. David Webster, the President, presided. The minutes of the preceding meeting were read and approved.

Dr. R. C. Brandeis read a paper on CATARRHAL HEADACHES AND ALLIED AFFECTIONS.

The following is a brief summary of the paper read: It is not my intention to consider all the various types of headaches, but those forms only which are due to diseases affecting the nasal cavities.

The function of the nose is threefold, it is the seat of the olfactory sense, it plays a leading part in th:

process of respiration, and the production of voice is dependent to some extent upon the nasal cavity.

Dr. Brandeis next gave in detail the anatomical construction, boundaries, and relations of the nasal cavities, and illustrated their relation to the pneumatic cavities by the exhibition of diagrams and anatomical preparations. The inflammatory process as it is manifested in acute and chronic coryza was described, and the relation existing between the occlusion of the nasal cavities and frontal sinuses by pathological secretions and frontal headache demonstrated. In conclusion Dr. Brandeis narrated the history of several cases which served to illustrate the connection between coryza and frontal pain, cases in which the removal of the accumulated secretions and the treatment of the turgescient tissues had been followed by complete relief from pain.

Owing to important business the discussion of Dr. Brandeis's paper was postponed to a subsequent meeting.

The election of three delegates to the State Medical Society was the next business in order. The following gentlemen were nominated, viz: Drs. C. S. Ward, C. A. Leale, C. R. Hitchcock, W. R. Gillette, P. Albert Morrow, Francis M. Weld, E. M. Sell, W. M. McLaury, James R. Taylor (declined.) The balloting resulted in the election of Drs. C. S. Ward, C. A. Leale, and C. R. Hitchcock.

Dr. A. D. Rockwell in presenting resolutions on the death of Dr. G. M. Beard, paid a heartfelt tribute to the many brilliant qualities of the deceased. He was followed by Drs. D. B. St. John Roosa and W. M. Carpenter, who spoke at some length of the public and private virtues of Dr. Beard, his talent for scientific research, his devotion as a student of psychological problems, and his loyalty as a friend.

The society then adjourned.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, MARCH, 28, 1883.

Dr. G. F. Shrady presided. The minutes of the preceding meeting were read and approved. Dr. Livingston presented a specimen of

CHRONIC HYDROCEPHALUS

occurring in a child 2 years old, an inmate of the nursery and child's hospital. The mother was 23 years old, had been married 3 years and was one of twins, the other one having been born dead. She was paralyzed on left side when born but recovered. The father was perfectly healthy. There was no history of syphilis. When admitted the child's head was of average size, the face symmetrical, the expression vacant, the eye balls wandering vacantly. On examination the child was found to be totally blind though the mother was unconscious of this. It had never made any attempt to walk. The results of physical examination were negative. There were no symptoms except a slight dry cough. The child died suddenly without convulsions or other symptoms and on autopsy 11½ ozs. of fluid was found in the calvarium, the brain substance was pale, the white substance being disproportionately increased, there was an increase also in the spinal fluid, the arteries were smaller and harder than normal.

Dr. Livingston presented a second specimen of

ENLARGED THYMUS GLAND.

The child had died suddenly. A very scanty history

was ascertainable. The mother said the child had frequently had "fits" but would come out of them when slapped on the back. It died in one of these convulsions. On autopsy the thymus gland was found much enlarged, the larynx, trachea, lungs, and kidneys much congested.

Dr. Gerster presented a specimen illustrating

NEW FORMATION OF BONE

after excision. The patient a boy æt. 5, had presented at the German Dispensary with empyema, having the ordinary symptoms. The left thorax was filled with purulent fluid. An incision was made June 24, 1882, the cavity drained and washed out and a drainage tube inserted. A few days afterward it was found that the incision did not secure proper drainage and June 29th excision of a portion of the 6th, and 7th, ribs was done. At the beginning of January 1883, I again saw the boy who had grown very much in the meanwhile and was in good health, the size of the chest on the side operated upon corresponded to the other side, but a fistulous opening remained at the seat of the drainage tube. The cavity which was extra thoracic was washed out with chloride of zinc but showed no tendency to heal. I probed and thought I detected dead bone and March 21st, cutting down upon this I found a curious condition of things, the excised portion having reproduced itself with the exception of a small space corresponding to location of drainage tube. After a second operation the wound cicatrized. The operation was subperiosteal.

Dr. Liautard presented specimens of

TUBERCULOUS DEPOSIT

taken from the body of a rhinoceros, 16 years old, weighing 5,000 lbs. The thoracic cavity contained 28 gallons of clear, serous fluid. There were tuberculous deposits on the aorta and valves of the heart and in nearly all the organs. The skin, of which a specimen was shown, was an inch in thickness.

Dr. Wyeth presented

FRAGMENTS OF BONE REMOVED BY TREPHINATION.

Patient æt. 32, had suffered a fracture of the skull from a blow with a machine hammer. He showed marked dilatation of right pupil; he had been an inmate of the Chambers Street Hospital, where trephination was offered him, but he refused it. The only symptom of compression was headache. I performed trephination, finding that the inner plate of the calvarium had shelled off on its lower surface. Temperature went up to 105° 24 hours after operation, but patient is now well.

Dr. Wyeth exhibited also an aorta with only one carotid artery given off. The specimen was the third on record. He also showed 116 preparations of the carotid artery, branches from the internal carotid were shown in some of them; this being rare, occurring only in 7 cases in 100. He also presented specimens of the posterior tibial artery, showing the arterial branches which nourish the internal flap in Syme's amputation, the want of recognition of which had interfered with the success of this operation.

Dr. Wyeth said he had been puzzled to account for the dilatation of the right pupil in the case in which he had done trephination. He wished to ask some of the neurologists present if pressure on the fissure of Rolando would give dilatation of the pupil on the opposite side?

Dr. Birdsall replied that various injuries of the brain

gave rise to pupillary disturbances, but that such disturbance necessarily followed an injury of the fissure of Rolando he was not prepared to say.

Dr. Peabody presented a specimen for a candidate. He also presented a microscopic section of the brain of patient dying from

CEREBRAL SYPHILIS.

The patient, an Englishman aged 55, had a chancre 3 years before admission, and following this severe sore throat, pain in head, formication and marked loss of power in left side. Tendon reflex normal; ophthalmoscopic examination negative. The symptoms disappeared under iodide of potassium. He had a second attack, which was again relieved by the iodide. At the third attack he became stupid and gradually comatose, temperature being very high, and though taking full doses of the iodide, did not improve, but died comatose the 9th day of his third attack, temperature 107°. On autopsy the organs showed the lesions of syphilis. The section under the microscope is that of the middle cerebral artery, showing syphilitic arthritis or endarthritis obliterans.

Dr. Wyeth asked if Dr. Peabody regarded the arthritis of Bright's disease as of the same nature as that of syphilis. Dr. Peabody replied in the affirmative. Dr. Wyeth had carefully studied this subject and reached the conclusion that the arthritis of Bright's was more general and was accompanied by peri-arthritis. Dr. Peabody replied that the specimen presented was distinctly syphilitic, and yet it showed not only arthritis of the intima, but arthritis of the external coat as well, so that the latter form could not be said to characterize the arthritis of Bright.

Dr. Van Santwood presented a specimen showing an

ABNORMALITY OF RIGHT HORN OF UTERUS.

On the right side the ovary was in the right iliac fossa and the fallopian tube was displaced outwards and terminated at the brim of the pelvis in a club shaped mass the cavity of the uterus was conical and had no opening corresponding to the fallopian tube on the right side, although this tube is pervious. The club-shaped mass representing the right horn of the uterus was solid.

Dr. Van Santwood presented a second specimen

A SUB-PERIOSTEAL HÆMATOMA,

taken from a foundling at Randall's Island, who died of marasmus when 22 days old. The outline of the tumor corresponded accurately with the parietal bone.

Dr. Ferguson presented a specimen of CHRONIC DIFFUSE NEPHRITIS AND DILATATION OF THE HEART.

with a written history. On autopsy the vessels of the brain were thickened, the brain anæmic, the right kidney was normal in size, the left very small and the seat of granular degeneration. The heart was markedly hypertrophied. There was a close stricture of the urethra at the bulbo-membranous junction, which had been operated upon. A perineal fistula still remained. The lumen of the left ureter was barely $\frac{1}{16}$ of an inch. The bladder was greatly distended and hypertrophied.

Dr. Heineman presented a specimen for a candidate. The patient had died of fatty liver. On autopsy, im-

bedded in the omentum, was found the rusty remains of eleven needles, which had given rise to symptoms. Four needles were discharged during life. The patient, being questioned, denied having swallowed any needles, but it was ascertained that she had swallowed sixteen in a fit of despondency. The omentum gave no evidence of recent inflammation. One needle presented at the femoral ring, another lay in the body of the rectus muscle.

Dr. Heineman also presented three specimens removed from the same patient, an old lady of 60, who had been admitted to the Mt. Sinai Hospital, March the 16th. On admission, the friends gave a history of sudden seizure with right hemiplegia and aphasia. Two days before death she suddenly presented bloody urine. On autopsy a clot was found in the optic thalamus. The kidneys were the seat of pyelonephritis. The pelvis of the left kidney was gangrenous and filled with blood. The uterus was the seat of a large osteoma. The cervix of the uterus and the ovaries were well preserved. The tumor which filled up the pelvis had given rise to no symptoms directly. It had been a sub-mural fibroid, and there was nothing remarkable about its conversion into bone, though in this case the process was very far advanced.

Dr. Carpenter presented a specimen sent by Dr. Beverly Robinson. A placenta weighing three pounds after expulsion. The specimen was discharged by a patient of Dr. Romaine, who had noted some points of unusual interest in the previous history of the patient.

She never menstruated until after the birth of her first child. She bore nine children in 12 years, and during this period only menstruated twelve times. In the last delivery the child weighed only 7 pounds while the placenta weighed 3 pounds. The Society then went into executive session.

SELECTIONS FROM JOURNALS.

THE GULSTONIAN LECTURES ON THE STERILITY OF WOMEN, BY J. MATTHEWS DUNCAN, M. D., LL. D., ETC.

LECTURE II: PART I.—ITS THEORY OR CAUSATION.

MR. PRESIDENT, VICE-PRESIDENT AND GENTLEMEN:

In studying the theory or inquiring into the causes of sterility in women, it is advantageous to keep in mind the corresponding condition in plants and in the lower animals, for in all living beings there is more or less similarity of the sexual organs and offices, and disturbance of function in one division will throw light on disturbance in another. On this subject I have made many, but only casual, observations, and have had the privilege of conversation with gardeners and breeders, classes of men in whom are found many of remarkable intelligence and acuteness of observation. But the great storehouse of facts and references on which I rely is Darwin's "Variation of Animals and Plants under Domestication." Plants, and some animals, propagate otherwise than by sexual generation, but it is only the sterility arising from disturbance of the regular course and consequences of sexual union that has a direct or nearly direct bearing on the present inquiry. The sterility of hybrids, which, considering the theory he is supporting, forms naturally the main study of Darwin, is of comparatively little interest to us, and will not be hereafter referred to, but

many of the principles of sterility find strong support in the special sterility of hybrids.

Viewing the subject generally, we may anticipate a great result by pointing out the paramount prevalence and paramount potency of constitutional conditions as causes of sterility. Such are cold and heat, overfeeding, youth and old age, degradation of general health, confinement and interbreeding.

Local conditions occur in plants that are quite sufficient to account for or cause sterility. Such are contabescence of anthers, monstrous flowers, double flowers, seedless fruit. These local conditions are the result of the general or constitutional conditions of the individuals in which they occur; and they have their place rather in the results of sterility, or of the conditions producing sterility, than in the causes of sterility.

They have their analogues in such abortions, dead foetuses, unhealthy offspring, or monstrous products of animals, as are believed to be results of what may be called the sterile diathesis. The causes of sterility are causes of these imperfections, and for that reason they are referred to the sterile tendency. They do, indeed, constitute the sterility to be accounted for. Thus, to wander into hybridism for an example, it is an observation of Gärtner, that hybridism in plants, a great cause of sterility, produces also a strong tendency in flowers to become double.

In the vegetable kingdom, every one has observed that source of sterility which may be, no doubt nearly truly, designated a degradation of general health. A plant covered with flowers is brought from a house where its fertility has been stimulated to the highest degree, and placed as an ornament in a sitting-room, where it remains till its charms are lost, and the result is such an injury to its constitutional vigor, that it is sterile, or nearly sterile, for one or for several subsequent seasons. Its fertility may never be restored, or only after several years of the medical care of a skilful gardener. The scarlet geraniums which were brought from their healthy homes in full bloom to adorn the houses of inhabitants of densely populated cities soon show the injurious influence of their new surroundings, however well they may be cared for; their flowers become less numerous, or are altogether wanting; then their leafage diminishes greatly in quantity, and their existence becomes a mere lingering. A rose-garden, lately in a suburban position near London, becomes surrounded by the growing city, and gradually, as the buildings increase, the fertility of the roses diminishes; the garden becomes useless. Some of our finest forest trees, and among them some plants, grow beautifully in our squares, producing wood in even exaggerated quantity, and a clothing of leaves sufficient for ornament; but there is no wealth of leaves, and there is no seed. In some cases, an exception makes the rule more striking, as when a cherry tree in the heart of the city of London lately produced flowers and matured its fruit, so far as maturity is indicated by beauty, size, and taste.

Practical gardeners attribute sexual injury to overstimulation by manure, or what they call over-feeding. This ordinarily produces great growth of the tissues; and, when this is restrained by judicious pruning, it forces out a large or excessive crop of flowers and subsequent fruit. In the language of Spencer, there is produced by over-feeding an excess of individuation, the restraint of which results in excess of genesis. The natural tendency of the over-feeding of plants is to produce a degree of relative sterility; and this may show itself in a paucity of flowers, or it may show itself in the production of those double, or monstrous, or

abortive flowers which are so much admired. The opposite result is produced by moderate or full feeding. Then, in mature plants, there is not great growth of tissues, but rather a production of fruit. Sometimes, the plant, without assignable cause, but especially if under-fed, has an exaggerated production, and it is said to run to seed; and, from whatever it may arise, it, in a reflex manner, injures the plant, which consequently becomes blighted, and often dies. Excessive production here seems to take the place of sterility.

The following is an interesting illustration of the effect of over-feeding and of moderately feeding or under-feeding a vine; and it is important because it specifies a particular local condition or disease which is apparently the cause of the infecundity of the over-fed plants, and so indicates a line of investigation which may with advantage be pursued in other examples of sterility. In a recent letter from Mr. Thomson, the well-known vine cultivator, he writes: "A circumstance has arisen in my own experience that I have never seen noticed in print. A vine called the Alnwick seedling, if grown vigorously in rich soil, fails to set its fruit even when aided. This failure is caused by the exudation from the female organ of a dewdrop of sap, which moistens the pollen, and it does not descend through the pistil and impregnate the ova. When the vine is grown in poor soil a dewdrop does not appear, and impregnation takes place; seeds are formed in perfection, but the pulp for which the grape is grown is almost absent. I know," he adds, "no other grape affected in the same way or subject to the same influences."

I know no good account of the sterility of plants as regulated by age, but the influence of age is well recognized. A young fruit tree bears no fruit, or very little, and that little imperfect, and the careful gardener does not permit it to bear much, or even a little, believing that fruit-bearing injures growth and diminishes future fertility. The influence of old age and decay in fruit-bearing trees is also well known; the fruit is ill-developed, and there is little of it.

"All know," says Spencer, "that a pear tree continues to increase in size for years before it begins to bear, and that, producing but few pears at first, it is long before it fruits abundantly. A young mulberry, branching out luxuriantly season after season, but covered with nothing but leaves, at length blossoms sparingly, and sets some small but imperfect berries, which it drops while they are green; and it makes these futile attempts time after time before it succeeds in ripening any seeds. But these multiaxial plants, or aggregates of individuals, some of which continue to grow while others become arrested and transformed into seed-bearers, show us the relation less definitely than certain plants that are substantially, if not literally, uniaxial. Of these, the cocoa-nut may be instanced. For some years it goes on shooting up without making any sign of becoming fertile. About the sixth year it flowers, but the flowers wither without result. In the seventh year it flowers and produces a few nuts, but these prove abortive and drop. In the eighth year it ripens a moderate number of nuts, and afterwards increases the number, until, in the tenth year, it comes into full bearing. Meanwhile, from the time of its first flowering, its growth begins to diminish, and goes on diminishing till the tenth year, when it ceases."

The evil influence of interbreeding is a subject too extensive to enter upon at any length. In plants, it is corroborated by the well-known advantage of crossing of varieties. But it needs no confirmation; for there are self-impotent plants, plants more thoroughly fertilized by nearly allied species than by pollen of their

own species; and there are the wonders of dimorphism with sterility arising from union of individuals not only of the same species, but of the same form. In the works of horticulturists is to be found ample evidence that interbreeding of plants tends to weakness, malformation and sterility.

The influence of heat and cold is, in plants, well illustrated by the failure of most Alpine species to produce flowers and fruit in lowland gardens, and by the same failure of lowland plants as they ascend the sides of mountains. A walk in the highlands will show the pines thriving on the hill-sides and well covered with cones; but, as greater altitudes are reached, the trees are observed to become stunted, and the fruit entirely to fail.

The abortion-like sterility of plants is illustrated by the bearing of double flowers, of flowers whose seeds do not ripen, or whose seeds, though apparently perfect, are incapable of germination and growth. In some of the cases of seedless fruit, and of fruit with few seeds, or with one seed, or with imperfect seed, we have also abortion, and at the same time a fine illustration of the working, locally, of the opposition between individuation and genesis. The whole plant, as the vine or the pear-tree, may have the appearance of health, and its fruit alone is unnatural. The tissues of the fruit-capsule are enormously developed, while the seeds have disappeared, or are reduced to one or a small number. The luscious pear or the juicy grape are masses of hypertrophy or myxomatous-like degeneration, while the seeds are the subject of extreme hypoplasia. Gardeners generally ascribe these results to over-feeding and over-stimulation by manures and heat; but Darwin is more cautious, and in most cases does not analyze the causes farther than is implied in "unnatural conditions of life." No one, according to Lindley and Darwin, has produced double flowers by promoting the perfect health of the plant.

Before leaving vegetable physiology, I would point out the frequent occurrence in plants of seeds which, though apparently perfect, will not germinate; they cannot be distinguished by their neighbors otherwise than by their incapacity for growing. The same failure to grow is often observed, under closely similar circumstances, in the eggs of fowls and other birds; they cannot be hatched, although no imperfection is discoverable in them. That there are such ova in other animals and in woman is highly probable, but in them the completeness of the demonstration is unattainable.

Very little is known of the sterility of animals, and it is easily understood that reliable observations can only, with great difficulty, be made on them, especially in a state of nature. Many authors, and latterly Darwin and his collaborators, have paid much attention to the great subject of the sterility of hybrid animals. Observations and experiments in this department are made chiefly on domestic animals, or on wild animals in confinement, and each experiment has a high value. But the sterility of ordinary domestic animals has been little studied. In herds of fine heifers and cows, and in mares, it is occasionally exhibited, but I have no data as to its frequency; and in cattle, at least, observations are imperfect, the animal that, by sterility of one season, disappoints its owner, being generally at once fattened for the butcher.

It is a well-known belief among breeders, which may be historically traced to ancient times, that when the female of any kind is made to breed when very young, she does so at the expense of permanently preventing her own growth to perfection, and she will be likely to produce offspring that is not of the best

quality. This failure is well illustrated in the case of the common fowl and of the turkey, the progeny of chickens and of turkeys one year old not being the best of their kind, and specially difficult to rear. Fanciers breed these animals from a female two years and a male three years old. The occurrence of sterility in early and in elderly life is clearly seen, and its degree easily made out in pluriparous mammals, as the dog and pig, and in birds whose broods can be counted, and whose yearly production of eggs can also be numbered. This subject will be discussed fully when we come to consider pluriparity in woman.

Over-feeding, or the production of fatness or of obesity in the female, is well known to be hostile to fertility, to be an illustration of the opposition of individuation to genesis. By special feeding and fattening turkeys and common fowls, the henwife arrests almost completely the production of eggs. They may also be made fewer by starving the birds, and not fewer only, but also smaller. These birds, when highly fed, sometimes exhibit excessive productiveness, two eggs being laid daily, an instance of great intensity of fertility; but this is not regarded with favor, having, I am told by a turkey-fancier, an injurious influence in their case, by delay of the commencement of laying in the season following that of the excessive production. The breeder of cattle prevents, by careful management, the fattening of the females.

In respect of feeding, comparisons are made between the relative sterility of wild animals and the comparative fertility of domesticated or confined animals of the same species, but the comparisons are not quite satisfactory, from the intermixture of the influences of food, and of domestication or confinement; and again, in the comparisons of animals fed on rich and on poor pasture, sufficient care is not taken to insure that the compared animals are of the same breed. With this previous reflection, I subjoin an interesting passage from Spencer's chapter on nutrition and genesis: "Clear proof," says he, "that abundant nutriment raises the rate of multiplication (and *vice versa*) occurs among mammals. Compare the litters of the dog with the litters of the wolf and the fox. Whereas those of the one range in number from six to fourteen, the others contain respectively five or six, or occasionally seven, and four or five, or rarely six. Again, the wild cat has four or five kittens, but the tame cat has five or six kittens two or three times a year. So, too, is it with the weasel tribe. The stoat has five young ones once a year. The ferret has two litters yearly, each containing from six to nine, and this, notwithstanding that it is the larger of the two. Perhaps the most striking contrast is that between the wild and tame varieties of the pig. While the one produces, according to its age, from four to eight or ten young ones once a year, the other produces as many as seventeen in a litter; or, in other cases will bring up five litters of ten each in two years, a rate of reproduction that is unparalleled in animals of as large a size. And let us not omit to note that this excessive fertility occurs where there is the greatest inactivity—where there is plenty to eat and nothing to do. There is no less distinct evidence that, among domesticated mammals themselves, the well-fed individuals are more prolific than the ill-fed individuals. On the high and comparatively infertile Cotswolds, it is unusual for ewes to have twins, but they very commonly have twins in the adjacent rich valley of the Severn. Similarly, among the barren hills of the west of Scotland, two lambs will be born by about one ewe in twenty; whereas in England, something like

one ewe in three will bear two lambs. Nay, in rich pastures, twins are more frequent than single births; and it occasionally happens that, after a genial autumn and consequent good grazing, a flock of good ewes will next spring yield double their number of lambs—the triplets balancing the uniparæ. So direct is the relation, that I have heard a farmer assert his ability to foretell, from the high, medium or low condition of an ewe in the autumn, whether she will next spring bear two, or one, or none."

An interesting department of the sterility of animals is that which results from confinement. This seems specially to affect what are vaguely designated the noble animals. Those which are sterile show great variations; some disdain to cohabit, or have lost sexual desire; others have increase of sexual appetite, and cohabit freely or excessively, but without impregnation resulting, or with the result very rarely following. Some, if impregnated, bring forth only abortions, or young which are born dead, or, if alive, feeble and ill-formed. There is, for instance, as Shorthouse has pointed out, a common occurrence of cleft palate in the lions' cubs born in the Zoological Gardens.

Among birds in confinement, there are many good examples of change of sexual habits and of sterility. In some cases they have no eggs, or, if they produce, they have only comparatively few, or they may neglect the eggs when produced, or the eggs duly cared for may be incapable of being hatched. This abortional sterility arising from imperfection of eggs as a result of confinement is well proved by experiments made in France on the common fowl. When these birds were allowed considerable freedom, 20 per cent. of the eggs failed to be hatched; when less freedom was allowed, 40 per cent. failed; when closely confined, 60 per cent. were not hatched.

The power of temperatures that are not according to an animal's nature to induce sterility is no doubt very great. Darwin mentions that Mr. Miller, a former superintendent of the Zoological Gardens, believed that the sterility of the carnivora there was increased by increase of exposure to air and cold. In winter, inadequately sheltered cows either cease to give milk, or give it in diminished quantity. "And," says Spencer, "though giving milk is not the same thing as bearing a young one, yet, as milk is part of the material from which a young one is built up, it is part of the outlay for reproductive purposes, and diminution of it is a loss of reproductive power." Failure to maintain the cow's heat may entail such reduction in the supply of milk as to cause the death of the calf. Hard living, says Darwin, retards the period at which animals conceive, for it has been found disadvantageous in the northern highlands of Scotland to allow cows to bear calves before they are four years old. Roulin found that, in the hot valleys of the equatorial Cordilleras, sheep were not fully fecund.

The common fowl will not breed in Greenland or Northern Siberia. "In this country it is fed," says Spencer, "through the cold months; but nevertheless, in midwinter, it either wholly leaves off laying, or lays very sparingly. And then we have the further evidence that, if it lays sparingly, it does so only on condition that the heat, as well as the food, is artificially maintained. Hens lay in cold weather only when they are kept warm. To which fact may be added the kindred one that, when pigeons receive artificial heat, they not only continue to hatch longer in autumn, but will recommence in spring sooner than they would otherwise do."

On the subject of the interbreeding of animals, there

is a vast body of opinion as well as of facts showing its power in producing monstrosity and its all^o sterility. "If we were," says Darwin, "to pair brothers and sisters in the case of any pure animal, which from any cause had the least tendency to sterility, the breed would assuredly be lost in a few generations." Elsewhere, he shows that "long continued close interbreeding between the nearest relations diminishes the constitutional vigor, size, and fertility of the offspring; and occasionally leads to malformations, but not necessarily to general deterioration of form or structure. This failure of fertility shows that the evil results of interbreeding are independent of the augmentation of morbid tendencies common to both parents, though this augmentation no doubt is often highly injurious. Our belief that evil follows from close interbreeding rests to a large extent on the experience of practical breeders, especially of those who have seen many animals of the kind which can be propagated quickly; but it likewise rests on several carefully recorded experiments. With some animals, close interbreeding may be carried on for a long period with impunity, by the selection of the most vigorous and healthy individuals; but, sooner or later, evil follows. The evil, however, comes on so slowly and gradually, that it easily escapes observation, but can be recognized by the almost instantaneous manner in which size, constitutional vigor, and fertility are regained when animals that have long been interbred are crossed with a distinct family."

Regarding the very remarkable subject of sterility of sexual connection with special individuals only, Darwin says: "It is by no means rare to find certain males and females which will not breed together, though both are known to be perfectly fertile with other males and females. We have no reason to suppose that this is caused by these animals having been subjected to any change in their habits of life. The cause apparently lies in an innate sexual incompatibility of the pair which are matched. Several instances have been communicated to me by Mr. W. C. Spooner (well known for his essay on Cross-breeding), by Mr. Eyton of Eyton, by Mr. Wicksted, and other breeders, and especially by Mr. Waring of Chelsfield, in relation to horses, cattle, pigs, foxhounds, other dogs, and pigeons. In these cases, females which either previously or subsequently were proved to be fertile, failed to breed with certain males, with whom it was particularly desired to match them. A change in the constitution of the female may sometimes have occurred before she was put to the second male; but in other cases the explanation is hardly tenable, for a female known not to be barren has been unsuccessfully paired seven or eight times with the same male, likewise known to be perfectly fertile. With cart-mares, which sometimes will not breed with stallions of pure blood, but subsequently have bred with cart-stallions, Mr. Spooner is inclined to attribute the failure to the lesser sexual power of the racehorse; but I have heard, from the greatest breeder of racehorses at the present day, through Mr. Waring, that it frequently occurs with the mare to be put up several times during one or two seasons to a particular stallion of acknowledged power, and yet prove barren, the mare afterwards breeding at once with some other horse. These facts are worth recording, as they show, like so many previous facts, on what slight constitutional differences the fertility of an animal often depends."

Before leaving the subject of the causes of sterility of animals, I quote a passage from Darwin regarding the results of confinement. "Sufficient evidence,"

says he, "has now been advanced to prove that animals, when first confined, are eminently liable to suffer in their reproductive systems. We feel at first naturally inclined to attribute the result to loss of health, or at least to loss of vigor; but this view can hardly be admitted, when we reflect how healthy, long-lived, and vigorous many animals are under captivity, such as parrots, and hawks when used for hawking, cheetahs when used for hunting, and elephants. The reproductive organs themselves are not diseased, and the diseases from which animals in menageries usually perish are not those which in any way affect their fertility. No domestic animal is more subject to disease than the sheep, yet it is remarkably prolific. The failure of animals to breed under confinement has been sometimes attributed exclusively to a failure in their sexual instincts. This may occasionally come into play; but there is no obvious reason why this instinct should be specially liable to be affected with perfectly tamed animals, except, indeed, indirectly, through the reproductive system itself being disturbed. Moreover, numerous cases have been given of various animals which couple freely under confinement, but never conceive, or, if they conceive and produce young, these are fewer in number than is natural to the species. In the vegetable kingdom, instinct, of course, can play no part; and we shall presently see (he says) that plants, when removed from their natural conditions, are affected in nearly the same manner as animals. Change of climate cannot be the cause of the loss of fertility; for, whilst many animals imported into Europe from extremely different climates breed freely, many others, when confined in their native land, are completely sterile. Change of food cannot be the chief cause, for ostriches, ducks, and many other animals, which must have undergone a great change in this respect, breed freely. Carnivorous birds, when confined, are extremely sterile; while most carnivorous mammals, except plantigrades, are moderately fertile. Nor can the amount of food be the cause; for a sufficient supply will certainly be given to valuable animals; and there is no reason to suppose that much more food would be given to them than to our choice domestic productions, which retain their full fertility. Lastly, we may infer, from the case of the elephant, cheetah, various hawks, and of many animals which are allowed to lead an almost free life in their native land, that want of exercise is not the sole cause. It would appear that any change in the habits of life, whatever these habits may be, if great enough, tends to affect in an inexplicable manner the powers of reproduction. The result depends more on the constitution of the species than on the nature of the change; for certain whole groups are affected more than others; but exceptions always occur, for some species in the most fertile groups refuse to breed, and some in the most sterile groups breed freely. Those animals which usually breed freely under confinement, rarely breed, as I was assured, in the Zoological Gardens, within a year or two of their first importation. When an animal which is generally sterile under confinement happens to breed, the young, apparently, do not inherit this power; for, had this been the case, various quadrupeds and birds which are valuable for exhibition would have become common. Dr. Broca even affirms that many animals in the Jardin des Plantes, after having produced young for three or four successive generations, become sterile; but this may be the result of too close interbreeding. It is a remarkable circumstance that many mammals and birds have produced hybrids under confinement quite

as readily as, or even more readily than they have procreated their own kind. Of this fact many instances have been given; and we are thus reminded of those plants which, when cultivated, refused to be fertilized by their own pollen, but can easily be fertilized by that of a distinct species. Finally, we must conclude, limited as the conclusion is, that changed conditions of life have an especial power of acting injuriously on the reproductive system. The whole case is quite peculiar; for those organs, though not diseased, are thus rendered incapable of performing their proper functions, or perform them imperfectly."—*British Medical Journal*.

INTRA-UTERINE INJECTIONS IN THE TREATMENT OF PUERPERAL SEPTICÆMIA.* By T. GAILLARD THOMAS, M. D., clinical Professor of Gynæcology in the College of Physicians and Surgeons, New York.

The following case seems to me to illustrate what should be the accepted treatment of puerperal fever, or puerperal septicæmia, at the present day. The case was that of a lady in the higher walks of life whom I was called to see about a month ago, in consultation by her physician, a man of wide experience. She was a primipara, was taken in labor at four o'clock Sunday afternoon, and at nine o'clock in the evening was delivered of a female child, without any difficulty or assistance. Her physician examined the external genitalia carefully, and found no tear whatever. The nurse was instructed to syringe out the vagina carefully the next day with carbolized water, which she did. The first forty-eight hours passed by without any bad symptoms at all, but, on visiting her on Tuesday morning, the physician found a temperature of 101° F., and in the evening it had risen to 102.5° . The next morning, the morning of the fourth day, the temperature was 103° , and the patient began to complain of a very severe pain in the right iliac fossa. There had been no chill. At five o'clock in the afternoon the temperature was 106.5° in the mouth. The patient's appearance became wild, as of one who was about to have puerperal mania; the skin was hot, and she was crying out with pain, although she had received a good deal of morphine.

Having been called to see the patient, I took the temperature in the mouth myself, and confirmed the record of her physician, that it was 106.5° . The pulse was 145. Making a vaginal examination, I found a bilateral laceration of the cervix uteri extending nearly up to the vaginal junction. Probably this extensive laceration partly accounted for the rapidity and the ease of the labor as occurring in a primipara. I urged that the uterus should be washed out with carbolized water at once, but her physician had never seen the method practiced, and was strongly prejudiced against it; he finally consented only because it was apparent that unless something decided was done the patient would soon die. Using the Chamberlain tube and the Davidson syringe, Dr. Jones, and afterward Dr. McCosh, continued to wash out the uterus with carbolized water every four hours during the night, and the next morning the temperature was found to have sunk from 106.5° to 101° ; the pulse had fallen from 145 to 120; the patient, who had been given opium quite freely during the night, declared that she was very much relieved. Indeed, the relief had been so extraordinary that they began to believe that the

danger was not real at all; and that exceptional circumstance had occurred, and that there was no septicæmia. The uterus was now washed out at longer intervals, but at once the temperature went up to 102° , 103° , 104° and 105° , and the patient again began to look maniacal. The uterus was now washed out every three hours, opium was freely administered, ten grains of quinine were administered every eight hours, ice-water was passed through a coil of rubber tubing placed over the abdomen; and as long as this treatment was kept up the temperature did not rise above 101° or 102° ; but so soon as they ceased to wash out the uterus the temperature at once rose to 104° , and at times to 105° . This fact was proved by repeated trials.

After this treatment had been continued for ten days, a physician remaining with the patient day and night, giving the injections every three hours, and thirty grains of quinine during the course of the day, it was believed to be time to stop it; but in less than twenty-four hours the temperature again rose to 105° . I mention the amount of quinine which was being taken particularly, so as to prove positively that there was nothing of a malarial character in the case at all. On the sixteenth day after delivery, the tenth day after the commencement of the high temperature, the intervals between the uterine injections were extended from three hours to four then to five, six, and seven hours, and finally they were discontinued altogether, and at the same time the administration of quinine was given up and the coiled tubing was taken off. Opium was continued in small doses for a while longer, and the patient recovered entirely.

I wish to contrast this case with another which I saw just before—that of a woman who had been recently delivered of her third child. When I was called to see the patient the temperature was 106° ; she had been taken with violent pain in one iliac fossa, and had been put five days before pretty profoundly under the influence of opium, and a blister had been applied over the whole of the abdomen. Large doses of quinine had likewise been administered. When I saw the patient the use of intra-uterine injections was begun at once, but the patient lived only twenty-four hours, and died in a state of coma.

It seems to me that the time has arrived when puerperal septicæmia should be treated upon just as simple a plan as septicæmia of any other kind is, namely, by washing with some antiseptic fluid the surface where the disease originates—some fluid which will remove the poisonous material which is being absorbed, and also, so far as possible, neutralize its poisonous qualities. In brief, I would say that puerperal septicæmia, with our present light on the subject, should be treated in the following manner; First, wash out the uterine cavity completely with some antiseptic fluid; second, quiet all pain by opium; third, get the peculiar influence of quinine upon the nervous system; and, fourth, keep the temperature, at all hazards, at or below 100° by the methods which we now possess. Three years ago, at the American Gynecological Society, which met in Baltimore, I took the ground which I take to-day regarding this subject, and only one gentleman in the entire society supported my view. Every other member who spoke referred to the dangers of introducing air into the uterine sinuses during the injection, etc. But I believe that the dangers attending the use of the injections are counterbalanced by the benefits to be derived. I do not think there is the least probability that air will be introduced if a tube of large size—as large as the finger—is used. But when a catheter is employed

there is some danger in inserting it into a sinus and introducing air and fluid together directly into the vessels.—*New York Med. Jour.*

ON PICRIC ACID AS A TEST FOR ALBUMEN AND SUGAR IN THE URINE.—By GEORGE JOHNSON, M.D., F.R.S.

For the detection of Albumen, Dr. Johnson recommends that this acid should "be used in the form of saturated aqueous solution, or in the form of powder or crystals. The aqueous solution is most suitable for home use, while the powder or crystals may conveniently be carried in a urinary pocket test-case. A saturated aqueous solution may be quickly made by adding about fifty times the bulk of boiling distilled or rain water to the powder or crystals, a portion of the acid will crystallise out on cooling, leaving a transparent yellow supernatant liquid. This solution being added to an equal volume of albuminous urine in a test-tube, immediately coagulates the albumen. The coagulated picrate of albumen is soluble in alkalies; if, therefore, the urine be highly alkaline, it must be acidulated by a vegetable or mineral acid before adding the picric acid solution. In my numerous testings for albumen with picric acid, I have not once found it necessary to acidulate the urine. The picric acid solution is itself sufficiently acid to dissolve the phosphatic sediment which results from boiling a neutral or alkaline specimen of urine. To detect a very minute quantity of albumen, the following method is the best. Into a test-tube about six inches long, the urine is poured to within two inches of the top; then, the tube being held in a slanting position, about an inch of the picric acid solution is gently poured on the surface of the urine, where, in consequence of its low specific gravity (1003), it only partly mixes with the upper layer of the urine; and, as far as the yellow color of the picric solution extends, there will be more or less turbidity from coagulated albumen, contrasting with the pellucid unstained urine below. If, then, the tube be placed in a stand, the coagulated albumen will gradually subside, and form a delicate horizontal film at the junction of the colored and the unstained stratum of urine, the yellow liquid above and the uncolored urine below being quite free from turbidity. If the urine should be turbid with urates, it must be cleared by heat before the addition of the picric acid solution.

"As a result of numerous observations, I have arrived at the conclusion that picric acid applied in this way is a more delicate, and, therefore, more trustworthy, test for albumen than nitric acid in cold urine, whether the latter be employed by the method of dropping the acid into the cold urine, or by pouring the urine on the acid previously placed in the tube. The simplest and most satisfactory mode of comparing the two tests as regards their relative delicacy, is to dilute a specimen of albuminous urine until one or the other test fails to act; and it will be found that the picric acid solution shows the presence of albumen in a specimen diluted considerably beyond the point at which the nitric acid fails to give any indication. The picric acid too often causes an immediate albuminous opalescence in specimens in which nitric acid only slowly, and after an interval of some minutes, gives a similar, but sometimes a doubtful, indication." Dr. Johnson also describes a new process by which picric acid can be employed for detecting the presence of glucose in the urine.—*British Medical Journal.*

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DYSPEPSIA.

A CLINICAL LECTURE, DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

BY

Prof. FRANCIS DELAFIELD, M.D.,

HEPATIC DYSPEPSIA.

GENTLEMEN:—This patient is a young man 24 years of age, and a compositor by occupation. He complains of not being able to sleep well at night, and on rising in the morning he usually has a pain in his temples and a burning sensation in his stomach. His trouble began five years ago when he noticed that his bowels were becoming irregular and then constipated, and they continue to be so still. His passages are generally dark colored, and sometimes there is mucus mixed with them. The next thing that began to trouble him was a headache coming on almost every day in the morning, and lasting until after supper in the evening. These attacks continue at present, and the pain is usually located in the left temple, but sometimes it starts in the back of the head and then shoots forward. The next thing he noticed was that he began to feel sick at the stomach at a time varying from half an hour to an hour after eating, and with this feeling there would be regurgitation into the mouth of sour matter, but he would never vomit. He then complained of a peculiar pain in the abdomen in the vicinity of the navel, and a sensation as if something were running around inside at this point. He also had frequent flashings of heat and cold alternating. He says he has only been a moderate drinker of spirits. Within the past three years he has lost twenty-four pounds of flesh. He has taken a variety of medicines including milk of magnesia, iron, quinine, Horsford's acid phosphates, and pills of aconitia, but none of them had done him any good, he

thinks, except the milk of magnesia, which relieved the acidity of the stomach.

On examining this man's physical condition you notice that he is considerably emaciated, and the outlines of the bones of the thorax are a little more apparent than they should be, and the abdomen seems to be a little fallen in. The liver is a little smaller than usual, but otherwise there is nothing specially abnormal about the abdominal appearance.

This man then gives you a very good example and a very good history of the various symptoms that may be produced by functional derangements of several different portions of the alimentary track in the same individual. He begins with a history of constipation five years ago, which has continued up to the present time. Then came headache, and you observe that this headache which he has described was somewhat of the character of a neuralgia, beginning in one temple and then extending across or shooting through the head from behind forward. This also has continued ever since. Then about two years ago was added a sense of nausea after eating, but this was not accompanied by vomiting. Then lately has been added certain abnormal sensations in the abdomen, and flashings of heat and cold in different parts of his body. He has also lost flesh, and you see his color is bad, and not only is his face pale but his complexion is very poor, and his skin is unnaturally thick.

We have then brought before us here in a very characteristic way symptoms belonging primarily to a functional disturbance of the liver, and latterly those belonging to a functional disturbance of the stomach. Most of his symptoms however can be referred to disorder in the liver. It seems probable that most of this derangement of the liver is due to the fact that it does not produce a sufficient amount of bile for the purposes for which the bile is needed.

To relieve these symptoms he has apparently gone through with a considerable amount of medication, and he has taken iron and quinine and Horsford's acid phosphates as tonics, and aconitia for his headaches, and now he is taking the milk of magnesia for the acidity of his stomach, and this seems to give him the most relief at present. Now, the proper thing to do here is to put him at once on the use of such drugs as will be likely to increase the production of bile by the liver. He should not use iron, quinine or other tonics at present, nor aconitia for his headache, for you cannot expect much good from these while the source of the trouble is neglected. You should direct your treatment mainly to the liver, which is the cause of the symptoms in other parts of the body, and so in the first place I would put him on the use of some such preparation as this:

R—Podophylli.....	gr. 1	10
Hydrarg. Bichlorid.....	gr. 2	10
Pulv. Ipecac.....	gr. 1	2
Ext. Colocynth. Co.....	gr. 1	2

M—Ft. Pil. No. I.

I would give him a pill composed of these ingredients in the above proportions, and let him begin by taking three such pills each day. He may then gradually lessen the number as his symptoms improve. Then as regards his food, I would put him on a diet composed principally of animal broths and meat, and cut off most of his other articles of diet. Then I would also advise him to wash himself all over every morning in cold water, and to rub himself dry with a rough towel until his skin is all in a glow. Then he should be out of doors and walk as much as possible,

going out in the evening if his business will not allow him to during the day.

INTESTINAL DYSPEPSIA.

This man is 32 years of age, and he says he has had more or less pain in the epigastrium and the right side of the abdomen for two years, but for the past three weeks it has been almost constant. Before this the pain came on principally at night. Otherwise his health is very fair, and he is able to go on with his work without any trouble. He is a painter by trade. He has all his life had some difficulty about his head in the way of dizziness and heaviness and a feeling of pain across the back of the head, but these are no more than usual at present. His appetite is quite irregular, and he does not complain of any sickness at the stomach or of vomiting. His bowels are pretty regular. After being for some time in a warm room he says that his feet, hands and arms swell up. He is as strong as ever in his hands. He complains of no other pains or disagreeable sensations.

As I look into his mouth I see there is a little discoloration around the roots of this man's teeth; but still it has not enough of the characteristic blue appearance to indicate that it is due to lead poisoning. On further examination into his physical condition you notice that the contour of his stomach is perfectly natural, but there is a rather undue amount of epigastric pulsation, and the motions transmitted from the abdominal aorta are a little more plainly seen than they should be. The liver seems to be of natural size, and there is no special change in the condition of any of the abdominal viscera, so far as I can make out by palpation and percussion. The man is fairly fat and the muscles of his abdomen and elsewhere are fully developed. The heart's action is regular enough.

So after our examination and questioning we seem to come down to a matter of pain in the abdomen, and that is all. The point of particular interest in this man is to know whether or not this pain has anything to do with lead poisoning, or whether it is simply such a pain as any one may have from some derangement of the intestinal tract. This man is a painter by trade, and so is especially liable to suffer from lead poisoning, and a colic coming on intermittently is one of the commonest symptoms of this trouble. But on the other hand, the man gives no symptoms of lead poisoning at all, for there is no characteristic blue line along the edge of his gums, and his hands do not droop from weakness of the extensor muscles, and his general health does not seem to have deteriorated, and besides the pain he describes does not have the ordinary character of a lead colic. These colicky pains usually come on in sudden attacks, and they are generally more severe than those from which he suffers. He has had a pain all the time for the past three weeks, but it is not the very intense and sharp pain that we would expect from lead poisoning. Yet there is a great variety in the character of the pains in lead poisoning, and the attacks come on in a variety of ways. On the other hand, there are plenty of persons in whom there is no suspicion of lead poisoning, who occasionally suffer from just such pains as this man has, from a simple functional derangement of the intestines.

It is of particular importance to find out whether this pain is due to lead poisoning or not, in order to decide upon the proper treatment. If it is, then the three drugs of most importance are dilute sulphuric acid, jaborandi, and the iodide of potassium. But if the pain is simply due to derangement of the intestines, these drugs will be of no particular use. Of these two con-

ditions, I think it is most probable that he is not suffering from lead poisoning, although he is a painter. I should therefore try first to treat the intestinal derangement, and if this fails then we can institute the proper treatment for lead poisoning at a later date. To correct his intestinal condition I would advise putting him on some such mixture as this :

R.

Ext. belladonnae.....gr. $\frac{1}{10}$

Ipecac.....gr. $\frac{1}{8}$

Soda bicarbonat.....gr. iij

M. Ft. in Pil. No. i.

Let him take one of these pills three times a day, and at the end of three or four weeks if he will come back here we will see what his condition is, and if necessary make a change in his treatment.

GASTRIC DYSPEPSIA.

The next patient is a man about fifty years of age, and he is a gardener by trade, but has recently been a horse car driver. He always enjoyed good health until about a year ago, when he had an attack of pneumonia, and since then he has never felt as well as he used to before. What has most troubled him is a tendency to vomit every morning on getting up, and all day after eating he experiences more or less nausea, and his food seems to sour on his stomach so that it regurgitates into his mouth at times. He also complains of a constant burning pain in the left epigastric region. He has almost no appetite and takes but very little food. He says that he is not a drinking man, but his breath belies him as regards this statement. He coughs more or less all the time and is often quite short of breath, and this has troubled him more than usually for the past week. He has never noticed any swelling of the feet.

The man's heart is beating regularly enough. His breathing is fair. The percussion resonance is good over both lungs in front, and it and the breathing are both good behind. The area of liver dullness is a little less than it should be, and the free border of the liver does not come down to the edge of the ribs, as I can crowd my hand well under them. The liver is therefore considerably diminished in size. There is no special change in the size of the spleen. The stomach is a little large, and the upper portion of the anterior abdominal wall is decidedly flat. His urine has been examined, and it is found to have a specific gravity of 1.020, and it contains no albumen. As you look at the man you notice that his color is not natural and his face and conjunctiva are pale, and he has not the florid complexion that is natural to him.

It would take a longer time than we have at our disposal to get an exact history of this man. We are troubled here not with too little history, but with too much, and he would undoubtedly give us many more symptoms if we would give him the opportunity. But from the general appearance of this man and what he has already told us about himself, and from our knowledge of what is found in similar cases, it is very easy for us to say without further examination what the condition here is. The man has then a chronic gastritis, and with this cirrhosis of the liver, and these two conditions together have now reached the point where they are beginning to interfere with his nutrition. Not as regards fat, however, for he is yet fat enough, but as regards the condition of his blood. He is fast becoming anæmic though he is not yet at all emaciated; and though I have not asked him yet, I think he is not as strong now as he was a year ago. Then, again

although the examination of his urine is negative and its specific gravity is normal, and it contains no albumen, yet the probabilities in his case are that there is already some change in this man's kidneys, and that they have begun to develop the lesions of a chronic diffuse nephritis. So we conclude that he now has lesions in these three viscera, the stomach, liver, and kidneys, and it is the perversion of the functions of these that is changing the nutrition of his blood.

The treatment of such a case cannot, of course, be altogether satisfactory, but we can do something to make him easier. I would be disposed to put him, first of all, on the use of the tincture of the chloride of iron and dilute hydrochloric acid, three or four times a day, to improve the condition of his stomach and at the same time lessen his anæmia.

R.

Acid Hydrochloric Dilut.....gtt. xx.
Tinct. Ferri. Chloridi.....gtt. xv.
Glycerinæ.....i.

M. S.—Take this amount three time a day.

There is no question but that this man has been decidedly intemperate, and I imagine he has been an habitual drunkard. Though he said he was not a drinking man, his breath had a very strong odor of alcohol.

PREGNANCY, WITH LACERATION AND HYPERTROPHY OF THE CERVIX UTERI—A NEOPLASM CAUSING STERILITY—OVARIAN DYSMENARRHŒA.

A CLINICAL LECTURE DELIVERED

BY

T. GAILLARD THOMAS, M.D.,

At the College of Physicians and Surgeons

Gentlemen :—Our first patient is Mrs. L., 22 years of age, a Prussian by birth, has been married four years, and had two children and three miscarriages, the last one eight months ago. She has been complaining for three years past of a continued pain on standing, which she refers to the lower part of her abdomen in front, and also of more or less pain in the back. She has not been unwell now for four months and nine days, but she does not think she is in the family way. She complains of nothing else except the whites.

Now, gentlemen, when this patient is examined by the finger something peculiar is discovered which I will not tell you much about just yet, because I want to wait until I have shown you what is seen by a speculum examination. As the patient lies on her side in Simon's position, when the speculum is introduced I find a large irregular growth on the cervix, looking like this which I have drawn on the black board. You see it is three or four times as large as the cervix should be, but I have not exaggerated the size of this picture, which represents a huge raspberry growth on the vaginal portion of the uterus. Now when I rub the mucus off from the surface of this growth with a moistened sponge so as to cleanse it well, then I see a bloody sweat exuding from this granular surface. Now unless I had examined her by feeling, I would from the appearance here have said that this is certainly a case of malignant disease of the cervix uteri, and you will frequently be led into the same error by such cases if

you make a practice of examining them first by the speculum and not by the finger.

I will tell you of a case to illustrate this. Fifteen years ago a doctor brought to my office one day a patient whom he told me had a malignant disease of the cervix uteri. She was a young Indian woman 25 years of age, and her physician had discovered just such a state of affairs as I have shown you here, and so he put her on the table and introduced the speculum and showed it to me, and from its appearance I agreed with him that it was a malignant disease and advised its removal. So the patient went away and prepared for the operation, and after a time came back and told me she was ready. But before sending her to the hospital I told her I would like to examine her once more, and I did so. But when I put one finger in the vagina and pressed down through the abdominal wall with the other hand I found the uterus was as large everywhere as a five months pregnant uterus. I of course did not operate, and at the seventh month she gave birth to a child. The miscarriage in her case was due to a laceration of the cervix, and the hypertrophy of the tissues during utero gestation had led to the appearance which misled both me and her physician.

About five years ago one of the most eminent gynaecologists in this city sent me the wife of his partner, and said that he wanted my opinion as to the advisability of operating on her for a malignant disease of the cervix. I examined her and found a condition similar to this we have here to-day, and did not operate. At the sixth month of gestation she was delivered of a child.

Now, two years ago this patient had a very decided laceration of the cervix uteri at the birth of her second child, and that laceration has produced three miscarriages since. Such a laceration is a great cause of miscarriages. In general, however, it is not really a miscarriage, which consists in the birth of a non-viable child, that is thus induced, but a premature labor, which consists in the birth of a child that may live. This condition of the cervix, then, generally gives rise to a premature labor at just about the time of the viability of the child. You must therefore beware, in these cases, how you hastily decide that the woman has malignant disease of the cervix, when time will show that you were deceived by a natural hypertrophy of a lacerated cervix during gestation. Two years ago I knew of two such cases of supposed malignant disease of the cervix, and the women were operated on. Both got well, but of a disease which they never had, and neither of them ought to have had her cervix cut off.

This woman says that she has borne two children, and has since had three miscarriages, and she does not suspect that she is pregnant now. But when I heard her story I examined her on her back with my finger, as I always do before I use the speculum, and I found I could mark out a large globular mass, and below this a huge rough and bleeding cervix. I then put in the speculum and removed a profuse mucus secretion and then saw what I have already described to you, and that is all. Now, the reason that this woman has not menstruated for nearly four and a half months is that she is pregnant, and I advise her, therefore, to go home and get proper treatment, so that she may avoid another miscarriage, and this is the one thing that ought to be looked after now.

You may ask what it is that has given this patient so much pain in standing for the past two or three years. It is because of the laceration of the cervix, which was torn completely through on each side to the vaginal

junction at the birth of her last child, and at that time she probably had either a precipitate labor or the forceps were used.

Those gentlemen among you who attend these clinics regularly will notice how I use the different cases here for different purposes, one for instance to show you how to make an examination, another to show you something that you will often meet with when you get into practice, and another to illustrate one or two rare or important points. In this case the points I wish to impress upon you are: 1st, that a lacerated cervix often induces repeated miscarriages; and 2d, that during pregnancy it often resembles malignant disease of the cervix so strongly that you are liable, unless very cautious, to cut off the cervix when you should not.

A NEOPLASM CAUSING STERILITY.

The next patient is Mrs. B., a native of the United States. She has been married four years and has never been pregnant, and she comes to us to find out why in the first place, and in the next place to know if we can remove the cause of her trouble. So what we are going to do now is to see if we can discover in this ruddy and healthy looking young woman anything to keep her from having a child. She says all she complains of is pain in the back, and a tendency to vomit her food about twice in the year, and beside she is very restless and unable to sleep at night, and she has a profuse leucorrhœa. She is regular in her monthly periods and does not suffer much at such times, and they are about right in every way.

We can not tell from these few negative symptoms whether there is anything wrong here about the uterus or not, and so we must make an examination and see if we can find anything to account for her trouble. As I introduce my finger I first pass it along the floor of the vagina, and there I feel nothing unusual, but above this I feel the cervix looking forwards and then as I press my finger downwards I feel the body of the uterus below. The uterus, therefore, seems to be turned over backwards so that the fundus lies in the hollow of the sacrum, and this view is confirmed by pressing down with my other hand through the anterior abdominal wall, for I find that I can not get the body of the organ between my two hands. But I can make out an irregular mass like a tumor lying posterior to the uterus and attached to its wall in the hollow of the sacrum, and with one finger in the rectum I can circumscribe it, and it does not seem to lie entirely outside of the uterine parenchyma. Now when I introduce the speculum I find the cervical canal filled with a thick gelatinous mucus, and on passing the sound I find the uterus is bent far backwards, and I also find that the ovaries are tender to the touch, as is usual, from sympathizing with the congestion in the uterus. The question now is, have we yet found the cause of her sterility? I answer, yes. You may ask, is it not strange that she does not complain of dysmenorrhœa, and that she menstruates with perfect freedom? Not at all, for there is no retroflexion of the uterus here, but the canal is straight, and hence there is not so much congestion of the uterus as you would expect, and there is less spasm at the os internum than there would be if the canal was bent at an angle. What we have here then is a neoplasm or new growth on the posterior wall of the uterus, and the present condition began in this way: At first a tumor, about the size of the head of a small pin, made its appearance, and the uterus remained in its natural position; but as it gradually grew the tumor increased

in weight, and it caused the uterus to fall over backwards, and this displacement became more and more marked, until the tumor and the fundus of the uterus rested in the hollow of the sacrum. That new growth by its presence interfered with the uterine innervation, and so gradually the whole uterus became congested, and a catarrh of its lining membrane took place, and the ovaries became the seat of a sympathetic congestion. The cause of her sterility is then, in the first place, that the cervix uteri, being directed forwards instead of downwards, is covered over by the anterior vaginal wall, which so presses upon the os that spermatozoa cannot get into it; and secondly, this new growth has caused a uterine catarrh, and this, by reason of its gelatinous nature, is enough to prevent the spermatozoa from passing through the cervical canal; but even if they could get through and get into the body of the uterus, they would die there almost immediately, because the mucus is so ichorous in its nature. This is proved by microscopical examinations of the discharge, and you know too that ichorous mucus is very irritating in any locality. It is this mucus in the intestines that causes the tenesmus in diarrhœa. If you will notice the upper lip of a child with a catarrh of the nostrils, you will find the outside layer of the skin excoriated, and a reddening or eruption on the face wherever the discharge runs over it. This shows you how irritating mucus sometimes is.

Now, this new growth is of large size, and I believe it is partly interstitial and partly submucous or subperitoneal, and it is this that has caused her sterility and the backache and all the symptoms which she comes to be relieved of to-day.

The prognosis in this case I need not tell you. If I could get at and remove that growth by laying hold of it with a vulsellum forceps, and so pull it down and cut it out, I could cure the patient. But in no other way can I do so. But I can try putting in a pessary to see if I can replace the uterus, and if I can move it forward and keep it there in place, I may succeed in curing the uterine catarrh. But the prognosis is very doubtful.

Gentlemen, nothing gives a man greater comfort in the practice of gynecology than to get at the bottom of a case and then tell the patient how little he can do. Suppose, for instance, that this patient wanted to enter my private hospital, I would not allow her to do so without first telling her or her friends that her chances of recovery from her condition of sterility were only two out of twenty, and so they must not be disappointed if my efforts should fail. Two out of twenty is too much here, and I should hardly put this woman's chances as one out of twenty, and I shall tell her so before attempting to do anything for her, in order that she may not be disappointed at last.

OVARIAN DYSMENORRHOEA.

This patient is Miss B.; she is single and has been sick for the past five years. She says that she suffers great pain all through menstruation, but not before. She is not strong, and her stomach is weak and she is pallid, and her breathing rapid, and she is rather anæmic. Has leucorrhœa all the time and headaches irregularly. She is sick for two days only at each period and at these times she has to keep in bed and take three hypodermics a day, equal to a grain of morphia in the twenty-four hours.

Gentlemen, I wish I had a whole hour to spend on this case alone, because of the interest of the subject. You probably doubt the statement she has just made, but I believe she is perfectly accurate in saying that

she takes one grain of morphine a day while she is unwell. This is a very simple case of dysmenorrhœa, and it would have been treated twenty-five years ago by guiac or aloes or something else supposed to have some influence over dysmenorrhœa.

The examination I made here shows this: The finger passes readily into the vagina, but the moment the cervix is touched she starts and then shivers as if in a chill, and I find there is hyperæsthesia everywhere about it, and this same sensitiveness extends to each side of the cervix and toward the broad ligaments. I can pass the uterine sound clear up to the fundus, and it meets with no obstruction, and the organ is not out of place. With my finger in the vagina, on pressing down with one hand through the abdomen I discover one ovary enlarged, and I think I feel something projecting out from the side of it, but I cannot tell certainly without first putting her under an anæsthetic. I find both ovaries in the same condition, and "thereby hangs a tale." This patient is not suffering from a uterine dysmenorrhœa at all, but from an ovarian dysmenorrhœa, and that is a form of dysmenorrhœa which all gynecologists are agreed is utterly incurable by any means we know of. Battey's operation was introduced first for the relief of this condition, and it consisted in removing the ovaries through a vaginal incision. Then the operation of Tait was proposed for the removal of both Fallopian tubes and both ovaries, and this is a very important but an exceedingly dangerous one.

Mr. Tait has misled us entirely as to the risks of this operation, I think. He talks of having performed it thirty-five times, and of only having one death, and he says that that one ought not to have occurred. I have performed it five times, and have lost one out of the five, and in three of them I had simply to tear the ovaries out of a bed of lymph and fibrinous adhesions which bound them down everywhere, and in one case I could not remove them at all. I say, therefore, that it is a very dangerous operation, but it is one that will never die so long as surgery lives, because these cases always go on from bad to worse, and they become confirmed opium eaters and hateful to themselves and all about them. You cannot prevent them from becoming opium eaters, and when a woman becomes an opium eater, and especially if she takes it by the skin rather than by the mouth, her condition is perfectly dreadful, and not only her friends but the patient herself desires to undergo the risks of this operation. Of my four patients all are now well and only struggling against the opium habit, but as they do not menstruate any more they are saved the great agony which they used to suffer every month.

I would not advise this operation at present in a case like this. But if she should desire to enter the Woman's Hospital I would keep her under observation for one year, and try what I could do to relieve her. I would send her away for the summer after giving her directions as to her manner of life, and then while at the hospital I would use galvanism and apply it three times a week, placing one electrode in the vagina against the ovary, and the other on the abdomen, and so pass the current directly through the ovary, and besides I would employ hot water injections, and paint the skin over the painful region with the compound tincture of iodine, and put her on the best dietary and tonic treatment possible. The two sedative drugs that are better than any others in this condition, are cannabis Indica and viburnum opulus, and I would combine these and use them together. After carrying out all these measures, if by a year from

next September she was still suffering as much as ever, and I found that no good had been done for her, then I would lay before her the advisability of an operation, warning her of the chances of failure and of all its evils, and then I would let her choose for herself what she would do. I would prescribe nothing for her to-day unless it were a placebo to satisfy her, for I do not think this is a case that can be cured by drugs. She has already proved their inefficiency, for she says she has consulted three other doctors here in New York, and two more in the city from which she came, and she never got any relief from anything except morphia. I am sorry that I have to present to you so many cases that can not be benefited by treatment, but by seeing such you learn the limits of medicine.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, APRIL 5, 1883.

The President, Dr. Fordyce Barker presided. After the transaction of routine business the election as resident fellows of Drs. C. B. Kelsey, C. D. Scudder, Wm. B. Anderton, and S. M. Smith was announced.

A memoir of Wm. H. Van Buren, M. D., L.L.D., was read by Dr. E. L. Keys, and resolutions expressive of the grief of the Academy over the loss sustained, esteem for the departed fellow and sympathy for the surviving family were presented by Dr. Austin Flint and seconded by Dr. Alfred C. Post.

Dr. Keys after a short sketch of the life history of Dr. Van Buren, eulogized his qualities as a friend, a teacher, a surgeon, a physician and a gentleman, enumerating his social, professional, and literary achievements, paying a glowing tribute to the memory of the deceased.

The scientific paper for the evening entitled

"A CLINICAL STUDY OF CAFFEINE AND CONVALLARIA MAIALIS AS CARDIAC TONICS,"

was read by its author, Dr. Beverly Robinson, and discussed by Drs. Fordyce Barker, F. P. Kinnicut and A. A. Smith.

The following is a brief summary of the paper and the discussion elicited.

Until very recently digitalis had been regarded as the only reliable cardiac tonic, but within the past year three new therapeutic agents had been used with varying degrees of success, caffeine, convallaria, and nitro-glycerine. It had been the purpose of Dr. Robinson to detail the nature, action, and uses of these three, to cite a few personal cases, and offer a few comments as deductions from his study of their effects as heart tonics. He would confine the discussion this evening, however, to two of the agents named, viz: caffeine and convallaria.

Caffeine or citrate of caffeine was no new remedy. There was in reality no permanent chemical combination such as citrate of caffeine was sold, as this was either caffeine or a temporary combination of it.

For a long time the diuretic action of this agent has been recognized, but only recently was its power as a heart tonic appreciated. It is a useful and valuable addition to cardiac therapeutic agents.

Under its influence the action of the heart becomes first slower, then stronger and more regular, and if

continued more rapid. When dropsy is dependent upon cardiac failure caffeine is of service, but it is of no avail in the dropsy of chronic nephritis. As a diuretic caffeine is the complement of digitalis; the latter increases the secretory power of the glandular renal epithelium. Caffeine has no tendency to accumulate or produce toxic effects as has digitalis. It acts with greater rapidity, does not interfere with the stomach functions and cause indigestion. If continued for some time it occasions persistent wakefulness. From 6 to 30 grains a day may be given in capsules in divided doses. It is rapidly eliminated from the system. The ordinary preparations are unsuitable for hypodermic use, but a combination of salicylate of soda and caffeine may be used for this purpose. Dr. Robinson had used it in cases of cardiac hypertrophy, and aortic stenosis giving 2 grains every four hours in capsules. In some cases the bulk of the urine was increased, in others not, but it has afforded marked relief in regulating the action of the heart and respiration.

Convallaria maialis or Lily of the Valley, was not unknown to therapeutics. It had a purgative action similar to that of aloes. Its action, as a cardiac tonic, had been little dwelt upon by authors. As a cardiac poison it approximates digitaline. The aqueous extract of the flowers was the preparation used, the dose being 30 grains in solution in water or in syrup.

It increases the arterial tension and causes the heart to beat slower and deeper and with more force. It must not be pushed to too great an extent or its toxic effects will be developed. Under its influence the urine is increased in quantity, and far from disturbing digestion it increases the appetite. Dr. A. H. Smith recommended its use by the hypodermic method. Dr. Robinson had administered convallaria in 14 cases, in asthma, in diffuse nephritis, in dilatation of the heart, and in cardiac irritability, he had given 10 drops of the fluid extract every 4 hours. Its cumulative effects were not to be feared as those of digitalis. Its diuretic effects were not marked. The urine being scarcely increased and its use being followed by no appreciable effect on œdema.

A question suggested by the use of various cardiac tonics was: Are there not several kinds of systole? Certainly the action of these agents would indicate this.

Dr. Fordyce Barker said he was glad to have a paper on a therapeutic subject presented since it had often been objected that advances in therapeutics did not keep pace with those in other departments of medicine. He wished to ask Dr. Robinson to what the effect of convallaria was due, whether to its power as a cardiac tonic or its influence on the vaso motor system. He related a case characterized by extreme weakness, shortness of breath, coldness of the surface, ashy white anxious facies, and great restlessness and nervousness, in which no abnormal heart sound were found, and nothing abnormal on examination of the urine. Six drops of convallaria once in six hours were administered with the effect of so controlling the great depression that in one day the patient expressed himself as feeling better than he had for months. There was no marked feebleness in the impulse of the heart and on the second visit the patient's color had returned. This seemed to point to the method by which its action was produced.

In another case, that of a young widow lady suffering from severe bronchitis, there was great prostration, apprehension, anxiety and palpitation, but no marked weakness of the impulse. In two days after the administration of convallaria there was a very

marked change for the better. The point in these cases was that the influence of convallaria seemed to be due to its action as a vaso motor stimulant.

Dr. Kinnicut said: My service at St. Luke's Hospital following that of Dr. Robinson, I continued his observations of the results of these agents, and my experience coincides with that of Dr. Robinson in most points, though I cannot speak so positively as he of the feeble diuretic action of convallaria. Dr. Ott's experiments have apparently demonstrated that slowing of the heart's action does not depend upon the effect produced on the inhibitory nerves, but upon the heart muscle, and yet I have seen marked and speedy benefit result in cases of exhaustion of the cardiac inhibitory apparatus by the administration of these cardiac tonics.

Dr. A. A. Smith said he had used convallaria in a large number of cases. He agreed with Dr. Robinson as to its therapeutic power. He was not disappointed to find that it aggravated the symptoms in chronic renal disease or marked hypertrophy of the heart, for he had anticipated that it would have this action. In many cases of dyspnœa it answered a good purpose. Still he was not yet ready to give up digitalis as a heart tonic.

He did not accept what Ott seemed to have shown, viz., that the action was due to the effect on the heart muscle.

He had used it in three well marked cases of pulmonary œdema of pneumonia, given in combination with atropine, 10 minims of the former to $\frac{1}{2}$ of a grain of the latter, hypodermically. Its administration was followed by most marked relief, and the patients recovered. In a fourth case complicated with renal disease the patient died. Of course no conclusions could be deduced from three cases, and he merely offered these cases as suggestions. Its action could be explained on the theory of its influence on the vaso motor nerves.

In one case of pericarditis with effusion with secondary pneumonia, in which the accumulation of fluid was very marked, convallaria was given, and under its influence the pulse and temperature fell, and the patient progressed favorably until pleurisy with effusion set in. It only affects the respiratory system indirectly through its effect on the circulatory system. There was much difficulty in getting preparations of uniform strength. Dr. Robinson closed the discussion.

Dr. J. C. Peters called the attention of the Academy to the prevalence of scarlet fever among horses, and moved that a committee be appointed by the President to investigate the matter. Dr. Barker accordingly appointed a committee of five, with Dr. Peters, chairman.

The Academy then adjourned.

SELECTIONS FROM JOURNALS.

INHERITANCE OF CANCER.

In the course of a paper on the Local Origin of Malignant Growths, read in the Section of Pathology at the last annual meeting of the British Medical Association, Mr. Jonathan Hutchinson observed: "It is needful to say a few words as to the inheritance of cancer in its bearings upon the doctrine of its local origin, since an adverse argument has been founded upon it. It has been urged with much plausibility, that a disease which is capable of inheritance must be

a constitutional one. No doubt, to some extent, this is true; but the argument must not be pushed beyond its legitimate scope. The laws of inheritance, as with property, so with disease, concern convection, and not origin or production. The inheritance of a fortune is a very different thing from its acquisition, and gives us no clue as to how that may have been accomplished. The causes of cancer, as we meet with it in practice, may, perhaps, be usefully classed as three, senility of tissue, local irritation, and inheritance. Of these, only the first two can rank as true causes; the latter, although practically of great importance, is only a mode of perpetuation of that which the other two have originated. Senility gives proclivity, local irritation excites, and subsequently hereditary transmission may perpetuate. The facts, as regards chimney-sweep's cancer, gives perhaps the best illustration of what I mean. Before this malady was practically suppressed by Act of Parliament, I believe it was commonly noted that when the trade of sweep went, as it often did, in a family, proneness to suffer from soot-warts, and for soot-warts to degenerate into cancer, increased in successive generations. Grandsons and great-grandsons were attacked at earlier ages, and with much greater frequency, than those who were new to the trade. Here, then, we observe the liability to a form of cancer, produced in the first instance by a local cause, perpetuated and intensified by hereditary transmission. We witness the genesis of cancer, and see the shares taken by local irritation and inheritance, and how entirely secondary the latter is as regards the former. If we ask what it is which is inherited in the case of the transmission of cancer, probably the nearest approach to an answer which can be given will be to say that it is a peculiarity in cell-structure generally; not germs, not a blood-malady, but a special type of cell organization, permitting, with greater ease than in other persons, the injurious influence of local causes. Even in the sweep, whose forefathers have suffered from soot cancer, the transmitted tendency still waits for the exciting cause; and the disease occurs, not in internal and, therefore, protected parts, but on the same part as it did in his great-grandfather, and under the direct influence of exactly the same cause. Not that I would for one moment doubt that in some instances, the inherited proclivity may be so strong, that it does not wait for the help of any exciting causes, but manifests its power in the production of a cancer which may be considered spontaneous. It is probable in this way that we ought to explain almost all cases of cancer occurring in very early life; and it may be the fact that, in a few of these, something more definite than mere tissue proclivity may be transmitted, possibly even germinal matter, especially in those cases in which the parent was the subject of the malady. Thus, then, although I fully admit that in the examination of our patients we must make large allowance for the influence of inheritance, I wholly deny that we can allow it to rank as a true cause of cancer."—*British Medical Journal*.

THE GERMICIDE VALUE OF CERTAIN THERAPEUTIC AGENTS.

Dr. Geo. M. Sternberg, in the *American Journal of the Medical Sciences*, April 1883, has made a long series of experimental studies as to the germicide value of certain therapeutic agents on various forms of bacterial organisms. In his experiments on the micrococcus of gonorrhœal pus, he found that, in general,

those reagents which destroyed the vitality of the micrococcus from pus are destructive of other organisms of the same class; and their relative value as germicides is not changed when a different micro-organism is used as the test of this value. Moreover, the reagents which were found to be practically valueless as germicides in the first series of experiments, *e. g.*, ferric sulphate, sodium sulphite and hyposulphite, boracic acid, etc., proved to be equally without value when the test was extended to other micro-organisms of the same class. But the reagents found to possess decided germicide power have, in some cases, a different value for different organisms. In other words, the vital resistance of different bacterial organisms to the reagents in question is not in all cases the same. Nevertheless, the comparative germicide value of the reagents tested is the same for the several test-organisms, and, allowing certain limits for specific peculiarities, it is safe to generalize from the experimental data obtained in the practical use of these reagents as disinfectants. But it must be remembered that the resisting power of reproductive spores is far greater than that of bacterial organisms in active growth (multiplication by fission), and the data obtained for the latter cannot be extended to include the former.

The antiseptic value of the reagents tested depends upon their power to prevent the multiplication of putrefactive bacteria, and this is not necessarily connected with germicide potency.

DISINFECTION OF THE STOOLS IN ENTERIC FEVER.

The importance of the thorough disinfection of the stools in enteric fever is, to those who believe in it at all, so great, and its practical results in the control of the extension of the disease are so manifest and direct, that any additional data as to the best methods of employing disinfection cannot fail to be of interest. On the other hand, there are quite as many other physicians to whom the subject appears to have no importance whatever. These latter either do not believe in the necessity of the disinfection of enteric fever stools, or else they regard it as of so slight moment that it matters not practically whether it be attended to or not, or, finally, whilst professing to recognize its importance, they adopt in practice imperfect or incomplete measures to accomplish it. Indeed, it may be regarded as the exception to the rule, rather than the rule, both in private practice and in hospitals, to systematically and thoroughly disinfect every stool, even in well-characterized cases of enteric fever. To both of these classes of physicians it cannot but prove of advantage to read the excellent paper on this subject published by Dr. James C. Wilson in the *American Journal of the Medical Sciences* for April, 1883.

He shows that although the nature of the germ that gives rise to enteric fever is unknown, many facts in its natural history are established by abundant proof. Of these, the following have a direct bearing upon this subject:—

1. It is invariably derived from a previous case of enteric fever.
2. It is eliminated with the fæcal discharges.
3. It is not capable of producing enteric fever at once in susceptible persons exposed to it, but must undergo changes outside the body before it acquires this power.
4. It retains its activity in favorable situations for a

lengthened period, the requirements to this end being decomposing animal matter, especially fæcal discharges, and moisture.

5. In such situations it is capable of reproducing itself.

These are the facts which indicate with singular directness the true measures necessary to prevent the spread of the disease, the efficient prophylaxis.

TRIGEMINAL NEURALGIA RELIEVED BY LIGATION OF THE COMMON CAROTID ARTERY AND NEURECTOMY.

Dr. Ferdinand H. Gross publishes in the *American Journal of the Medical Sciences* of April 1883, a condensed clinical history, extending over nine years, of a case of this disease, with an account of the various remedial measures undertaken for its relief. The result of the operative treatment may be summarized as follows:—

1. The effect of the ligation of the common carotid artery was immediate relief in the domain of the first and second divisions of the trigeminal nerve; the period of immunity from pain in the second division being fully two years, while in the first division the pain has never returned, the relief there being probably permanent, and can only be accredited to the carotid ligation. The effect of this operation upon the third division of the nerve was too transient to count for anything.

It should be added that no impairment of intellect has followed the ligation. After the lapse of nearly two years and a half no disturbance of brain functions has been noticed either by Dr. Gross or the patient, or by any of those who are habitually associated with him.

2. The first neurectomy of the inferior dental nerve, eight months later, resulted in a period of relief from the neuralgia of about one year and three months—to remain within safe limits.

3. The last two operations, viz., the neurectomy of the superior maxillary and the repetition of the operation upon the inferior dental nerve, were performed within two months of each other, September 14th and November 11th, respectively, and may be considered together. The result thus far is entirely satisfactory, the patient being now, three months later, completely relieved of the neuralgia.

SYPHILIS OF THE EYE AND ITS APPENDAGES.

Dr. Leartus Conner publishes in the *American Journal of the Medical Sciences* for April, 1883, an interesting paper on this subject, in which the following points are emphasized:—

(1) The study of specific ocular diseases is helpful in the diagnosis of certain obscure cases otherwise difficult to make out satisfactorily. Thus, a specific iritis will at once set at rest all doubts as to the origin of a series of indefinite general symptoms which have annoyed the patient and puzzled the doctor.

(2) The careful attention to these cases is the only method by which, in many cases, the eyes can be saved intact during the course of the disease. Surely, when such attention can save eyesight in some cases, it is criminal not to give it to every case.

(8). The study of these lesions calls for the most searching examination of the entire organism. Especially is this true of such affections as cannot be dis-

tinguished from like diseases of the eye due to far different causes. Thus, if the early treatment of a dacrocystitis be simply local, it is sure to fail if it be of specific origin. Hence, the only chance to avoid failure lies in such an examination as will reveal its specific nature. The same remark applies with even greater force to many other specific diseases of the eye, as will be gathered from this brief review. From this it follows that, in every eye case, the only safe practice is to constantly entertain the possibility of specific infection.

(4) The treatment of every specific case calls for constant watchfulness of the eyes with the ophthalmoscope, otherwise lesions impossible to repair may be established before the practitioner is aware of their existence or of any danger. Perhaps in no class of troubles is it more apparent that the general and special knowledge of morbid phenomena need to be constantly combined in one person. The special practitioner needs to be a general one, and the general practitioner a special one.

THE CLINICAL HISTORY AND LOCALIZATION OF PERINEPHRITIC ABSCESES.

Dr. John B. Roberts (*American Journal of the Medical Sciences*, April, 1883), believes that purulent collections in the cellular and adipose tissue surrounding the kidney are very properly termed perinephric, or circumrenal abscesses. It has recently become somewhat customary to speak of them as perinephritic abscesses, but Dr. Roberts believes that perinephric is etymologically the more correct adjective.

The early recognition of the existence of perinephric abscess, and the determination of its relative position with regard to the kidney is important, as the promptness and efficiency of operative treatment must depend very much upon the early recognition of the exact position of the abscess.

Dr. Roberts arbitrarily divides the perinephric cellulo-fatty tissue into six tracts. The upper, middle, and lower anterior; and the upper, middle, and lower posterior tracts. There is of course no sharp definition between these regions, which are used to conveniently indicate the location of the disease.

It may be premised as an axiomatic truth that, although there may be pains radiating in various directions, anterior inflammation will give rise to pain, especially in the front or side of the abdomen, posterior lesions to pain in the loin. Tenderness upon pressure, œdema over the abscess and pointing will be similarly exhibited. The swelling, the tumor-like outlines and the feeling of resistance to palpation will naturally be the more evident in anterior lesions because the tissues between the disease and the surface are flaccid. Involvement of the chain of sympathetic ganglia, situated along each side of the spinal column, would occur in posterior lesions only.

The following tabular statement of symptoms is given to assist in the localization of perinephritis and perinephric abscess:—

All anterior regions.—Pain, tenderness, swelling, œdema, and pointing in front and side of abdomen.

All posterior regions.—Pain, tenderness, swelling, œdema, and pointing in loin.

Upper tracts.—Pleuritic friction, pleural effusion, empyema, expectoration of pus; dyspnoea; supraprenal involvement; solar plexus involvement. (On right side.) Bilateral œdema of legs; jaundice; fatty stools; persistent vomiting; rapid emaciation; ascites.

Middle tracts.—Albuminuria and casts; suprapubic, scrotal, or vulvar pain or anæsthesia; suppression of urine; uræmia; pus in the urine; œdema of scrotum or varicocele (especially on left side).

Lower tracts.—Flexion of hip; pain or anæsthesia of front, inside, or outside of thigh; retraction of testicle; pain at knee; scrotal or vulvar pain or anæsthesia, without accompanying albuminuria; unilateral œdema of legs; abscess of sinus near Poupart's ligament; constipation (if left side); involvement of chyle receptacle (if right side.)

DIVISION OF THE FEMUR BELOW THE TROCHANTERS, PERFORMED SIMULTANEOUSLY ON BOTH SIDES, FOR ANKYLOSIS.

Dr. Joseph C. Hutchison reports in the April number of the *American Journal of the Medical Sciences* for 1883, a case of a boy, aged 13 years, in which division of the femur below the trochanters was performed simultaneously on both sides, for angular ankylosis of the hip-joints following coxalgia. As the result of the operation it is stated that the lordosis continues, but is slightly less marked than before the operation. There is some obliquity of the pelvis towards the right side. The lower extremities are straight, or nearly so; the thighs are slightly adducted, especially the right. He often uses a cane, but can get about very well without it. There is no motion at the hip-joints nor at the seat of the osteotomy, but there is considerable increase of mobility in the lower lumbar and sacro-vertebral joints.

This case is especially worthy of note from the fact that the osteotomies were made by open wounds directly to the bone; it was not intended to make them subcutaneous. The osteotome was introduced and placed transversely across the bone in order to divide it, and consequently the external air was admitted directly to the interior of the bone.

This case has a further interest, from the fact that it is the only one in which osteotomy of the upper part of the thigh-bone has been done upon both sides simultaneously. The operation commends itself to the surgeon on account of both its simplicity and safety. The external wound behaves as well and heals as readily as a simple tenotomy; indeed Dr. Hutchison states that he has seen more local disturbance from an ordinary tenotomy than occurred in any of the eight osteotomies that he has performed on the femur.

THE USE OF IODINE AS A STOMACHIC SEDATIVE.

The employment of iodine for the relief of the vomiting of pregnancy has been somewhat in vogue for a number of years. And while the success attending its use has been pointed out with more or less enthusiasm its exact value has never been established.

Dr. T. T. Guant (*American Journal of the Medical Sciences* for April, 1883) has for a number of years been employing the compound tincture of iodine in drop doses in nearly all forms of emesis, and reports thirteen cases of the most varied character in all of which vomiting was promptly arrested by the use of this drug.

GASTROSTOMY, ŒSOPHAGOSTOMY, AND INTERNAL ŒSOPHAGOTOMY IN THE TREATMENT OF STRICTURE OF THE ŒSOPHAGUS.

Operations on the internal organs of the body have become much more common than they were formerly, and in recent years, the stomach has been very frequently operated on with the view of counteracting the effects of œsophageal obstruction.

Dr. Morell Mackenzie, in the *American Journal of the Medical Sciences* for April, 1883, analyzes the cases of this character which have been already published, and gives an account of two new cases.

He finds that gastrostomy has been performed 81 times, and that death occurred from shock in 27 or in 24.6 per cent.

The advantages of gastrostomy are: 1. that it can be carried out with comparative ease; 2. That there is very little risk in the steps of the operation itself, especially if done in two acts separated by a proper interval of time; 3. That there is almost entire certainty of being able to affect the object aimed at, which is the establishment of an alimentary fistula altogether beyond the seat of stricture; and 4th, that the fistula is hidden from sight. The only disadvantage is that gastrostomy still yields a high percentage of deaths.

Twenty-six cases of œsophagostomy are analyzed; of these, 16 died within a fortnight, and 7 died from shock.

The advantages claimed for *œsophagostomy* are:—

1. That it is attended with comparative little shock.
2. That it facilitates subsequent dilatation of the stricture; while the disadvantages are that the operation is a very difficult one, and attended with considerable danger from its proximity to so many important structures, and there is great uncertainty in any given case whether the opening in the œsophagus can be made below the stricture; and finally a discharging fistula in the neck is a conspicuous disfigurement.

Seventeen cases of *internal œsophagotomy* are analyzed, and the following advantages claimed for this operation:—

- 1st. That it is attended with an inconsiderable amount of shock.
2. That if the stricture can be thoroughly divided, gradual dilatation can be carried out, and a cure thereby effected.
- 3d. That the procedure involves no external wound. The disadvantages of internal œsophagotomy are:
 - 1st. That it can only be safely performed in cases where it is still possible to pass a bougie.
 2. It is often difficult to pass all the strictures.
 - 3d. In many cases, the walls of the œsophagus are so thickened that limited longitudinal incision does not relieve the obstruction.

- 4th. The actual danger in the operation is far from inconsiderable.

RHABDOMYOMA OF THE PAROTID GLAND.

The interest and importance which have always attended the study of the rare and complex tumors called Rhabdomyoma, or Myoma striocellulare, won greatly in significance when their characters and occurrence were adduced by Cohnheim in support of the very suggestive theory of the embryonal origin of tumors.

The fact that tumors, composed wholly or in part of such a highly organized type of tissue as striated muscle, should be formed in organs like the kidney, testicle, etc., where such tissue does not properly be-

long, was entirely inexplicable on any of the earlier hypotheses concerning the etiology of tumors.

Dr. T. Mitchell Prudden records in the *American Journal of the Medical Sciences* for April, 1883, a new case of an heterologous rhabdomyoma, which presents some unique and significant features both in structure and position.

The tumor is intimately connected with and involves the parotid gland, and presents the usual peculiarities of structure of the rhabdomyoma. In addition to this it contains structures which the writer feels justified in considering as a typical rudimentary lobules of the parotid gland—atypical not only in structure and development, but in their distribution through and association with the incompletely developed muscular tissue.

TYPHO-MALARIAL OR CONTINUED FEVER.

Dr. R. D. Webb concludes a paper in the April number of the *American Journal of the Medical Sciences* as follows:

Seeing, then, that fevers are so closely allied generically, and that even when separated into species, there are striking resemblances; that pathological researches do not establish a constant anatomical lesion, which is pathognomonic of any one of them; and that ulceration of Peyer's glands (claimed as characteristic of typhoid fever) is frequently found in other diseases, we are justified in claiming that a *continued fever*, occurring under circumstances which point to a miasmatic origin, although it may present many of the vital phenomena of the typhoid fever, and occasionally its recognized anatomical lesion, is still *malarial fever*.

There remains, to his mind, but one other explanation of these continued fevers, viz., that they are to be regarded as atypical typhoid fevers originating *de novo*.

But, admitting the origin, *de novo*, of typhoid fever from animal miasm, and that possibly it may have thus originated in the example he has given, even the warmest advocate of this view will be unable to bring those sporadic, isolated cases which occur again and again in *malarial*, but otherwise salubrious and healthy country localities, within the rôle of such instances as are claimed as establishing this mode of origin.

The natural conclusion, taking all the facts into consideration, is that they are *malarial fevers* of a typhoid form, using the term typhoid, not in a specific sense, but as indicating a typhoid condition of the system.

COLOR BLINDNESS FOR GREEN.

The extreme infrequency of green-blindness, which is admitted by the followers of the Young-Helmholtz theory, and denied by Herring and his school as being inconsistent with their theory, is sufficient reason for directing attention to a case of this character reported in the April number of the *American Journal of the Medical Sciences* by Dr. James L. Minor. The case was that of a male, aged 18, whose vision was perfect, and the fundus was normal, but he was unable to select green from certain other colors, while blue and red were quickly and accurately recognized. Dr. Minor thus explains this condition: The green perceptive elements in the retina were so far reduced that they could not be acted upon without setting up at the same time an undue action in the red and the blue perceptive elements which are in greater abundance than in the normal state; and thus a mixed sensation is excited, that furnishes the color zone in which green and its derivatives are placed by the patient.

A CASE OF ACUTE FŒTID EMPYEMA, TREATED BY INCISION INTO THE PLEURAL CAVITY, WITH COPIOUS AB- LUTION; RAPID RECOVERY.

Dr. George Buchanan, Professor of Clinical Surgery in the University of Glasgow, reports the following case in the *Glasgow Medical Journal* for February. The patient was under the care of Dr. Whitson, but as she was a family connection of his, he from the outset asked Dr. Maclaren to direct the medical treatment. The case proving very serious, Professor Gairdner was asked to coöperate as consultant, so that all the features, some of which are very unusual, if not unique, can be vouched for by competent observers.

Miss D., aged 19, enjoyed good health till Sept. 24 last, when she began to suffer from pains in the left side of the chest. On the 28th the symptoms became more severe. She had pains over the left mammary region, increased on taking a deep respiration, and on applying the stethoscope over the painful part a friction sound could be heard. There was dulness over the left lung behind, and diminished respiratory murmur. She had a short cough, but no expectoration, and she lay on her back well supported with pillows, as the pain was worse when she attempted to lie on her left side. Her temperature rose to about 101°, and her pulse to 130. The treatment at this stage consisted in moving her bowels well, keeping poultices constantly applied to the painful part, and giving her a diuretic mixture containing iodide of potassium. The symptoms became gradually more severe. Effusion into the left pleura was evidenced by dulness on percussion over the whole posterior region, and anteriorly as high as the third rib, and by displacement of the heart to the right of its normal situation. Her respiration rose to 36 per minute and her pulse to about 140. On October 3 Dr. Gairdner saw her for the first time in consultation. He thought her illness a serious one, but had hopes that in a short time the acute symptoms would abate under the treatment pursued. He saw her again on Oct. 7 and 12, and on the 14th all hopes of being able to cope with the disease without recourse to thoracentesis were given up, as she was then in a dangerous state, owing to the prolonged high fever, the greatly enfeebled and very rapid heart's action, and the great and apparently increasing dyspnoea.

On Oct. 14 Dr. Buchanan was called on to perform paracentesis thoracis, with the aspirator in the following circumstances: Miss D.—'s pulse was 140; respirations, 50; countenance anxious; breathing oppressed; she could not lie down, owing to the sense of suffocation; the left side of the chest bulged, but not decidedly at the intercostal spaces; the respiratory movement of the left side was impeded; percussion was dull all over the left side; the heart was displaced toward the middle line. There was no pneumothorax, nor any evidence of connection between the pleural cavity and bronchial tubes.

He made the puncture two inches below the point of the scapula between the seventh and eighth ribs, and drew off about 70 ounces of dark brown putrid pus of most offensive odor. The operation was attended with most gratifying results, the patient sleeping during the following night several hours at a time, which she had not done since the onset of the disease.

The fluid rapidly re-accumulated, so that on the 19th matters were much as described on the 14th. The operation was therefore repeated, and twenty

ounces of pus removed. In this case the pus, though still putrid, was not so dark in color, and more watery.

In both instances, the pus was submitted to microscopic examination and the presence of bacteria established; but this was forty-eight hours after evacuation, so that there is no proof of their existence in the pus while it was in the pleural cavity.

The relief after the second tapping was as apparent as before; but again, in twenty-four hours, the fluid was evidently accumulating. Accordingly, with the concurrence of the other medical attendants, Dr. Buchanan gave chloroform, and made a free incision into the pleural cavity, near the site of the puncture. He introduced his forefinger into the chest to explore the cavity, and found the pleura costalis covered with a soft pulpy membrane; the upper surface of the diaphragm was smooth, but he could not reach the pericardium with his finger. The lower edge of the lung felt soft, but was so far off that he could only touch it. He now introduced the two tubes of a Gooch's double canula, crossing them like the letter X, and washed out the pleural cavity with tepid water containing Condry's fluid, using an India-rubber tube as a siphon. About eight gallons of fluid were made to flow through the chest till it ran out perfectly pure and odorless, and of the original color of the Condry's fluid as diluted. A large vulcanite trachetomy-tube was passed into the chest through the opening and secured there to insure drainage.

The effect of this apparently rude proceeding was marvellous; most marked improvement in breathing, pulse, and temperature, and general comfort. The patient slept in the afternoon, and several hours during night. Occasionally she was troubled with a tickling cough, for which camphor dissolved in chloroform was tried. There never was much expectoration; and that of clear mucus.

From this time onward the progress to recovery was uninterrupted and rapid. Pus in very small quantity and of no offensive odor continued to be discharged for some days by the tube; but by November 11 it had become blocked up, so Dr. Buchanan took it out, giving exit to a little healthy yellow pus. He again washed out the chest with water and Condry's fluid; but it ran clear at the very first. Instead of the hard vulcanite tube he put in a soft ordinary drainage tube, about six inches long, and secured it in its place. Through this a few drops of pus were discharged daily, but this completely dried up before the tube was finally removed on November 22. In a few days the opening into the thoracic wall was completely closed—that is, in about five weeks after the incision. After this, the patient rapidly regained health and strength.

Remarks by Professor Gairdner.—This case is unique within my experience, in respect of the rapid formation of an acute empyema, not only dangerous and extreme in its symptoms from the first, but in all probability septic and even gangrenous, apart from any primary lesion of the lung or other organ or part, such as in the great majority of cases determines a really foetid empyema. Even in a somewhat extended pathological experience, and among many hundreds of observations in my own cases and those of others, I cannot remember to have ever witnessed a positively putrid collection of this kind, in which there was not at the same time either foetid abscess or gangrene of the lung, or, on the other hand, a perforation leading to pyopneumothorax, with septic contamination of the effusion; and even in cases in which leakage had taken place from the pleura into the lung through a superfi-

cial slough of the former, the absence of distinct septic contamination has usually been rather remarkable. Moreover, the symptoms in this case approximated closely to those of the rare and dangerous form designated by Fräntzel as "pleuritis acutissima," in which a fatal result is almost unavoidable, whether or not evacuation of the contents of the pleura is practised (Ziemssen's *Cyclop. of the Practice of Medicine*, Vol. iv., p. 602). Such cases, apart from complications, are undoubtedly exceptional. In the first twenty years of my experience I can recall only one, and perhaps one or two at a later date. "Such cases are rare," writes Dr. Clifford Allbutt in probably the latest English *résumé* of the subject, "except as complications of septic and other diseases, and they are almost surely fatal, even after free evacuation of pus by incision." (Quain's *Dictionary of Medicine*, p. 1213.—Note). When, therefore, in the present case, after twenty days of accumulation, the aspirator gave vent to a pus so horribly foetid that the first gush of it was almost intolerable, even in a large airy apartment, the mind was led irresistibly to the idea of some latent primary gangrene, either in the lung itself, or in some other viscus with secondary gangrenous abscesses forming in the lung. A certain amount of equivocal odor, suggestive of possible septicæmia, had, indeed, been detected in the breath and transpiration of the skin, and had formed one of the elements of a grave prognosis; but, on the other hand, there had never been any but the most insignificant expectoration; and even after the first aspiration of the chest, most careful observation failed to detect any evidence of pulmonary lesion on the one hand, or of pneumothorax on the other. After the second aspiration, it became only too clear that nothing could possibly save the patient except free incision and washing out the cavity; but we hardly ventured to hope that these measures would be so rapidly successful, and that the source, whatever it was, of septic decomposition would be not only reached but apparently removed by one, or at most two, ablutions of the cavity with diluted Condry's liquor. The result, unexpected and gratifying as it was, deserves to be recorded, even although it leaves the question of the source of septic infection as obscure as ever.—*London Medical Record*.

MEDICAL NOTES AND NEWS.

DISLOCATION OF THE FEMUR UPON THE DORSUM ILII, IN A CHILD 4½ YEARS OLD. REDUCTION.

REPORTED TO DR. HAMILTON

BY

SANDS C. MASON, M. D.

LEONARDSVILLE, N. Y., March 31, 1883.

Prof. F. H. HAMILTON:

DEAR SIR,—I take the liberty to address you in order to report a case that came under my observation recently. I find by consulting your work on "Fractures and Dislocations," that a dislocation of the femur in a child under five years of age is not common.

I was called, Feb. 24th, 1883, to see a little girl by the name of Alice Coon, aged four and one half years, who had received an injury of the left leg while sliding on the ice. The exact way that the accident occurred

we were not able to learn. Her playmates brought her into the house, and she was placed in bed. The knee was partly flexed and her parents could not straighten it. They did not think the injury serious, and she soon went to sleep; but when she awoke she was in no better condition than before, and I was sent for.

I found her in bed, on her back, with the right limb straight, the left leg partly flexed, and the patella resting against the inner condyle of the right femur; the entire limb lying flat on the bed. There was marked shortening of the limb. The hip joint could not be moved by ordinary force. I could feel the head of the bone on the dorsum ilii. The patient complained of the knee and said there was where she was hurt. I administered ether, and by the ordinary manipulations succeeded very easily in reducing the dislocation, its reduction being accompanied with a very distinct snap. The entire deformity was at once relieved, and remained so without mechanical force. I secured the limb to a long splint in order to keep the joint at rest. This was removed in three days. She was kept in bed for about two weeks, after which she was allowed to get up. At the end of three weeks the limb was nearly as good as before the injury.

I am respectfully,

SANDS C. MASON, M. D.

TO THE MEMBERS OF THE REGULAR MEDICAL PROFESSION IN THE STATE OF NEW YORK:

GENTLEMEN:—Representing a large number of physicians associated to uphold the National Code of Medical Ethics, we beg leave to ask you to consider the importance of this object.

The so-called New Code recently adopted by the Medical Society of the State of New York, sanctions fellowship by means of consultations with all practitioners who are "legally authorized to practise medicine." This sanction extends to practitioners who have adopted designations intended to distinguish them as belonging to sects apart from, and hostile to, the regular medical profession, and who are organized in order to lessen public respect for this profession and for its members. Will you not seriously consider the question whether, under these circumstances, affiliation by any act with sectarian or irregular practitioners, is consistent with a due regard for the honor of the profession, or with a proper sense of self-respect?

The New Code has dis severed all connection, by representation, of the Medical Society of the State of New York, and its auxiliary County Medical Societies, with the American Medical Association, and also with the medical societies of the several States of the Union. At the last meeting of the American Medical Associa-

tion (1882), the Judicial Council decided as follows: "Having carefully examined the Code of Ethics adopted by the New York State Medical Society at its annual meeting in February, 1882 (as furnished by the Secretary of said Society), the Judicial Council find in said Code provisions essentially different from, and in conflict with, the Code of Ethics of this Association; and, therefore, in accordance with the provisions of the ninth by-law of the American Medical Association, they unanimously decide that said New York State Medical Society is not entitled to representation by delegates in this Association."

The following is the by-law referred to in the foregoing decision: "No State or local medical society, or other organized institution, shall be entitled to representation in this Association that has not adopted the Code of Ethics, or that has intentionally violated, or disregarded, any article or clause of the same."

We submit for your consideration that the substitution of the New Code for that adopted by the American Medical Association has inflicted upon the medical profession of this State a great injury and disgrace.

It is believed that the recent action of the New York State Medical Society in relation to the Code of Ethics is not sustained by the sentiment and judgment of the great majority of the medical profession in the State. But even granting that they who are opposed to this action are in a minority, it must be admitted that the number is very large. The effect of the action of the State Society, if persisted in, will be a division of the profession of the State into two parties. In view of the evils which cannot but follow such a division, and the many advantages of harmony, we appeal most earnestly to those who have been led to approve of the substitution of the New Code for that of the National, to reconsider the matter; and we solicit the active coöperation of all who are in favor of the National Code, in concerted efforts to effect, as speedily as possible, a reversal of the action of the Medical Society of the State of New York at the annual meetings in 1882 and 1883.

Communications from societies and individuals who are in sympathy with associations for upholding the National Code of Medical Ethics, and resisting any modifications of that Code which do not emanate from the American Medical Association, may be addressed to JOHN H. HINTON, M. D., No. 41, West Thirty-second street, New York City.

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AUSTIN FLINT, M. D.,
JOHN H. HINTON, M. D.,
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THE NEW YORK ACADEMY OF MEDICINE AND THE NEW CODE.

The meeting of the New York Academy of Medicine, April 19, 1883, was a memorable one, both in the history of the Academy and in the history of the evolution of medical ethics.

The clouds which have been gathering for so long a time, and gradually but surely obscuring the harmony which should exist among members of the same profession, pledged to the honorable accomplishment of the same great purposes, seemed to have burst, and the pent up feelings of both factions were poured forth in a deluge of words. If by such means alone the ethical atmosphere could be made clearer and purer, no one would wish to stay the storm, even though it must needs leave behind it ineffaceable traces in the severance of hitherto amicable relations and the smart of personal retort.

It was at first hoped that the battle of opinion regarding the new code would not be introduced into the Academy of Medicine. It, however, seemed imperative that a question of such vital importance should be recognized and dealt with by a body who had always taken such an active interest in matters medical, and especially those having to do with the welfare of the profession at large.

The resolutions presented by Dr. Flint and adopted by the Academy, whatever exception may be taken to the method by which they were carried, are entirely in accord with the constitution and by-laws of the Academy; and the position assumed by the conservatives, namely, that until the American Medical Association change their code it must be supported by the Academy, it must be admitted, is a sound one, and from any point of view can not be assailed.

By whatever means, political, legal, or social, the adherents of the new code attempt to justify it, whatever appeals are made in the name of liberty of conscience, freedom of opinion, of humanity or justice, divested of the deceptive atmosphere of mock sentiment, the bare fact remains, that the Academy as a body and each member individually stands pledged to

uphold the code of the American Medical Association.

The adherents of the new code were bitter in their denunciation of the means employed to secure the adoption of Dr. Flint's resolutions, characterizing them as highly dishonorable and as savoring of political trickery, and stigmatizing their authors as tricksters.

What were these means? If we understand them, they consisted simply in an organization of the conservative element, and a justifiable attempt to marshal this element in sufficient force to insure the adoption of resolutions, the spirit of which was embodied in the constitution and by-laws of the Academy, and the necessity for which would not have existed had not many members seemingly failed to appreciate the nature and significance of their pledge to that body.

These very means, now so unsparingly contemned by those upholding the new code, were pre-eminently the ones by means of which the new code was adopted by the State Medical Society.

All must regret that the personal element has grown to be so large a factor in the discussion of a question of ethics, and must deprecate the spirit too strongly manifested by both factions, which fails to distinguish defence of principles from self-justification.

In adjourning till October, by which time the ardor of personal controversy will have cooled, and given place to a desire for deliberate discussion, the Academy has shown its wisdom.

The resignations which several prominent members of the Academy so hastily presented while smarting under a sense of supposed injury, have already, on more sober thought, been publicly withdrawn.

The significance of the action taken by the Academy, and of other recent events which seem to point to a disruption of the profession, is, we believe, much exaggerated. The members of the profession who are opposed to the action of the N. Y. State Medical Society in adopting the new code are so much in the majority, there are so many potent reasons why the general adoption of the new code is impracticable, and the mutual interests of the two factions are so dependent on the perpetuation of harmony, that we can not but believe that after the turbulence of discussion has subsided, and time has given a clearer insight into the bearings of the question at issue, from the shapeless mass of heated controversy will be crystallized a code which will meet with the acceptance of the better elements of both liberal and conservative factions, and without doing violence to the sentiments or principles of either; when the lion and the lamb shall lie down together and the pure visage of medical progress be unmarred by wounds inflicted by those who are members of the same family, brothers sworn to fight the same fight.

Is it not a consummation devoutly to be wished; nay, earnestly striven for, and let us hope, as speedily as may be, achieved.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF MEDICINE, APRIL 19, 1883.

The President, Dr. Fordyce Barker, presided. After the transaction of routine business, Dr. Gaspar Griswold read a paper on

"ELATERIUM"

which he regarded as the best of the hydrogogue cathartics, although it had fallen into disfavor from

the variation in the strength of the preparations sold. Dr. Griswold described in detail the method by which elaterium was prepared. The crystals were first isolated in 1831; they were called elaterin, and constituted the active principle of the drug. Good elaterium was obtained from the juice found free in the cavity of the cucumber, the balance was inert. The crude drug is subject to much variation, but a reliable form exists in crystallized elaterin, whose efficacy, as compared with the crude drug, may be compared with that of hyoscyamine to hyoscyamus; and yet, up to two months ago, the crystalline form was not kept by druggists. What they sold was an amorphous extract.

Dr. Griswold had given elaterin to thirty-two patients in private practice in $\frac{1}{10}$ gr. doses, which secured watery evacuations. In one case of acute dropsy treated by Dr. Pierrpont at the Brooklyn City Hospital, it effected rapid and remarkable diminution in the dropsical effusion. He believed $\frac{1}{10}$ gr. was the proper dose of elaterin, and that this was the active principle.

Dr. W. Gill Wylie read a paper on

"ANTEFLEXIONS OF THE UTERUS"

of which the following is a brief summary.

The subject which I have taken up this evening can not be concluded in the limits of a paper which is possible for me to read to you in the time allotted to me. I must therefore be content with reading you the first half of my paper. (Dr. Wylie here exhibited a section of the female pelvis, showing the normal position of the uterus in a multiparous woman). He then continued: A normal uterus is about 2 by 3 inches, pear-shaped, flattened antero-posteriorly, ante-flexed, and with an average depth of channel of $2\frac{1}{2}$ inches. It is flexible and elastic, bending readily at the os internum or isthmus. It does not bend in an acute angle, but in a curve such as a rubber tube with thick walls would form when bent. It is held suspended in the pelvic cavity by ligaments, and maintained in position by fascia and connective tissue. The uterine ligaments are elastic, allowing of considerable motion. When contracted, they draw the uterus forward. The pressure exerted by the elastic contractility of the muscles and the connective tissue I will term the vital-musculo-connective tissue pressure. So far as retention of the abdominal organs by atmospheric pressure is concerned, only those above the diaphragm are much influenced by it. When sitting or standing erect the plumb line of the pelvis passes in front of the pubes. Postures that make tense the abdominal muscles make tense the abdominal walls. A wave of motion would expend its force on the floor of the pelvis. In straining at stool and in old men straining in passing urine this force is concentrated on a particular point. If the uterus is out of its normal position it is not so well fitted to bear the impulse of a wave.

The musculo-connective tissue has great sustaining power and regulates the pressure on the blood-vessels.

In estimating the influence of indirect pressure on the uterus we must regard the pelvis as a cylinder containing fluid and having an elastic top and bottom, therefore when the floor of the pelvis is tense force applied from above is transmitted all around the uterus, not only on top, and the uterus is thus kept in position like a flexible seaweed surrounded by water. Advocates of the mechanical pathology of uterine troubles have under estimated this supporting power of the tissues and organs surrounding the uterus. If the uterus

was fixed instead of movable force would be more dangerous. Downward pressure therefore tends rather to general prolapse than to flexion.

A backward displacement is much more important pathologically than a forward one.

Except when the bladder is tensely distended it has no influence on the position of the uterus, when distended it carries the uterus back.

The rectum when emptied or only slightly distended has no influence on the position of the uterus. When habitually distended it causes relaxation of the pelvic floor. The point of greatest curvature as a rule in ante-flexion is at the os internum.

The time to examine the position of the uterus is half way between the menses. In deciding the frequency and degree of ante-flexion it must be remembered that in multiparous women the normal amount of ante-flexion is from 10 to 30°.

Congenital influences greatly predispose to ante-flexion—abnormal ante-flexion is one of the first indications of race degeneration. Women more than men are influenced by the tension of modern life. The function of the organs is rotated and this can not be done with impunity. Menstruation apparently regenerates the uterus and may take the place of other functions. The greater the intellectual development of women the weaker the venereal desire. In the lower classes physical labor decreases but does not crush out venereal desire as does intellectual development.

Excessive and unhealthy development of the nervous system, want of proper food, exercise, and fresh air at the age of 10 to 18 greatly predispose to ante-flexion. Too frequent child bearing or abnormal labor are also predisposing causes; as is enlarged uterus or anything that weakens the uterine walls. Unequal involution, inflammation extending to the parametrium, unequal development of the walls or ligaments of the uterus and abnormal development of the cervix are all predisposing causes.

I have given up the belief that anteversions cause dysmenorrhœa by shutting up the canal. Simple stenosis of the os-externum may be associated with flexion and be the cause of the dysmenorrhœa.

Dr. Wylie abruptly brought this portion of his paper to a close, stating that the more interesting portion embodying the treatment of ante-flexions was embraced in the second half of the paper.

Dr. Emmet said, "I shall have little to say on this subject because there is so much to be said. I think we could simplify the subject by saying that ante-flexion is usually due to inflammatory action in the tissues outside of the uterus. It is important to recognize this cause. We too often treat the effect as if it were a cause. I do not think I have ever seen a case of ante-flexion without existing inflammation in the ligaments. It is often malpractice to attempt to put the uterus where we think it ought to be."

Dr. Chamberlain said, "The question of the dynamics of uterine movements has a wide relation to education and habits as well as to disease. The effect of posture is not sufficiently recognized in the etiology of uterine displacements. Thus the popular 'Boston Dip' and high-heeled boots modify the natural supports of the uterus. There are displacements incurable by mechanical appliances because they depend on an empty state of the connective tissue which may be cured by restoring a true condition of the system."

Dr. Wylie closed the discussion.

Dr. Austin Flint, Jr., by the request of a number of the fellows of the academy, presented the following preamble and resolutions:

Whereas, The Academy has adopted the code of the American Medical Association, and whereas fellows are required to sign the constitution and by-laws of this Academy, be it resolved that the Committee on Admissions be instructed not to report for admission any candidate for fellowship who cannot consistently sign this constitution and by-laws. And that the support of this Academy be given to the code of ethics of the American Medical Association until that body sees fit to change it.

After adverse discussion by Drs. Agnew and St. John Roosa, a motion was made to lay Dr. Flint's resolution on the table. This was lost by a vote of 60 to 32.

Dr. Agnew maintained that the resolutions offered were virtually changes in the by-laws, and must be acted upon as such. The Chairman decided that the resolutions were simply instructions to a committee.

Dr. Flint's motion, that the resolutions be adopted, was put and carried by a vote of 58 to 25. Dr. Flint moved that this motion be reconsidered, Dr. Gouley amended this motion to read that the reconsideration should be indefinitely postponed. This was carried. Dr. Flint then presented the following resolutions: *Resolved*, That this Academy disavows any sympathy with the action of the State Medical Society regarding the Code of Ethics, and gives its allegiance to the code of the American Medical Association, until changed by that body. This was carried. Moved to be reconsidered and its reconsideration indefinitely postponed. Drs. R. F. Weir, Fordyce Barker, St. John Roosa and C. R. Agnew tendered their resignations as fellows of the Academy, the Academy then adjourned till the first Thursday in October.

LECTURES.

EPITHELIOMA OF THE UPPER JAW: AND REAMPUTATION OF STUMP.

A CLINICAL LECTURE DELIVERED AT THE NEW YORK HOSPITAL.

BY

THOMAS M. MARKOE, M. D.,

Professor of the Principles of Surgery, College of Physicians and Surgeons, New York.

History.—Male æt. 46, has a tumor in the upper jaw for about a year. It came on slowly and caused a good deal of pain, with a tendency to protrusion of the eyeball. The patient was operated upon last summer and the tumor was found to grow from the posterior wall of the antrum of Highmore. It projected up into the orbit and pushed the eyeball from its position forward and outward. We supposed at that time that all the diseased tissue was taken away. The patient made a rapid recovery and stayed away from the hospital for some five months.

On admission he had a stinging sensation under the eye and the neighboring tissues were œdematous. Infra and supra-orbital pains were again complained of, and have continued up to the present time. There is no difficulty in breathing or stenosis of the nasal cavity, as the tumor does not encroach upon the nose or mouth. The patient is in pretty fair condition and is beginning to suffer more and more pain from the encroachment of this tumor, which warrants us to perform an operation for its removal.

This warrant is derived from the fact that in epithelioma a certain amount of success has been achieved

by repeated operations, which signifies of course only a prolongation of life and a mitigation of pain and suffering. This success has in various cases been very great and very marked, lasting for many years, until the patient died perhaps of some intercurrent disease, or at any rate was so much benefited by different operations as to be almost cured. The same holds true in some forms of sarcomatous diseases, but then here we have not so clear and distinct a history as in the case of epitheliomata.

Now, gentlemen, I propose to go down upon the same spot as before, notice the tumor carefully and see what the encroachments have been. If the tumor has merely sprouted out from its original seat and pressed up into the orbit, pushing the eyeball out of the way, I think we can remove the growth without any trouble, and perhaps all morbid deposit. My impression, however, is that although the original tumor has been reproduced more or less distinctly, yet new involvement has also taken place. It is very probable that a portion of the jaw has become involved which will require removal. These partial operations are not very successful. In carcinoma and sarcoma they are injurious. Nevertheless statistics show a certain amount of benefit derived from these operations. We are not absolutely certain that we have removed all the diseased material, as in an amputation for example. It is becoming a general notion that malignant diseases of the upper jaw are not so dangerous as those of other parts of the body. Patients do better after excision of parts of the upper jaw than after similar operations in other parts of the body. As for cure we have no right to promise it in any form of cancerous disease. There is a certain percentage of absolute cure in all cases of sarcoma, which thus far has been stated as varying from ten to thirty per cent. Carcinoma does not furnish such a large number of cases.

It is only within a few years that we are beginning to believe that there are cases of carcinoma, which meet this statement of being perfectly curable. All older writers, as far down as Paget, in their statistics do not show anything like actual cure, but they show a very great variation in the number of years that patients live after the operation. It is only of late years that the idea has been broached, and very earnestly advocated by Dr. Gross, of Philadelphia, that there is a much larger percentage of cases *curea* than was formerly imagined. I have not yet seen the evidences which convince me that that is a true statement, and, therefore, I feel that it is best to withhold all judgment until statistics prove the fact.

Operation.—Patient was put under ether; dorsal decubitus. There is very little danger of strangulation in these cases, if you do not have the etherization too profound. The disease was found to have invaded the eyeball. The antrum was exposed, and there was found a tumor around its outline, which was not very distinct. It was adherent to the posterior portion, and probably incorporated with the eyeball structure and sclerotic coat. It has, therefore, gone further than was supposed, and, moreover, has extended to the bone on either side.

This, gentlemen, is not a very encouraging condition of affairs. These cases are successful in proportion to the distance which the tumor is separated from the surrounding parts. Where it is covered by a capsule which distinctly separates it from neighboring tissues, you are warranted in expecting a longer delay in its return than where the tumor is not distinctly limited.

I hope that this operation, which has taken away the tumor that has pressed upon his eyeball, and

which has given him his chief pain, will be followed by a very great mitigation of his suffering. The involvement of the surrounding parts, however, is too serious to allow us to hope for any long delay in its return.

CASE II.—RE-AMPUTATION OF A STUMP.

History.—Male æt. 34. Was operated on June 30th for knee-joint amputation, with lateral flaps, which at first seemed to be sound, but afterwards sloughed to such an extent that not enough integument remained to cover the bone.

Now, gentlemen, you observe the ends of the femur standing out clean beyond the granulations which have sprung up around it. There is no hope of making the process of cicatrization cover the end of the stump. For even in that event the whole end of the cicatrix would be so tender as to be practically useless to the man.

I propose now not to make a formal and systematic amputation, but simply to go around the prominent portion of bone, cut around the line of granulation, and then push up the tissues from the bone. We want to expose as few intermuscular areolar spaces as possible, and make as little invasion of the surrounding parts as will permit me to push them out into their proper position. I shall be exceedingly careful to avoid opening the prolongation of the synovial membrane of the knee-joint, but dispense with the patella.

The knee-joint stump has two great advantages: In the first place when well-covered with sound integument, it permits pressure and allows the whole weight of the body on a very indifferent padding. In the second place, we do not open into the cancellous structure of the bone which is a very complex structure.

The medulla is one of the lympho-glandular structures and is extremely liable to strumous and caseous inflammation.

The worst result of cutting through the thigh-bone is that the bone being sawed far up near where the medullary cavity exists, the arterial supply is cut off and the bone dies from the sequestrum. A surgical operation of considerable severity is then necessary in order to extract it. This medullary substance at the end of the bone is not liable to necrosis.

The advantage of the broad end of the knee-joint for pressure is simply mechanical. If we can save something of this expansive layer of the thigh-bone, we get part of that result. Hence we aim to cut the thigh as low down as we possibly can.

Operation.—An abscess has formed in the stump near the external condyle. This is apparently not connected with the synovial sac. It matters very little whether I open into the synovial membrane or not with this condition of things. In fact I shall open it purposely. I shall be very careful not to strip the periosteum at any point. Sometimes in this amputation the artery is eroded by rubbing against the edge of the bone. This abscess forms a cavity outside of the bursa. We will lay that cavity all in one.

This will make a very good case for thorough drainage. By this method we trust to the antiseptic influences of frequent injections, once every three or four hours, with carbolic acid of the strength of one of the acid to forty, fifty or sixty parts of water.

LIGATURE OF THE FEMORAL ARTERY.

A SURGICAL CLINIC HELD AT THE ROOSEVELT HOSPITAL.

BY

H. B. SANDS, M. D.

History.—Patient was a male, æt. 33; native of Ireland, married; occupation, conductor. Came into hospital Jan. 13, on account of a swelling of the left thigh. The thigh was painful about a year ago. The pain was rather worse at times than usual; was also worse after active exercise. He was in the habit of lifting heavy weights and resting them on the left thigh. A tumor was discovered two months ago and pulsation was noticed three weeks ago.

This man, gentlemen, who seems to be otherwise in excellent health, shows a swelling of the left thigh in the course of the femoral artery, just below the middle of the thigh. The swelling is along the part of the artery which lies in Hunter's canal. It is an angular swelling, about the middle of the thigh, and from that point the diameter extends downwards about three inches. The swelling is deep seated, and is not adherent to the skin. It has a pulsation which is uniform in all parts of the tumor that can be grasped. This is one reason why the diagnosis of aneurism has been made. The other signs of aneurism are also well marked. On applying the ear over the tumor, or on listening by means of a stethoscope, a soft characteristic systolic murmur can be detected. Also, on making firm and steady pressure over the tumor, it is found to diminish very greatly in size, so that it can be nearly effaced. When pressure is made over the femoral artery pulsation ceases, to be resumed when the pressure is remitted.

There can be no doubt that in this instance the disease is aneurism. The only other affection that might be considered as possibly existing in this case is what is known as pulsating encephaloid tumor—a sarcoma containing so many blood-vessels as to cause pulsation and sometimes a bruit.

In certain situations, as in the neighborhood of a joint—especially knee joint—it may be sometimes so difficult as to be impossible to discover whether a given swelling is aneurism or pulsating encephaloid. Frequently, however, the diagnosis can be made, and I think it is plain in this case. In pulsating encephaloid we can get up a pulsating murmur, but we should not find, as in this case, that the tumor can be effaced on pressure. For, although pulsating encephaloids are very vascular, they nevertheless contain for the most part a solid or semi-solid tissue. This cannot be made to change position, and the tumor retains its bulk.

The aneurism here affects the femoral artery in an unusual situation. The great majority of aneurisms of the main trunk of the lower limb are found in the popliteal portion of the vessel. As regards femoral aneurisms they are, in the very large majority of cases, found in that portion of the artery which lies in Scarpa's space. The artery lying in Hunter's canal, which is bounded by a pretty strong tendinous tissue, is so well protected that it rarely becomes the seat of aneurismal enlargement. I think I can remember only one other case of aneurism in this situation. Such aneurisms are very rare.

As for treatment, I propose to perform the operation of tying the femoral artery.

Ligature of the superficial femoral was the only operation that used to be practised in cases of aneu-

rism. But in more recent times other methods have, if not superceded, at least to some extent taken the place of ligature. Pressure is the main method relied upon besides the ligature.

I do not resort to pressure in this case because I think one very favorable circumstance for the use of the ligature here is that no disease of the arterial coats can be discovered, except where the aneurism exists.

It is possible that the aneurism was of traumatic origin, although it is circumscribed, and I have little doubt that the ligature is a perfectly safe operation.

I have scarcely any fear but what the operation can be done without the accident of having to encounter gangrene of the lower limb, which is most to be dreaded in tying this artery. It was the opinion of Mr. Syme that sufficient consideration is not given to the proper method of tying the artery. He ascribes the disasters recorded in the medical journals to the faulty performance of the operation, and shows that if the operation be carefully done there is little or no risk of gangrene. He cites his own experience: "In thirty-three consecutive cases of ligature of the femoral artery, no bad results followed."

The situation of the aneurism here in Hunter's canal is peculiarly favorable for cure. It is not likely that after the operation has been performed here there will be recurrent pulsation, such as occurs in the popliteal region. For in this case there are no anastomotic vessels given off on the side of the artery, whereas in the popliteal region we have the articular and anastomotica magna.

The line of the artery is marked out by a tape measure. A point is taken midway between the symphysis pubis and iliac spine. [Some anatomists take it midway between spine of pubis and iliac spine], and drawn to the inner side of the patella or back to the inner condyle of the femur. The limb is slightly flexed and rotated outwards.

The only large vessel given off from the femoral artery is the profunda, which arises about two inches below Poupart's ligament. Pains should be taken of course to tie the superficial femoral alone. Tie it at a point sufficiently far from the origin of the profunda.

Assuming that the profunda always lies not lower than two inches (instances are known where it has arisen as low as four inches from Poupart's ligament) it is safe to apply the ligature 4 or 4½ inches from Poupart's ligament at a point where the adductor longus is crossed by the sartorius.

The incision is made equi distant above and below the vessel intended to be ligatured, about 3 or 4 inches in length. The skin and subcutaneous fat are divided. Care being taken to avoid puncturing any branch of the saphena vein, the fascia lutea is next divided.

The sheath of the vessel is carefully opened over the artery. The artery is then dissected or scratched from its sheath upon a grooved director in the usual way. The aneurism needle is then passed in and the ligature applied to the artery.

The risk in the operation is that of interference with the vein. Very rarely is the artery wounded. In consequence of the fear of adhesion of vein to artery from chronic inflammation, or in consequence of want of care on the part of the operator not to separate completely the artery from the sheath, the vein has been wounded in the operation. It has happened a good many times that the aneurism needle, being out of sight, even when underneath the artery, has been thrust through the venous vessel and made to transfix it at two points. In some instances the surgeon has

not withdrawn the ligature, but has tied the vein. The ligature thus acting has a seton, as set up mischief in the vein and caused thrombosis and gangrene on account of the impairment made to the venous return. If the accident should happen, the proper thing to do is to withdraw the needle, open the sheath at a point ½ inch higher up, and repass the needle with care, and tighten the ligature. After the operation has been done it is customary to envelop the limb in a layer of cotton wadding so as to compensate for the loss of heat and to flex the thigh slightly, allowing the limb to rest on a pillow.

One other danger attending the operation is secondary hemorrhage. Nowadays, when we no longer use silk but cat-gut sutures, the wound uniting by first intention, we do not anticipate secondary hemorrhage.

Operation.—The patient was etherized and placed in a supine position, the limb being flexed and slightly rotated outwards. An incision was made three fingers' breadth below Poupart's ligament for a distance downwards of three inches. Care was taken not to wound a branch of the long saphenous nerve which may run over the artery. A small branch close to the profunda was divided and ligatured. The artery being reached, the sheath was opened about ¼ inch, and pulled aside with a catch forceps. The more you open the sheath the more you destroy the vasa vasorum and the greater the danger of secondary hemorrhage. The artery was tied with a reef-knot three times. No drain was put in. The wound was dressed with carbolized cotton and a bandage applied to keep up the necessary warmth of the limb until collateral circulation becomes established.

ORIGINAL ARTICLES.

REFLEX PAINS FROM A GUNSHOT WOUND.

BY

F. R. CAMPBELL, M. D.,

Buffalo, N. Y.

On the 28th day of July, 1882, Lewis L—, of Tombstone, Arizona, was shot in the chest. The ball, of large size, passed through the right border of the sternum below the third costal cartilage, and came out through the third intercostal space, half an inch external to the nipple, a distance of six and a half inches from its place of entrance. The ball passed through the left lung, and the patient had pneumo-hydrothorax, but recovered after an illness of three months, when he came to this State.

The patient was first seen by me April 4, 1883. The opening where the ball entered was still discharging, and a probe could easily be passed under the sternum. The patient complained of intense neuralgic pain in elbow and little finger, in the course of the ulnar nerve. Although his wound had not been treated for several months, he noticed that the pain was always greatest when the pus was retained and the wound not kept clean. He also observed that irritation of the skin in the right submaxillary triangle, as in shaving, would produce pain in the wound. I enlarged the opening of the wound, removed the carious bone in the sternum, inserted a drainage tube, and washed the wound out with carbolized water daily. With this treatment he has made great improvement; pain can no longer be excited in the wound by irritating the submaxillary triangle, and the pain in the ulnar nerve has almost disappeared. What nerves were injured by the ball I do not know, but it seems quite evident that the pains in the arm were due to the injury of nerves in the region of the wound.

SELECTIONS FROM JOURNALS.

THE DELIGATION OF LARGE ARTERIES BY THE APPLICATION OF TWO LIGATURES AND THE DIVISION OF THE VESSEL BETWEEN THEM.

Mr. W. J. Walsham, F.R.C.S., Assistant Surgeon to, and Demonstrator of Orthopædic and Practical Surgery at St. Bartholemew's Hospital, writes: "During the past autumn, whilst in charge of Mr. Willett's wards, it fell to my lot to tie the femoral artery three times for popliteal aneurism. In each instance two ligatures were applied, a little less than half an inch apart, and the artery completely divided between them. The ligatures used were kangaroo-tail tendon; the wounds did well; the operations were performed strictly antiseptically; and in each instance the patient made a good recovery. If two ligatures be applied, and the vessel divided between them, all risk of too free a separation of the sheath is absolutely avoided, as one ligature can be applied to the spot where the sheath is separated above, and the other where the sheath is separated below. After the vessel is divided, each cut end retracts, drawing the respective ligatures well into the sheath, thus leaving the blood-supply of no portion of the vessel on the proximal and distal side of the upper and lower ligatures respectively in any way interfered with. The artery is thus placed under very nearly the same conditions as one which has been ligatured in a stump, and exactly under the conditions as one the ends of which have been secured in a wound, and from such secondary hæmorrhage is very rare. Indeed, I am not aware that, after the two ends of a divided vessel have thus been tied in a wound, hæmorrhage, except from the slipping of a ligature, has ever occurred. The normal longitudinal tension of the vessels constitutes another, and, I believe, not inconsiderable source of danger in ligaturing an artery in its continuity. A transverse wound of an artery, as first pointed out by Mr. Savory, in consequence of this elastic tension, assumes a diamond shape. Should any part of the ligature cut through the vessel before it has become permanently occluded, this tension, by causing such a cut in the vessel to gape, thereby disturbing the connection of any internal clot that may have formed, or adhesions of the coats that may have taken place, must tend to the production of secondary bleeding. In a case of secondary hæmorrhage, under the late Mr. Callender, on cutting down at the seat of ligature to secure the bleeding points, the hæmorrhage was clearly seen to be due to such a cause. The vessel, which had been secured by a catgut ligature, had given way opposite the knot (which itself was intact), and a gaping wound one-tenth of an inch wide existed in the walls of the vessel. By applying two ligatures, and dividing the vessel between them, all tension is taken off, and both ends are placed in a state of rest—the most favorable condition for healing. It has been objected that the application of a second ligature and division of the artery detract from the simplicity of the operation—a point, I suppose, other things being equal, always to be aimed at in surgery. In this instance, such an objection appears to me to be a mere question of sentiment, and, as such, I venture to think, is of little moment, if, as I believe, it is a fact that, by using two ligatures and dividing the artery between them, greater safety is obtained."—*British Medical Journal*.

ON THE PATHOLOGY OF DIABETES: ESPECIALLY DEALING WITH DIABETIC COMA.

Dr. Stephen Mackenzie, Physician to, and Lecturer on Medicine at, the London Hospital in a paper bearing, this title, and originally read before the British Medical Association at Worcester in 1882, gives a total of thirty-seven fatal cases of diabetes in the London Hospital from the beginning of 1874, to Midsummer 1882. "From this series of cases, twenty-one of which have been under Dr. Mackenzie's own care, it appears that coma and phthisis are the two most common modes of termination of diabetes. Coma is a much more common ending of diabetes than is often supposed by those who see but few cases of the disease. In this series, coma of a peculiar kind was the termination of diabetes in nineteen out of thirty-seven cases, or in just over half the number. Of these nineteen cases of coma, in seven *post mortem* examination showed no gross visceral disease to which the coma could be attributed; in four cases without *post mortem* examinations, there was no *ante mortem* evidence of visceral disease in three, and in one there were well marked signs of pneumonic phthisis during life. Further, there were eight deaths from coma, with old or recent pulmonary disease found at the necropsy; in some of these the affection of the lung was insignificant, in others advanced. The coma that closed the scene in the cases of diabetes, implicated (or followed) by pulmonary disease, had certain special characters, to be presently described, showing its connection with the diabetic rather than with phthisis. It was not the mere loss of consciousness that terminates so many exhausting diseases. Suddenly developing coma is an unusual ending of ordinary phthisis. Besides these nineteen cases, in three others death was by coma, but an obvious explanation was presented on *post mortem* examination—viz., cerebral hæmorrhage, meningitis, suppurative nephritis.

"*Onset.*—Pain in the epigastrium or hypochondria, often very severe, sometimes ushers in the attack, and may precede for several days the coma. Delirium, usually of a light garrulous kind, is observed in some cases. Rapidity of pulse is occasionally the first indication of impending coma. Vomiting and diarrhœa, separately or together, was noticed in some cases for a day or two before the attack. Severe headache precedes the coma in others. Fatigue, as pointed out by Prout, and noticed by nearly all who have written on the subject, often determines coma, and the latter is thus frequently induced by a journey.

"*Special Features of the Coma.*—One of the most striking symptoms in most, though its degree varies in different cases, is a peculiar laborious breathing—an 'air-hunger,' extraordinary efforts of the chest being made. The patient lies gasping for breath, like a person after violent exercise, whilst no condition in the respiratory organs accounts for its occurrence. Sometimes this dyspnœa precedes the coma, sometimes the dyspnœa and coma appear together. The coma in most cases commences gradually. The patient can at first be roused, but it steadily progresses until it is profound. It occasionally commences more abruptly, and in a few cases passes off, usually to return. The surface of the body is generally cold, and the skin and mucous membranes livid; the pulse is rapid and small, and ultimately becomes uncountable. The external and internal temperature sinks exceedingly low, and Dr. Mackenzie has known the temperature in the rectum to be little over 90° Fahr. This combination of coldness, lividity, and rapid pulse has led me for some

time to call the condition 'coma-collapse.' Incontinence of urine is noticed in some patients. The breath has been noticed by some good observers to have a peculiar odor, like sour beer, vinegar, acetic ether, acetone, etc.; but in no case that Dr. Mackenzie has observed has this been detected, though he has been on the outlook since 1874, and has directed the attention of those watching the patient to the point. Dr. Frederick Taylor's experience is similar. It has been said that a high temperature is necessary for its occurrence, owing to the low volatility of acetone. The urine is also said sometimes to give off a similar odor, but the author has not noticed it even when evaporated. In some cases the addition of a solution of perchloride of iron to the urine produces a deep brown color. This, which is a test for acetone, Dr. Mackenzie has noticed in some cases."—*British Medical Journal*.

URIC ACID AND ITS RELATION TO THE FUNCTIONS OF THE KIDNEYS.

In Dr. A. B. Garrod's Lumleian Lectures, the lecturer observes: "I must endeavor to show you (1) in what state of chemical combination it exists in the urine; (2) why it is held in solution in an acid fluid; (3) what are the causes which lead to its precipitation from the urine; and (4) what are the different shapes which it assumes when it is thus precipitated from its state of solution.

1. About fifty or sixty years ago, when Berzelius and Prout were investigating the subject, there was much discussion as to the condition of the uric acid when in solution in the urine—whether it is free or combined with a base, whether it is held in solution by the coloring matter of the urine, and so forth. For the details of such discussion, if still interesting, I will refer you to Dr. Prout's well known work.

At the present day, I believe that the subject is fully cleared up; and it may be asserted that uric acid, when in solution, is combined chiefly with sodium, but that there are also varying quantities of other bases present, depending on the amounts of different salts contained in the urine. I have already shown you, in my first lecture, that when urate of ammonium is dissolved in blood-serum in which the soda salts are present, it is converted into urate of sodium; and, bearing this fact in mind, we can explain the discrepancies which are found in the different analyses of urate deposits, both in health and disease. I may, however, say that the deposit, which, until recently, was commonly called lithate of ammonia, is composed almost entirely, in healthy urine, of urate of sodium. If, however, the urine, at any time, becomes ammoniacal from the decomposition of the contained urea, then the uric acid, meeting with a large excess of the new-formed base, gets deposited as urate of ammonium, a salt which is very insoluble.

2. The next point to be considered is the reason of its existence as urate of sodium in a fluid having such a well-marked acid reaction as healthy urine. This fact was for a long time difficult of explanation; but Liebig showed that, if to a warm solution of the common phosphate of sodium, which has an alkaline reaction, uric acid be added till it no longer dissolves, the solution becomes strongly acid, and there is contained in it urate of sodium and the acid phosphate of sodium, which latter salt exhibits a full acid reaction, but does not possess the power of precipitating the uric acid. This phenomenon solely depends on the tribasic char-

acter of phosphoric acid, which allows of a solution of phosphates, which reddens litmus powerfully without containing any free acid.

3. When, however, the least trace of a free acid, even acetic, exists in the urine, the whole of the uric acid is rapidly precipitated; a fact of considerable importance in the study of diseased conditions of the urinary excretion. If our attention is directed to the subject, we see, almost daily, that, when an urine is kept for a time, perhaps only a few hours, the uric acid, which at first was in complete solution, becomes gradually deposited in the crystalline form—a change due to the generation of a free acid in the urine by the occurrence of what is called the acid fermentation.

4. Our last point is to ascertain what shape the uric acid assumes when it becomes insoluble, and is precipitated from the urine. It may be thrown down either in combination with a base, that is, in the form of an urate, or as free uric acid. When, as an urate, it is often, from simple concentration, or from the presence of too small a quantity of water in the urine, and it seldom happens that such deposition takes place in the urinary organs themselves, unless there is a something present, such as a foreign body or the nucleus of a calculus, which greatly facilitates it. When, however, such urine is removed from the body, and cooled down to the temperature of the air, more especially in cold weather, the appearance of turbidity is extremely common, and often becomes, though most unnecessarily, a source of great mental disquiet to patients.

The simple evaporation of healthy urine *in vacuo* will usually cause, at a certain point in its concentration, the deposition of the same urate of sodium, and produce a similar appearance. When the urine, either concentrated or not, becomes abnormally acid, it at first causes the urate existing in it to be less soluble; but soon afterwards the acid itself is separated and deposited in the crystalline condition, forming what is commonly known by the name of cayenne pepper-gravel, so called from its resemblance to that condiment. We have been so accustomed, even from our student-days, to see the numerous forms which uric acid assumes, that we may feel little or no surprise that a body of so definite a composition and character as uric acid should be found under so many shapes, and perhaps most of us have paid little or no attention to the subject. Dr. W. Ord, however, has given no little thought to it, and has made a great number of observations and experiments which throw much light on the changes which the crystals of uric acid experience when acted upon by the various colloid substances, some of which are present in healthy urine, and others as the result of disease. Let us take what may be looked upon as pure uric acid, dissolve it in boiling water, and then allow it to cool and crystallize; it will be found in oblong tabular crystals, which are both homogeneous and transparent.

When uric acid crystallizes out from urine, it is more or less colored, from yellow to brown, and in the form of thin rhomboidal prisms, showing that there must exist in the urine something which causes an alteration not merely in the color, but also in the crystalline form. Dr. Ord makes the following remarks, which I cannot do better than quote, as they express the character of the changes to which I wish to allude. He says: "It follows from this comparison of the pure and urinary acids, that there must exist in the urine causes leading to a complete turning away of the substance from its proper crystalline form. The change is also in a definite direction. The faces and angles of a crystal from urine are almost always, some or all of

them, curved or rounded. Such a crystal is a resultant of the operation of two distinct influences—of crystalline polarity, under which the flat surfaces and sharp angles are determined; and of 'molecular coalescence,' in which polarity is lost and particles become arranged in spherical masses, by virtue of their unhindered mutual attractions. Furthermore, in urine the crystals are very frequently gathered into large glomeruli, to which such names as 'gravel' and 'cayenne pepper-grains' are given. These, on examination, are found to be regularly constructed of rhombs or prisms."

Dr. Miller, Dr. Beale, and other writers on micrology and chemistry, have suggested that the substances associated with uric acid in urine are the determining causes of the several differences; and the researches of Mr. Rainey have pointed the way to a solution of the problem.

Dr. Ord, in his work on *The Influence of Colloids upon Crystalline Form and Cohesion*, from which I have just quoted, and to which I would refer you for much valuable information, gives the results which he has obtained from the crystallization of uric acid under the influence of urea, coloring matters, mucus, albumen, cane and grape sugar, gum arabic, starch, gelatine and glycogen.

It appears to me, that the researches of Dr. Ord and Mr. Rainey are not only valuable, but also seem to throw a ray of light—dim, it is true, at present—upon those phenomena which, as it were, connect true chemical changes with those we are accustomed to look upon as due to the agency of life.

The result of our inquiries, as far as they go, may be summed up in a few words. Perfectly healthy urine should show no appreciable deposit; when, however, it becomes concentrated from deficiency of the watery excretion, then the uric acid is thrown down in the form of an urate. This may occasionally occur within the body, but far more frequently after the urine has been voided; sometimes, however, this change ensues so rapidly, that the urine is erroneously supposed to have been passed in that condition. The presence of a solid body in any part of the urinary tract favors deposition very much, and hence urine which would otherwise remain clear, may yield a deposit to any substance previously present in the same tract, and may thus add considerably to an already existing calculus. The appearance of the numerous layers so frequently seen around a central nucleus, both in renal and vesical calculi, is thus easily explained. When, however, the urine becomes further altered in composition—if, for example, a free acid is either excreted with the urine, or rapidly generated in it through the setting up of the lactic fermentation, the uric acid becomes liberated from its state of combination, and, in a form more or less altered by the presence of colloid matters, is deposited on a previously existing calculus, or is passed as separate rhomboidal crystals or in aggregated masses, constituting gravel or sand. I should feel disposed to confine the name of "sand" or "gravel" exclusively to such deposits, which, I believe, seldom form the nucleus or become the starting-point of any calculus. I may add, that urine possessing these characters is frequently voided for months and years, without the occurrence of any appreciable inconvenience to the patient. It is true, that a calculus may be augmented by contact with such an urine; but, as I have said, it seldom originates in this way."—*British Medical Journal*.

FACE PRESENTATION.

Dr. Strachan, of Sunderland, writes: "A W., aged 22, primipara, at full period, was first seen after slight dilatation of os had taken place, the face having barely engaged the pelvis, although the membranes were ruptured, and the liquor amnii was escaping. The finger touched the right malar bone and orbit. The pains were frequent but not strong, and the patient was hysterical. I gave opium, and left her, and was sent for twelve hours later, when the os was fully dilated, and the face, which had now descended to about the middle plane of pelvis, was found presenting, in the first position, the right oblique diameter, with chin backwards towards right sacro-iliac-synchondrosis. As the forehead seemed decidedly to take precedence, I tried gently to make the head rotate on its transverse axis into the first cranial position with the occiput towards the left ilio-pectineal eminence, but did not succeed. This was the method recommended by the late Dr. J. Clark, but is now abandoned. Next, introducing my finger into the mouth, I endeavored to bring down the chin—the proper analogue of the occiput—at the same time assisting the natural rotation into the fourth facial position—the left oblique diameter, with the chin forwards. But all my efforts seemed fruitless to move the head in any way, especially as the pains were weak. So, after waiting two or three hours longer to see what course nature intended to adopt, and as the fronto-mental diameter still remained impacted in the same position, I gave chloroform, and applied the long forceps with double curve; the upper blade, which had to be introduced first, being rather difficult of introduction between the prominences of the face and the maternal parts, so as to avoid injuring either. The long straight forceps are recommended in these cases with the view of better assisting rotation, but in this instance the double-curved ones answered remarkably well, as under rather powerful traction, accompanied by a gentle twist in the desired direction, rotation took place into the fourth position, and the face was born chin forwards, the hollow of the forceps pointing backwards. Had rotation not taken place, the case would most likely have ended in craniotomy. The child was born alive, and although slightly disfigured at the time, with the caput succedaneum over the right cheek and orbit, which were both considerably swollen, it has done well; the mother has also made a good recovery."—*British Medical Journal*.

"AN EXPERIMENTAL INVESTIGATION OF THE ACTION OF CHLORAL, OPIUM AND BROMIDE OF POTASSIUM," by DR. SIDNEY RINGER, Professor of Medicine in University College, London, and DR. HARRINGTON SAINSBURY.

The authors make the following important observations on certain well-known drugs, after discussing the physiological effects of the agents mentioned in the title of their paper: "Clinically, the dangers of bromide of potassium and of chloral have been recognized; and thus in our text-books, we find the statements that the presence of grave adynamic symptoms contraindicate chloral and bromide of potassium. Opium, on the other hand, in such adynamic states, frequently appears to lend actual support. The results of definite experiment we find to accord with the results of clinical experience; and the value of the former lies in that they confirm, and by the definiteness must tend to enforce, the teachings of the latter.

The choice of a drug, is, however, no simple matter ; an advantage here may be outbalanced by a disadvantage there ; and practical men may object that they would gladly give opium, but that the disordered stomach, blunted appetite, inactive liver, and torpid intestines, more than outweigh the advantages of opium administration. This clearly is a matter for consideration in the individual case under treatment ; and the decision will have to be according as one or other element, asthenia, or derangement of the digestive, etc., powers, is most to be feared. These objections to opium, on the one hand, and chloral and bromide on the other hand, raise the question as to whether, in very many cases, a drug, at present rather extensively used, especially in America, viz., bromide of sodium, might not with advantage be substituted in their place. The salts of sodium generally contrast very markedly with those of potassium ; for the chlorides, bromides, and iodides of these two metals, the lowest figure would represent the potassium as ten times as active as the sodium. These precise numbers refer to action on the ventricle of the frog's heart (See *Medico-Chirurgical Transactions*, vol. lxx., concerning the action of the salts of potash, soda, and ammonia on the frog's heart), but on all hands the evidence is forthcoming that, whilst salts of potassium are very poisonous, those of sodium are very slightly so. One of the marked points of contrast between the two sets of salts is to be found in respect to inhibition ; potassium salts inhibit the frog's ventricle strongly, sodium salts scarcely at all. Here, however, we are considering drugs as to their cardiac effect ; and in respect of this, sodium bromide would rank far ahead of bromide of potassium, chloral, or opium, as to innocuousness. The objections holding for opium would not apply here, for sodium salts are generally very little disturbing to the tissues. With these advantages the general verdict of clinical experience is to the efficacy of bromide of sodium as a hypnotic, and, indeed, as a substitute for bromide of potassium ; and should this position but be maintained, it is clear that bromide of sodium will be in very many cases the sedative above all others to be selected."—*British Medical Journal*.

RICKETS.

The second of the series of monographs upon diseases of children, by Dr. Baginsky, is devoted to rickets, and in 120 pages the author gives a clear and concise account of the disease, which he has had extensive opportunities of studying. Introducing his subject by stating that the original description by Sydenham still remains the best, he reminds us that from the earlier part of the seventeenth century, when the disease was named by Glisson, up to the present day, few maladies have been so widely treated of ; notwithstanding which, we are still far from an exact comprehension of its essential nature. In his opinion there still remain the questions :—Is the disease a local affection of the skeleton, or a constitutional malady ? And what is the nature of the cause that brings it about ? To answer these, he brings to bear his observation of upwards of 600 cases ranging in age from three months to thirteen years.

In the course of a graphic description of a typical case of rickets well worth quoting, did space permit, in its entirety, the author prominently draws attention to the influence of age on the character of the symptoms, showing that when the disease appears in older

children the malformations of the skull, as compared to those of the thorax, spinal column, and extremities, are usually slight. And again, whilst the disturbances of digestion, respiration, and the nervous system are more marked in younger children, after the end of the second year little more than the skeletal deformity may be observed, except for which the child might be almost considered healthy.

As the result of a very considerable number of weights and measurements, Dr. Baginsky concludes that the deficiency in body weight and length, which is met with, is an expression of a very severe disturbance of the general nutrition, and may be represented by the quotient obtained from the division of the length by the weight, which is less than that in health ; also that the relative proportion between the head and thorax is smaller than it should be.

Respecting the influence of rickets on dentition, the author states that, whilst normally the milk-teeth are cut between the seventh month and end of the third year in groups of two and four, in the rachitic cachexia the eruption begins and concludes three months later, and does not occur as a rule in groups. Again, the rickety teeth do not last as long as the healthy, but are good, provided the morbid change is not established until most of the teeth have been cut.

The changes in the skeleton induced by rickets are well described, though with but little attention to our knowledge. In the skull, the alterations are due to coincident atrophy and hyperplasia of the osseous tissue, although the former process is best marked in the earliest months. As to the time of the growing together of the sutures and closure of the fontanelles—a still debated question—the author's experience agrees with that of Ritter. In more than half the cases, the fontanelles were closed by the eighteenth month, and in some cases even by the eleventh.

In addition to the deformity of the jaws described by Fleischmann, which consists in a flattening and angularity of the lower jaw with incurvation of the alveolar margin and a corresponding portion of the teeth, the writer describes an occasional want of symmetry between the two halves of the bone, which produces the appearance of one side thrusting over or being higher than the other. The course of the disease is stated to be mainly determined according to the part of the skeleton which happens to be most actively growing at the time of the time of its onset.

Passing on to the affections of the viscera with the symptoms to which they give rise, we may note the author's remarks on laryngeal spasm, which, he considers, may be due to several causes. Sometimes the convulsions are anæmic in origin, especially through cardiac arrest from peripheral irritation of the organs. Severe dyspepsia determines them in other cases, by stimulation of the vaso-motor centers from gastric irritation.

The systolic cerebral murmur, first described by Fischer in 1852, Dr. Baginsky agrees with Epstein in considering to be a clinical phenomenon definitely related to rickets, since the majority—though not absolutely all—the cases in which it is to be noticed are rickety children. The cause of the *bruit* he regards as still to be discovered ; and though admitting that pressure on the carotid arteries may give rise to a sound that can be heard in the skull, he is far from thinking that this pressure is invariably produced by enlarged lymphatic glands.

The relationship of rickets to disturbance of digestion is shown to be most close. There is, in short, no rickets without such disturbance, and many cases are to

be traced entirely to it. The forms that the dyspepsia takes are very varied; sometimes acute vomiting and intestinal catarrh, with a lingering diarrhoea; sometimes constipation, alternating with diarrhoea, or even becoming intractable; but in all cases there is extreme emaciation. In reference to the very interesting question of hepatic and splenic enlargement, the author's conclusion as regards the liver are entirely negative; whilst, as regards the spleen, he concludes that, though usually enlarged, it is not invariably hypertrophied in rickets. Similarly, swelling of the lymphatic glands is not a constant symptom, nor indeed dependent on rickets. The relaxed and flabby condition of the muscular system, the anæmic and shrunken integuments, and the profuse sweatings, especially of the head, are all referred to, but without any addition to our knowledge.

Speaking of the very debatable subject of so-called "acute rickets," Baginsky quotes two cases accompanied with high temperature, which in the absence of other pathological conditions was only to be referred to the existing rickets, and concludes that the designation of acute rickets is only to be applied to those cases of acute or subacute epiphyseal swellings with more or less pyrexia, with secondary affection of bone. Upon the characters of the excreta, the writer makes some valuable observations based on his own analyses. The total quantity of urine in twenty-four hours varies very considerably, and ranges in specific gravity from 1.010 to 1.040, and except there be complications, abnormal constituents are not met with. It appears that the nitrogen is much more readily lost by the rickety than by the healthy child, whilst the reverse obtains as regards the phosphoric acid. The lime and magnesia salts are voided in the same proportions as in health, and the former are liable to disappear entirely from unknown causes, as occasionally is the case in health. There is a diminution in chlorine in the urine of rickets. For every kilogramme of body-weight the stools contain a greater amount of lime in rickets, whilst the phosphoric acid remains about normal.

The author mainly adopts Virchow's views as to the nature of the rachitic process, attributing the weakness and fragility of the bones to the deficient calcification, whilst microscopically there is seen irregularity of the line of ossification, so that the cartilage extends into calcified zone, with deposits of lime scattered in the cartilage itself.

With this extension of the medullary spaces and vessels beyond the limits of calcification, there is an abundant formation of osteoid tissue, through direct transformation of cartilage-corpuscles into osteoblasts. This so-called metaplastic ossification is the view adopted by Strelzoff. A *résumé* is given of the views of Kassowitz and Schwalbe, the latter of whom considers that the lamellar transformation of bone takes place very slowly in rickets, whilst there is abundant formation of reticular osseous tissue, producing such a condition of osteoporosis as might result from inflammation; indeed, Baginsky is disposed to regard rickets as a form of chronic inflammation, in which the development of the vessels and distribution of the nutritive material are the chief determining conditions of the process.

His analysis of the bones in young cases of well-marked rickets corresponded with those of other authors, but he failed to confirm the observation of Marchand and Lehmann that gluten was absent.

The subject of etiology, is treated at length. The disease certainly appears more frequently in the second year of life; and, on the whole, the writer is dis-

posed to doubt the influence of heredity in its production, notwithstanding Ritter's views to the contrary. As regards the influence of the constitution of the parents in its development, Baginsky altogether denies the view of Parrot, that rickets is a form of congenital syphilis, though he admits its frequent, or even more frequent, occurrence in syphilitic children: but at the same time, he has met with severe cases of congenital syphilis where no rickets existed. No direct relationship can be said to exist between rickets and phthisis. In cases of the latter the anæmia, malnutrition, and wasting play an active part in the deficient tissue-nourishment, whether of foetus or of infant.

The advanced age or extreme exhaustion of the parents exert any influence they may have in the same way.

The feeding of the child and other points of general hygiene are also considered in reference to their share in causation, but without any noteworthy remark.

Discussing the question of pathogenesis, the writer concludes that no one disturbing cause is sufficient to induce rickets, and shows by an extensive series of experiments that the withdrawal of lime salts from the food produces anomalies in the bones anatomically identical with those of infantile rickets; that they are arrested in their growth in length but are much increased in thickness, especially at the epiphyses, the microscopic structure of which exactly resembles rickets; further that the osseous tissue under such conditions yields less ash relatively to the animal matter. The general nutrition of the body, so far as mere weight is an indication, does not seem to suffer, but the tissues, especially the muscular, are flabby and anæmic. The simultaneous administration of lactic acid intensifies all these symptoms.

Everything points, the author considers, to the regarding of rickets as a genuine dyscrasia, which determines a severe disturbance of the general nutrition; and he attributes the predominance of the skeletal affections to the active growth taking place in the bones at the time when the disease is developed.

The brief chapter on treatment indicates nothing new, but occasion is taken to refer to the small therapeutic value of lime salts.

Only the briefest abstract has been attempted in the foregoing lines; those portions having been especially selected which the author has more peculiarly made his own, but enough has been said to show that the work is probably the most able extant upon the subject.—*Lon. Med. Rev.*

ON THE CO-EXISTENCE OR SEQUENCE OF DIFFERENT FORMS OF SKIN-DISEASES

Dr. J. K. Spender, of the Bath Mineral Water Hospital, describes a "Case of Lichen Psoriasis," at that hospital, which occurred in a man aged 44. The symptoms of psoriasis soon disappeared under hydrotherapeutic treatment, but the battery had little control over that part of the eruption which might be correctly termed lichen. The author continues: "I have had lately, in private practice, a case which illustrates this in which accidental circumstances may cause different forms of skin-disease to succeed each other. A retired farmer, aged 80, very temperate in all his ways, became depressed and generally out of health at the beginning of this January. In a few days, there was an acute eruption of lichen over a large part of the body, but

most severely, perhaps, on the upper arms, on the flexure side of the elbows, and about the wrists. There was a rough symmetry in the grouping of the papules, which were sufficiently red and multitudinous to deserve the name of lichen agrius. There was not so much pruritus as a general heat or smarting; and as if to exhibit the eczematous or boiling-over process, which any form of skin-congestion may undergo, a large vesicle was developed on the front of each wrist among a crowd of angry papules. After a few days, the lichenous eruption desquamated on the arms as cleanly and decisively as if it were the sequel of specific fever. On January 21st, small bullæ of pemphigus were seen on the back of both wrists and hands; presently also about the feet and ankles; and soon afterwards, very large bullæ formed on the legs, thighs and forearms. There were grave adynamic symptoms at the same time. By careful treatment and good nursing, the patient is now (Feb. 4th) pulling safely through. Now, how are we to interpret this chain of curious phenomena? Do they form a series of what Sir W. Gull calls 'nerve vagaries'—a succession of nerve-storms, one disturbance effacing as soon as possible what went before, as if in a hurry to display its own signs? Or, according to a less transcendental view, we may regard different elements of skin-texture as effected by certain morbid influences, one after the other; and the wonder is, that a person at such an advanced age should be able to survive the shock of so many cutaneous lesions."—*British Medical Journal*.

A NOVEL AGENT IN THE RADICAL CURE OF HYDROCELE.

J. E. W. Walker, M. R. C. S. E., L. S. A., late H.M., 55th Regt., writes:—"In bringing this matter before the profession, I feel bound to admit that, but for a curious accidental circumstance, the agent might never have presented itself to my notice. In the year 1875, I proposed to operate upon a patient, aged 65, for the radical cure of hydrocele of the tunica vaginalis. The disease had existed for about ten years, and had been repeatedly emptied by other surgeons. At this time I removed, by the trocar and canula, about twelve ounces of serum, and, by accident, took from my pocket a bottle containing about two drachms of liquor ergotæ (Battay) in the place of the same quantity of tincture of iodine, which it was my intention to throw into the cavity. On my return home, I discovered the mistake and watched the patient for some hours at intervals. No inflammatory state occurred, and there was entire absence of pain, so that I allowed my patient to return to his ordinary occupation the next morning. To the present time there has been no return of the abnormal secretion. I have since, on two occasions, used the same plan with perfect success, and I attribute the cure to a specific action, exerted by ergot which re-establishes the balance between secretion and absorption."—*British Medical Journal*.

MEDICAL NOTES AND NEWS.

AMERICAN MEDICAL ASSOCIATION.

The thirty-fourth annual session will be held in Cleveland, Ohio, on Tuesday, Wednesday, Thursday, and Friday, June 5, 6, 7, 8, 1883, commencing on Tuesday at 11 A. M.

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies as are recognized by representation in their respective State Societies, and from the Medical Department of the Army and Navy, and the Marine Hospital Service of the United States.

"Each State, County, and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates for any particular State, Territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Secretaries of Medical Societies as above designated are earnestly requested to forward, at once, lists of their delegates.

Also, that the Permanent Secretary may be enabled to erase from the roll the names of those who have forfeited their membership, the Secretaries are, by special resolution, requested to send him annually a corrected list of the membership of their respective societies.

SECTIONS.

"The Chairmen of the several Sections shall prepare and read, in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective Sections. * * * *"—*By-Laws*, Art. II. Sect. 4.

Practice of Medicine, Materia Medica, and Physiology.—Dr. J. H. Hollister, Chicago, Ill., Chairman; Dr. J. G. Lee, Philadelphia, Secretary.

Obstetrics and Diseases of Women and Children.—Dr. J. K. Bartlett, Milwaukee, Wis., Chairman; Dr. G. A. Moses, St. Louis, Mo., Secretary.

Surgery and Anatomy.—Dr. W. F. Peck, Davenport, Iowa, Chairman; Dr. P. F. Eve, Nashville, Tenn., Secretary.

State Medicine.—Dr. Foster Pratt, Kalamazoo, Mich., Chairman; Dr. T. L. Neal, Dayton, Ohio, Secretary.

Ophthalmology, Otology, and Laryngology.—Dr. A. W. Calhoun, Atlanta, Ga., Chairman; Dr. Carl Seiler, Philadelphia, Secretary.

Diseases of Children.—Dr. R. F. Blount, Wabash, Ind., Chairman; Dr. J. H. Sears, Waco, Texas, Secretary.

Oral and Dental Surgery.—Dr. D. H. Goodwillie, New York City, Chairman; Dr. T. W. Brophy, Chicago, Ill., Secretary.

A member desiring to read a paper before any Section should forward the paper, or its title and length (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements at least one month before the meeting.—*By-Laws*.

Committee of Arrangements.—Dr. X. C. Scott, 393 Euclid Avenue, Cleveland, Ohio, Chairman.

AMENDMENTS TO THE CONSTITUTION.—Offered by Dr. N. S. Smith, Dakota: "To provide for the admission to membership of two delegates from the Medical Bureau of the United States Indian Service, to be nominated by the Surgeon-in-Chief of that Bureau, and approved by the Secretary of the Interior."

Offered by Dr. J. M. Toner, D. C.: "That the office of Permanent Secretary be vacated, and that the Nominating Committee hereafter annually nominate a Secretary who will serve without compensation."

Offered by Dr. F. Pratt, Mich.: "That the law requiring the nominations for officers to be made from those members present at the annual meeting, shall apply only to the President, Vice-Presidents, Chairmen and Secretaries of Sections, the Assistant Secretary, the Chairman of the Committee of Arrangements, and the Judicial Council."

Offered by Dr. J. M. Keller, Ark.: "To permit the holding of the annual meeting as late as the first Tuesday of September, if desirable."

Offered by Dr. J. H. Sears, Ark.: "That the Chairman and Secretary of each Section may add any number of earnest workers to their Sections, in addition to those named by the Nominating Committee, and that the Librarian be made a permanent officer."

AMENDMENT TO THE BY-LAWS.—Offered by Dr. J. W. Smith, Iowa: Art. II. Sect. 8. Permanent Members: strike out the words "but without the right of voting."

WM. B. ATKINSON, M. D.,

Permanent Secretary.

Stimulants for Children.—Regarding the use of alcoholic stimulants for children, I can only say that in health the less the better and that even in disease their use is to be guarded and strictly medicinal. "Sipping from papa's glass" is a foolish and even dangerous custom, and may lay the foundation of craving for their immoderate use. Alcohol is accredited by Dr. Walshe and others with delaying the development of phthisis; that indeed "it excludes the formation of tubercle." Dr. King Chambers considers that it is rather that "the tubercles do not so soon break down into suppuration."

Whether with the object of preventing tuberculosis, or in great exhaustion, or in protracted illnesses etc., if stimulants are to be given, what forms are best for children? As a daily drink I regard a light bitter ale, or a little good sound porter as among the most wholesome. The child should be instructed to drink rather towards the close of its meal than near the commencement.

Many of the light Hungarian, French, Greek, and Australian wines are pleasant and harmless beverages. Diluted with water they refresh in hot weather and may assist feeble digestion. Champagne (but it must be excellent in quality) is *the* wine for a sick stomach; whether the cause be sea-sickness or what not, with a small lump of ice in it, we have few more efficient remedies. Champagne is light, diffusible, easily absorbed, transitory in its effects. It is admirable where a rapid volatile stimulant is required. A few drops of old Cognac may be added in extreme prostration. Burgundy, especially the better kinds, such as Romanee, Chambertin, etc., are magnificent restorative stimulants. I have known patients recovering from exhaustive illnesses remark that their glass of Burgundy seemed to "give them life." Port, if old and genuine, has also undoubted high value as a blood restorer. But the absolute necessity in sickness of having really fine wine deters one from running the risk of fusel oil and logwood. At any rate, that restorative wine is best the purity of which can best be guaranteed is a useful rule to bear in mind. I may enumerate a few very high-class restorative wines, special cases, of course, indicating some, rather than others—Chateau d'Yquem, Madeira, Ruster, Red Kep-

hesia, Como, Oberingelheimer, Steinberger, Cabinet, Carlowitz, Tokay, etc.

I have seen good results from the old-fashioned plan of allowing delicate young persons a glass of rum and milk early in the morning, say at least an hour, but better, two hours before breakfast. The rum should be old Jamaica and a small quantity is enough. Brandy when necessary in sickness *must* be old. "Three-star Hennessy" is reliable, but whatever the kind selected may be the *older* the better, and it should be obtained where reliance can be placed on the vendor. The young, raw, fiery brandies sold are bad enough for strong stomachs; they are simply poison to the sick child. I have often, when an out-patient's physician, in crowded London districts, shuddered to hear of the "drop of brandy," and the "drop of gin," which some unhappy little one had been compelled to swallow to "do it good."

Regarding ginger and orange and other "home-made" wines, they are innocent enough, except that with some children they are apt to produce biliousness, or to turn sour on the stomach.—*Ellis Dis. of Children.*

Baths for Children.—A Tepid Bath for a child should have a temperature of about 85° Fahr.

A Warm Bath for a child should have a temperature of about 90° Fahr.

A Hot Bath for a child should have a temperature of about 98° Fahr.

When a child evidently dreads the water, an excellent plan is that suggested by Dr. Eustace Smith, viz.—to cover the bath with a blanket, to place the child thereon, and then gently to lower it into the water. By this simple plan much screaming, terror, and unnecessary exhaustion are avoided.

Ice is a most useful agent in the diseases of children, applied to the head in convulsions, fever, meningitis, etc.; sucked, it is grateful in fevers, and valuable in affections of the throat, *e. g.*, diphtheria and tonsillitis, etc. It is also useful to check sickness and hemorrhage.

Dr. Chapman's spinal ice-bag is recommended in laryngismus stridulus, chorea, eclampsia and tetanus.

Blanket Bath.—This is useful in producing ready diaphoresis. A blanket is wrung out of hot water and wrapped round the child. Three or four dry blankets are then thrown over and the child left for half an hour or so. The body should then be rubbed with a soft "fluffy" towel, to absorb the moisture thoroughly, and the child should of course remain in bed.

The Wet Compress consists simply of a roll of flannel or soft linen dipped in cold water and wrung out, and then applied to the part indicated; over it a piece of waterproof sheeting may be placed, rather larger than the roll.

The Cooled Bath.—The child is immersed in water at 95° F., which in about thirty minutes is cooled to 70° F., or lower, if necessary, by the addition of cold water. A child may, however, often be wrapped in a wet sheet, and a little cold water poured over its head as a readier measure answering a similar object.—*Ibid.*

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COLLOQUY BETWEEN DRS. WARREN AND PUTNAM.

Dr. Warren. Have you interested yourself in the struggle for liberty which some of us are making in our effort to free ourselves from the bondage of the Code of Ethics, which has hitherto held us in a most degrading subjection?

Dr. Putnam. I have noticed the "struggle for liberty," as you are pleased to call it, but I cannot say that I sympathize with its objects. It seems to me rather a struggle for license, than a struggle for liberty.

Dr. Warren. Is it possible that you, the descendant of a family famous for its love of freedom, should hold such views, and be willing to remain in a kind of moral slavery, in which your masters forbid you to do as you please in matters of conscience? How can you call yourself a freeman while you remain in this condition of servitude? I hold that in matters of conscience every man should be free to think and act as he chooses.

Dr. Putnam. Your idea of freedom is perhaps a little too broad. There never was a time in any civilized government in which men were permitted, without restraint, to act according to the dictates of their conscience. They might indeed be permitted to think as they pleased, but not to act as they pleased. To permit this would be subversive of social order and of all government. It would permit a man to take the life of his own child, if he thought it his duty to do so. As every jurist will tell you, you will have to abandon this ground, which I see some of your friends have taken, if you wish to commend your present struggle to the sympathies of an intelligent and civilized world. It was not this liberty for which your fathers and mine shed their blood.

Dr. Warren. Conceding what you have said to be true, you will not deny that all good citizens are bound to respect and obey the laws, and the laws of the State of New York declare that the diplomas of the Homœopaths and Eclectics are legal qualifications to practice. To refuse therefore to consult with them is

virtually to disobey and to disrespect the laws of the State. For this view of the subject we have the authority of at least one distinguished jurist, Prof. Dwight, of the Columbia Law School in this city.

Dr. Putnam. I reply that, if by "respect" is meant approval, the statement is not correct, but if it means obedience it is correct. Our Legislators pass many laws which I cannot respect in the sense of approval, but which I propose to obey.

That I must obey the laws is undoubtedly true; but our legislators have not passed a law declaring with whom I shall or shall not counsel. If they had done so then indeed would our liberties have been invaded. If a law were enacted legalizing a policy shop, or any other more infamous establishment, this would not make it our duty to frequent such establishments.

The time has been in this State (and may be again), when any man who chose could practice medicine. If your argument is sound we ought then to have consulted with any ignorant charlatan who called himself a doctor.

Dr. Warren. Well, but, Dr. Putnam, we assume that these men with whom we propose to counsel are not ignorant, but that some of them are as well instructed in the science of medicine as we are. What then?

Dr. Putnam. I doubt the correctness of the supposition, but if it were true it would not justify your proposed action. If a man learned in all that pertains to the science of medicine were to declare publicly that he prescribed in all cases nothing but moonshine, and even to advertise himself as a moonshine doctor, would you seriously claim that I ought to consult with him in a case of colic or of pneumonia, or of strangulated hernia?

Dr. Warren. You have made an extreme case, which does not apply to either of the parties with whom we desire to associate ourselves.

Dr. Putnam. Not at all. Study for yourself the medical theories of these gentlemen, and see if you can make of them anything more than moonshine. They consist of nothing but the most absurd and ridiculous antitheses of common sense.

Dr. Warren. But, as you ought to know, they have openly and publicly declared that they have renounced the practice of prescribing moonshine, and that they are now giving the same medicines which we do.

Dr. Putnam. If this be so, then all that remains for them to do is to renounce the title of "moonshiners," and we are ready to consult with them. But I very much fear that so long as there are so many people who believe in moonshine, that they will not consent to do this. There are a good many excellent people who sincerely think that the so-called moonshiners are continuing to administer to them the genuine article in its most attenuated form, and for a moonshiner to renounce the title and call himself simply a doctor, would be to show the hand and throw up the game altogether. That would hardly pay. But suppose we drop this subject for the present, to be resumed, perhaps, at some future time, when we have both more leisure.

Dr. Warren. Certainly, I will do so with pleasure; but, before parting, I wish to say that I cannot but think that the code of ethics is an encroachment upon our rights as free American citizens—a worm at the root of the precious tree of Liberty which our fathers planted; and I for one, whatever may come, propose to stand by the flag of revolt which our leaders have raised. I should feel myself unworthy of my sires if I did otherwise. No true patriot could wish to fall in a nobler cause. Good-by, doctor.

LECTURES.

TUBERCULOSIS.

A CLINICAL LECTURE DELIVERED AT THE COLLEGE
OF PHYSICIANS AND SURGEONS, MARCH 29, 1883.

PROF. FRANCIS DELAFIELD, M.D.

CASE I.—This young man is a German, 25 years of age, and he came to this country five years ago, and has since lived for two years in Pennsylvania and for the past three years in New York. The first thing that troubled him was a loss of appetite a year ago, and soon after he began to have a diarrhoea, as he says. He had on the average three small, thin, dark, watery passages a day, and they were always painful and generally mixed with blood and slime. He was not at any time sick enough to keep bed, and he had only a little fever. This condition has remained ever since with occasional periods of improvement. For the past week he has only had one passage a day, but they are no longer painful and the amount of blood and slime is diminished. About a month before the diarrhoea first came on he began to spit up blood. The first time he says he raised about a wineglassful, and he coughed it up, not vomited. The next hæmorrhage was four weeks after the first, and six weeks later he had a third, and each time he raised about the same amount of blood as at first. Then in September he had a fourth hæmoptysis, and this time he coughed up a spittoon full of blood. Since then he has had no more hæmorrhages until last Saturday, when he again lost about a wineglassful of blood. He has a slight cough all the time, which does not trouble him much except when he goes out into the cold air. He is quite short of breath upon any exertion. He has not lost much flesh or strength, yet he does not feel able to work, and in wet weather he has a feeling of lassitude and aversion to work and seems worse in every way.

As we strip this man you see he is somewhat emaciated, and more so than you would expect from seeing only his face, which is still quite full. His thorax is not symmetrical in shape, and his shoulders are uncommonly high, and his shoulder-blades thrown back, and just below his neck there is an irregularity of his spine which looks as if he had suffered from an old attack of caries of the vertebrae from which he has recovered. The percussion resonance is not really very good under either clavicle, but there is no very great difference between the two sides. The breathing and voice sounds are good on both sides of the chest in front. Posteriorly there is slight dullness at the lower edge of the scapula on the right side, but there is no change in the breathing at all. At the base of the neck on the left side you see a scar which looks tolerably recent, and just below this is an older looking one, and they were probably caused by the rupture of inflamed lymphatic glands. He says that the first one broke five years ago, and the second a year and a quarter ago. I find nothing unusual about his abdomen.

We have here then a young man, a German, 25 years of age, who says that about one year ago he first raised a little blood, and he coughed up about a wineglassful, and then four weeks after he began to have a number of loose passages from the bowels during the twenty-four hours consisting of small quantities of

blood and mucus, and these were mingled sometimes with semifæcal passages accompanied with considerable pain and a slight fever, and these have continued more or less marked up to the present time. The raising of blood has been repeated three or four times at intervals, and at one time he raised he says as much blood as would fill a spittoon. He does not seem however to have lost much flesh or strength, though he has lost some. Besides he is not so well in wet weather as at other times, and he always has a little cough. When we examine his chest we find evidences of an old trouble resulting in caries of the spine and an inflammation of the lymphatic glands of the neck, resulting in suppuration; but in the heart and lungs we get no physical signs at all, except in one little spot over the right lung behind the percussion note is a little duller than elsewhere, but there is no change in the breathing anywhere. The question now is, what is the matter with the man.

Well, there is one point at least that we can certainly be sure of, and that is, as regards the condition of the large intestine. If he has been going on for nearly a year constantly passing blood and mucus in small quantities, he must either have ulcers or else a chronic catarrhal inflammation of the lower intestine, and from the length of time it has been going on I think we may be pretty safe in concluding that in either case the disease is not very extensive, but probably involves only the lower end of the large intestine. But then there comes up besides that the business of the spitting of blood a number of times during the past year. If he had only raised a little blood once or perhaps twice we might pass over this symptom as being of no consequence, but the fact is that he has raised it several times in both small and large quantities, and such a raising of blood is not a symptom which can be passed over lightly. Of course under these circumstances we naturally look for the changes of phthisis in his lungs, but on an examination of his chest we do not find the physical signs of any phthisical change. But on looking further we do find that the man has already suffered from two other examples of tubercular inflammation. The caries of the spinal vertebrae is an evidence of an old tubercular osteitis, and the broken down glands of the neck are a consequence of tubercular adenitis, and although there are no physical signs to prove it the probabilities are that this man already has milary tubercles in his lungs, but they are not so numerous or so crowded together and surrounded by enough of the products of inflammation to give evidence of their presence by dullness on percussion or the presence of rales. The pleura is evidently not involved and there are no changes in the bronchi or in the texture of the lung itself, and nothing wrong there except the presence of a small number of milary tubercles. This then I imagine is the condition at the present time; there are ulcers in the lower intestine and milary tubercles scattered about in the lungs.

As to treatment, we can probably do something to relieve the condition of the intestines, but we cannot do much for the lungs. For the trouble in the large intestine, I think the best plan will be to give him some suppositories made up of iodoform and bismuth, and let him use two a day, morning and evening. These will tend to lessen the chronic inflammation of the mucous membrane lining this part of the bowels. Besides, I would keep his bowels open by means of salts, or a Seidlitz powder, or small doses of castor oil or other mild laxative every morning, so as to give him a natural fecal movement every day, and in this way he can perhaps get well of the trouble with his large

intestine: and perhaps we had better be satisfied at present with directing our treatment to this.

CASE II.—This young man, 20 years of age, says that about the first of January he began to have a heavy cough, and this has continued up to the present time, but is less severe at present. He has also spit up blood twice after coughing. Soon after the cough began, the chain of glands on each side of his neck began to swell, but this swelling has also subsided to a great extent, and he thinks he has been improving during the past month.

When we examine this young man we find that there is still some evidence of an enlargement of the lymphatics of the neck on each side, but they are clearly not as large now as they have been. Then at the base of the neck of the left side we find a gland that is now suppurating, and this is probably due to softening and breaking down of an inflamed gland. The percussion resonance is not as good as it should be under either clavicle, but this dullness is especially marked on the right side, where the pitch is decidedly higher than on the left side. There is no special difference in the breathing on the two sides, but the voice sounds are decidedly louder on the right side than on the left side. The heart is not increased in size, but it is beating a little feebly. There is no murmur. I do not get very good pulmonary resonance over the chest behind, and this change is more marked on the right side than on the left. There is no special change in the breathing, but the voice is louder on the right side posteriorly. His body appears to be fairly well nourished.

We have here, then, a young man, 20 years old, who began about the first of January to have a cough with a mucus expectoration, and then he began to feel sick and to run down and to lose flesh and strength, and finally there was an enlargement of the glands of the neck. He sought medical advice, and was put on cod liver oil and the syrup of the iodide of iron, to improve his nutrition, and he was given an ointment of the iodide of lead to rub into the swollen glands. After beginning this treatment, and after spitting blood once or twice, he commenced to improve, and the glands have since gone down and the cough has nearly disappeared, and he has gained flesh and strength and is feeling better in every way. Now, the question is, what was the matter with this young man? Why has he been so sick, and what was his disease?

"Phthisis with a tubercular enlargement of the glands of the neck," you say. But let us take up these two varieties of disease separately. The glands of his neck have been enlarged, and we may reasonably suppose that this enlargement was tubercular in character. That the adenitis, instead of being a simple hypertrophy of the glandular tissue, has been characterized by the production of tubercular tissue in addition. This adenitis has now subsided, and as it has been doing so the glands have diminished in size except one, in which a suppurative inflammation has taken place and resulting in the formation of matter which is now discharging. He has probably then had a tubercular adenitis. But as to the evidences of phthisis, it is a very different question. The time has been too short since the first of January to account for so much improvement in his condition if he had phthisis. So we must think of something else to account for his pulmonary symptoms. He could have had a simple bronchitis which would account for his cough. But he may have had another condition existing in his lungs at that time which made him feel so badly and run down so much. Just as he had a tubercular adenitis of the glands of

the neck, so at that time he probably had a tubercular adenitis of the glands in the cavity of the thorax, that is, of the bronchial glands. Such an adenitis is quite common in children, but not so much so in men of this age, though it sometimes does occur in adults. I think that this is the case here, and that with a tubercular adenitis of the glands of the neck he had a tubercular adenitis of the bronchial glands, and that he has gradually been improving from these conditions under appropriate treatment; and I should advise that the same medicines be kept up, except the ointment which is no longer needed.

CLINICAL REMARKS ON VARICOSE VEINS.

DELIVERED AT THE UNIVERSITY MEDICAL COLLEGE OF
NEW YORK, MARCH 28, 1883.

BY

PROFESSOR J. W. WRIGHT, M. D.

CASE I.—GENTLEMEN:—This woman is 32 years of age, was married at 19, and has had eight children. She comes to us for a swelling of the veins of her legs. She says she thinks they first made their appearance before the birth of her fourth child. She is now in the family way, and thinks she is in the sixth or seventh month of pregnancy. The veins do not trouble her at all, except when she is carrying a child.

This is a very typical case of varicose veins, involving all the superficial veins covering the whole instep, and going around the ankle and passing up the leg to the knee. The veins appear nodular and tortuous and very much enlarged. You notice in some places that the skin is red, and in these places it feels sore and itches, as you would naturally infer would be the case where the circulation is so much interfered with as here. Now, I will ask any of you what you suppose to be the origin of these swollen veins in her case. You say, "it is a case of milk leg, due to the pressure of the child on the iliac veins, thus interfering with the passage of the blood upwards into the general circulation;" and that I suppose to be the true explanation. The woman has been bearing children very rapidly, and at the first birth she says she had twins. That perhaps is an important point for us to know. The children were carried to full term, and were of good size, so at that time there was probably more than the normal amount of pressure made upon the iliac veins. That, I presume, was the foundation of this trouble, and her repeated pregnancies subsequently have served to continue the evil.

As regards the treatment of cases of this kind in a pregnant woman, I do not think that surgical interference is to be thought of at all. This woman ought to be supplied with an elastic stocking, not one of the ordinary kind, which leaves the greater part of the foot uncovered, but one made so as to come clear down to the roots of the toes, because the foot is really the worst part of all in her case. I think if she could have an elastic stocking made reaching from her toes up to a little above her knees, where there are one or two quite large veins, she would experience great comfort from it, and she would probably go on to the end of pregnancy with no further difficulty from this source. But if nothing is done to support these veins, I think that before many weeks have passed those red spots on her leg will take on an ulcerative process, and then she will have one, two or perhaps three ugly looking and obstinate varicose ulcers there. As long as she is

a child-bearing woman, I would not recommend the performance of any operation for her relief; though there are several methods of obliterating the veins which might otherwise be employed, such as passing needles beneath the vessel, and then making pressure by twisting pieces of silk over the ends of the needles, or by tying them subcutaneously, and the like. But I would not recommend any of these in this case, as she is only troubled in pregnancy, while pressure is being made by the child in utero, and if she will wear an elastic stocking at such times, she will get along with but little inconvenience. When, as in this case, a patient is unable to buy an elastic stocking because of the expense, which is from five to seven dollars for a silk one, or about half this sum for a linen one. She can probably get one free by going up to the Institution for the Relief of the Ruptured and Crippled, where, I believe, they are in the habit of supplying stockings, trusses and apparatuses of that kind to those who are unable to buy them for themselves.

CASE II.—Here is a case, Gentlemen, that comes in nicely on the heels of one that has just gone out. You notice on this man's leg, not in so marked a degree as in that woman, but still sufficiently prominent to be seen, a number of varicose veins pretty well marked, on the outside of the ankle and winding about on the foot and leg. Now you see this man also has a sore on the inside of the shin bone a little above the ankle, which he said came from striking his leg against a bar of iron which knocked the skin off. He says that he did not have any varicose veins before the injury to his leg; but this may be so or it may not, for he may have had them and not have had his attention called to them before, and they probably did exist. At all events he struck the leg against something and knocked off the skin three years ago, and the sore thus made has not healed up since. Now that is not the kind of sore to come from striking the limb if there was nothing wrong behind that. Such a sore on a man with a healthy leg would have healed up long ago and have staid well. But he says this sore won't heal up, and it stays so for a short time, and then the thin layer of skin over it gives way and it breaks open again, and this is repeated over and over again. I believe the cause of this is that these varicose veins interfere with the nutrition of the skin and so prevent the healing of the ulcer. I believe this is a varicose ulcer, an example of what would ultimately take place on the leg of that woman who just went out if she should do nothing to support the vessels. When this leg heals only a thin cicatrix forms, and this cicatrix breaks open again when the pressure of the blood becomes too great. I think that this may be obviated by first healing up the sore and then supporting the leg. But if the support is omitted I do not think that the sore will remain healed for any length of time. If he will wear an elastic support either in the shape of an elastic stocking or an Esmarch's bandage of rubber cloth, and apply it from the roots of the toes to a little above the knee, I think that the sore will get well whether any dressing is applied to it or not. But he may put any kind of ointment you please or any other dressing upon the sore, yet if he omits to bandage the leg, at the end of six months the ulcer will be just as large or even larger than it is now. I would like to try the effect of a simple elastic bandage on this leg, and the only other treatment I would employ would be to stimulate the sore slightly with a little nitrate of silver, "to wake it up" as we say, and to cause it to throw out granulations. It acts now very much like an irritable ulcer, but it will not come under that head

because it is not tender. I should say then that it is a varicose ulcer which is indolent in character.

I will have this sore stimulated with nitrate of silver and protected by a piece of lint spread over with simple ointment, and over that I will have an elastic bandage applied from his toes up to the knee, not tight enough to shut off the circulation from the leg but simply enough to compress the superficial veins, and then I will tell him to come back from time to time to let us see how the sore heals up. And as to how the varicose veins if they do not get any better under this treatment they certainly will not get worse.

THE USE OF THE FORCEPS IN DELIVERY

A LECTURE DELIVERED AT THE NEW YORK UNIVERSITY MEDICAL COLLEGE, MARCH 28, 1883.

BY

ROBERT A. MURRAY, M. D.

GENTLEMEN.—I shall talk to you to-day about the use of the forceps; but I will first run over again very briefly some of the points I have already discussed connected with the operative procedures of midwifery. In the first place, these operations are of two kinds, conservative and sacrificial. Under conservative operations are included the induction of premature labor; the use of the forceps; and the performance of version. Symphysiotomy might be added, but this is an operation that is now seldom done. The sacrificial operations are craniotomy or breaking into the vault of the skull; cephalotripsy, which breaks up not only the vault but the base and the occipital portion of the skull as well; the Caesarian section; and, lastly, laparotomy, which after a while will undoubtedly be put among the truly conservative operations.

You remember I next told you about presentation and position, and I said that the presentation was that part of the fœtus which first appeared at the superior strait at the commencement of labor. There are three different presentations, called cephalic, podalic, and trunk presentations. Of the cephalic there are four varieties, occipital, vertex, mental, and face; of the podalic three, breech, knee, and foot; and of the trunk two, the right lateral plane, and the left lateral plane—and these are divided into the right lateral plane with the dorsum anterior and posterior, and the left lateral plane with the dorsum anterior and posterior.

The position of the child is, the relation of the presenting part to certain fixed points on the mother's pelvis. Thus, if the occiput presents it is compared with a fixed point on the pelvis, and from its relation to this point we get occiput anterior and occiput posterior positions, and these are sub-divided into L. O. A. and R. O. A., and R. O. P. and L. O. P., and they are called either by these names or by their numbers, as 1st, 2d, 3d, and 4th positions, according to the frequency of their occurrence.

We now come to the operations of midwifery, and I shall endeavor to perform each of them before you on the manikin. The process of the induction of premature labor I can not show you from the nature of the case, but I can show you how to apply the forceps and perform version.

As preliminary to the performance of these, as of all the operations of midwifery, it is indispensable that you become so practiced in touch as to be able to determine at the commencement of labor not only the presentation, but also the absolute position of the child. By acquiring this skill you will make yourself

quick in resource, and acquire a feeling of self-confidence whenever summoned to a case of labor, and you will instinctively know what to do in what are called bad cases, where any unusual complications arise.

There are two ways of determining the presentation and position of the child. 1st. Externally, by palpation of the mother's abdomen, and so determining by feeling the position of the breech or head, or any other part; or by listening for the foetal heart and determining its position, and whether it is most distinct at the upper or lower portion of the abdomen or on the right or left side; and, lastly, the general conformation of the uterus will aid you. 2d. Internal touch will tell you the part presenting, and if it is the head you can determine its position by the position of the fontanelles and the direction of the sutures, and similar points will aid you in determining the position in other presentations.

To-day I wish to afford you an opportunity of practising this touch, and while some of you are doing this I shall go on and tell you of the conditions requiring the use of the forceps, and then show you how to apply them.

Always remember one thing, and that is, to feel, whenever you go to a case of labor, that you are going to deliver that child before you leave the patient, and so be prepared with resources to meet any emergency that may arise. This feeling of self-confidence is indispensable, for it is this only that will make you a successful obstetrician.

When you are called to a case you will ordinarily find that the nurse is there before you, and she will be able to tell you something of the condition of the lady in regard to the progress of the labor, and she can inform you as to the frequency of the uterine contractions and whether the show has appeared or not. If it has, then ask the nurse to let you examine the patient, and proceed to do so without making any preliminary talk about former labors and the like, and never give any definite reply to questions of friends as to the probable duration of labor. In making the examination you first determine the presentation and position of the child and how far the cervix is dilated, and then you estimate as nearly as possible the size of the pelvis, and then the condition of the soft parts. This examination must be made before the bag of water breaks if possible, because if you find it is necessary to perform version or any other operation it is desirable to do so while the waters are still present.

Suppose you determine that a forceps delivery is necessary, either because of a tedious or powerless labor, or because the outlet of the pelvis is too contracted for the delivery of the child's head, or because of any other complication such as eclampsia, rupture of the uterus, placenta praevia, etc., just as soon as you have determined the condition you must always tell somebody who is interested in the patient that it will be necessary for you to use the forceps, and thus avoid getting yourself into a scrape. You can not do the simplest surgical operation without permission either from the patient or her friends; and if without their permission you should use the forceps, and in doing so should cause the slightest laceration of the soft parts they could sue you for damages. After you have arranged this matter the next question is, as to the use of an anæsthetic. In an ordinary forceps operation you do not absolutely require an anaesthetic, but you will generally find it best to use it because the patient is thus freed from the sense of shame she might otherwise feel from the exposure which is necessary, and at the same time the soft parts will be more relaxed, and

you will have better control of the case in every way. Chloroform is almost always used in such cases, but it should be pushed to the surgical extent only when you will be likely to cause very severe suffering. At other times it is only necessary to keep the patient slightly under the influence of it, and a few drops poured on a handkerchief and held near the patient's mouth at the commencement of every pain will ordinarily suffice.

Preparatory to the operation the patient ought to be brought down to the edge of the bed, and she should be made to lie in the dorsal position always with her knees drawn up, and an assistant should stand at each side to hold the limbs secure, so that she can not suddenly extend her legs while you are pulling on the forceps and so rupture the perineum. Next oil your hand well and introduce two fingers into the vagina and determine absolutely the position of the head before applying the forceps, which are to be applied to the head only. Then see to emptying the bladder and if possible the rectum too, provided it has not already been done. Always have the bladder empty, for if it is not you will have more difficulty in finding the place where the forceps are to be applied, and the pressure of the head during the process of extraction may cause a rupture of the bladder, or it may so bruise it as to cause a slough to form and then after four or five days this may fall off and leave a vesico-vaginal fistula.

Now take the forceps and warm them in water, but be careful not to have it too hot or it will stimulate the uterus to contract down upon them, and you will find it difficult to pass them up to the sides of the head. Then oil the outside of each blade, but not the inner side for the secretions upon the child's head will lubricate it so that it will easily slip over. In applying the forceps the first thing to do is to lock the blades so that you can see before hand which is the uppermost one. You need not be concerned about which is the right hand or the left hand blade, for these vary with different kinds of forceps and they depend upon the style of the lock. All you need remember is, after locking the forceps to always take up the undermost blade and introduce it first. The reason for this is, that it can then be pressed down on the perineum so that its handle will be out of the way while you are introducing the uppermost blade, and this is much less awkward than it would be if the upper blade were passed first, for then its handle would have to be held up against the symphysis pubis by an assistant while you were passing the under one.

Now I will try to show you on the manikin the correct method of using the forceps. After oiling the blades pass two fingers up the vagina until they touch the child's head, and press them well toward the side on which you are about to apply the undermost blade so that they will lie in contact with the surface of the child's head. As you will naturally have introduced the fingers of the right hand first, you then take the lower blade of the forceps, holding it loosely between the thumb and fingers of the left hand, so that you cannot apply much force, and pass it along the fingers in the vagina until it comes in contact with the child's head. Now the next thing to do is to get the cephalic curve of the blade to pass over the child's head without using force enough to push it away and so alter its position. You therefore press but lightly, keeping the blade well against the fingers, and so push upwards until it has ceased to rotate around the child's head and is in position. Remember that besides the cephalic curve the forceps have another, corresponding with the curve of the mother's pelvis, and in

introducing the forceps this curve should follow the curve of Carus, as it is called, in the mother. After you have the blade in position you can press it downwards against the perineum and give the handle to an assistant to hold. Then take the other blade in the right hand and introduce the fingers of the left hand into the vagina as before until they touch the side of the head, and then starting with the handle of the blade lying parallel with the left groin of the mother, pass the point along the fingers of the left hand, keeping it always in the curve of Carus until it finally gets in the axis of the superior strait, when the handle should lie in the axis of the outlet at the middle point of a line drawn from the anus to the symphysis pubis. If you have passed the blades of the forceps properly they ought to be at absolutely opposite points on the child's head. On account of the position of the head the forceps blades usually grasp it over the parietal fossa and the frontal eminence on opposite sides. They never grasp the head in the transverse diameter unless it lies in the transverse diameter of the pelvis. But as the head generally occupies the oblique diameter of the pelvis, the forceps generally grasp the head in its oblique diameter. The next thing is to lock the forceps, and if they have been applied accurately they will lock easily, but otherwise they will not lock at all, and then you will have to take out the top blade and reintroduce it in a changed position. Sometimes even though they have been accurately applied to the opposite sides of the child's head you will have to change them a little before you can lock them. You must take care in locking certain kinds of forceps which have a lock like Eliot's, not to grasp any of the soft parts of the mother or any of those protuberances of the mucous membrane about the orifice of the vagina formerly called *carunculæ myrtiformes*, and supposed to be the remnants of the ruptured hymen, though they really are not, but are merely protuberances of hypertrophied mucous membrane and found in women who have never born children as well as in multiparæ. After locking the forceps securely, then notice how nearly the handles are in apposition to each other, and you can tell where the head is grasped by the distance between them. In the ordinary position the distance is usually about three-quarters of an inch if the child has reached full term.

The next thing is to grasp the forceps underneath the handle with the left hand and above with the right, and extend the forefinger of the left hand so that it rests upon the child's head, and then as you make traction you can feel if the head slips at all from the grasp of the blades. The contraction of the uterus down upon the blades aids in holding them securely against the child's head. When therefore you feel that they have a firm hold then you begin to make compression first, and afterwards traction, on the head. The forceps you know are used for three purposes: 1st. For traction, that is to supply a force in front to take the place of the "*vis a tergo*," which is ordinarily supplied by the uterine contractions; 2nd, to produce slight, and only slight compression of the head. Forceps are now so made as to limit the possible amount of compression to three inches, in order that it may be impossible to injure the vitality of the child; 3rd, they may also be used to supply leverage. Thus if there is any obstruction to the passage of the head from abnormalities either in the hard or soft parts, by the aid of a little leverage you may be able to overcome this obstruction and so assist the uterus in the expulsion of the child.

If the uterus is contracting regularly you should only make traction by the forceps during the continuance of each pain. And where uterine contractions are absent or irregular, as the forceps is only meant to take the place of, or supplement the pains, you must imitate those pains by making traction only at intervals and for only a short time at once. For instance, if a woman is thoroughly under the influence of chloroform the pains are all gone, and you must imitate them in making traction on the forceps, and periods of rest as well as periods of traction, so as to give the soft parts time to stretch so that they will not be ruptured by the passage of the head. When the uterus is contracting regularly it is sometimes necessary to make traction during the intervals between the pains, as when the head is stopped by some obstruction at the superior strait and will not disengage itself. In such a case you can often make traction in the intervals of pain, when there will be freer motion of the head, and when you have disengaged it and started it on its course you can leave the labor to be terminated naturally. In using the forceps you must remember to always make traction in the direction of the axis of the pelvis. Thus if the head is in the superior strait you must pull it in a downward direction, and if the head is in the middle strait you must pull forwards, but if in the inferior strait your traction must be in a direction upwards and forwards. If on the other hand while the head is passing through the inferior strait you pull downward and posteriorly, it will not meet with any friction against the pubic bone and so will not rotate as it should, but delivery will be complete with the occiput posteriorly, and the perineum will probably be lacerated in consequence. If, however, you pull the axis of the outlet, so that the head can rotate until the occiput appears beneath the symphysis pubis, you can see and feel the forceps follow the head as it changes from the oblique to the transverse diameter, and the labor will then be terminated naturally. If you find that as the head comes down it rotates only so far as to leave the flat sides of the forceps' blades directed upward or downward you will have to take them off and reapply them because there is not room for them to pass through the vulva in this unnatural position.

In taking off the forceps you should not neglect to apply one finger between the mother's parts and the blade so that the soft parts may not be lacerated by the blade. And remember, too, that the cephalic curve of the instrument is such that if pulled directly out you would necessarily cause a laceration of the parts, and to avoid this accident you must make it take a similar curve to that it followed on introducing it. After removing and reapplying the forceps at the sides of the head, you can then complete delivery with no further trouble.

CLINICAL REMARKS ON A CASE OF FILARIA SANGUINIS HOMINIS.

AT THE COLLEGE OF PHYSICIANS AND SURGEONS, APRIL 5, 1883.

BY

PROF. FRANCIS DELAFIELD, M.D.

GENTLEMEN,—By the kindness of Dr. Wheelock I am permitted to bring before you to-day a man afflicted with that peculiar and rare disease, so seldom seen in this country, and known as chyluria. He passes chylous urine, as it is called. The characteristic symptoms in all these cases are apparently due to

the presence of a parasite in the blood called the *filaria sanguinis*. I have here a test tube containing some of the urine of this man which he has just passed, and I will let it go around you so that you may examine it and see the characteristic appearance of it. It looks very much like so much milk in the tube. The man has also some of the other symptoms belonging to the lesion, and so we will get at a little of his history. He is a colored man from the West Indies and about twenty years of age. He says he has had several attacks like the present one, and the first came on four years ago. He was cured for a time, and then the trouble came on again. His present attack began last January, but before that he had an abscess on his arm. His scrotum is also somewhat swollen. Besides the chyluria, therefore, the man gives us two of the other symptoms produced by the presence of these parasites in the blood and lymphatics, namely, abscesses in the connective tissues, in the arm in his case, and an enlargement of the scrotum. These three things, chyluria, enlargement of the scrotum or hypertrophy of the skin of the scrotum, and abscesses, are all lesions due to the same cause, and that is, the presence of the parasite called the *filaria sanguinis hominis* in the blood. This man's blood has been examined with the microscope and has been found to contain the *filaria*, and it is found at the same time that the parasite is usually found, that is, only at night. If you examine the blood of these patients during the day you will find nothing unusual, but at night these parasites seem to be present in the blood in very great numbers.

I have here and will pass around among you some photographs of the *filaria* taken from the blood of another patient, and they will give you some idea of the size and appearance of the worm as compared with the size of the blood corpuscles around them.

We do not really know as precisely as we should like to the exact way in which these parasites in the blood are able to produce the symptoms they do. It is evident that the *filaria* exists and moves freely about in the blood and in the lymphatic vessels, and passes easily from one to the other, and it is also a parasite which multiplies itself by the production of eggs. The ova are produced in the blood or lymphatics, and they may either perish there or else live and develop into other parasites. We know that after a certain length of time these patients get rid of them altogether, and all of them seem to be destroyed so none can be found. We do not know how rapidly they may be produced nor how soon they die.

The principal symptoms of chyluria, abscesses, and hypertrophy of the connective tissue of the scrotum or other parts of the body, or elephantiasis as it is called, seem to be all produced in the same way, and that is, by obstruction of the lymphatics. We do not, however, know just how these lymphatics become obstructed. It has been supposed by Dr. Manson, an English physician, who has given much study to this matter, that the obstruction of the lymphatics is due not to the presence of great numbers of the parasites but to masses of the ova which have been produced there and have not yet hatched out, but have collected together in such numbers as to obstruct the lymphatics. But if this is really the case yet it is not easy to tell why such an obstruction should produce chyluria or hypertrophy of the connective tissues. It seems that this new hypertrophied tissue contains a large number of newly formed lymphatic vessels.

The production of abscesses, however, seems to be due largely to the death of great numbers of the para-

sites in the lymphatics and blood vessels, which therefore become plugged up with their bodies, and an inflammatory process is set up around the point of obstruction and this leads to the formation of the abscess. But the explanation of the other results of the presence of the *filaria* we cannot understand so well.

There is not much to do in the way of treatment for these patients, for when they get well they do so very much of themselves. This man has already recovered from previous attacks and the present one has not been of long continuance, and he will probably soon get well, and if he remains here in this country and does not return to the West Indies, where he contracted this disease, he will probably not be troubled with it again.

LYMPHOMA OF THE NECK.—MALIGNANT FIBROMA OF THE BREAST.

A CLINICAL LECTURE DELIVERED AT THE NEW YORK HOSPITAL.

BY

THOMAS M. MARKOE, M. D.

Professor of the Principles of Surgery, College of Physicians and Surgeons, N. Y.

CASE I.—This patient, gentlemen, was operated on four weeks ago for tumor of the wrist. This tumor had certain peculiarities. Its shape and appearance were those of a bursal enlargement, and yet when an incision was made into it there was no fluid contained in this bursal enlargement which in reality it proved to be. There was a semi-fluid mass which could be slowly and with difficulty expressed from the incision leaving near the surface of the cavity a more or less distinct mark. This substance which came out of the cavity was examined under the microscope and the indications were those of sarcomatous elements in the mass. The tumor was evacuated, the wound dressed with cotton, and the patient did perfectly well. She has entirely recovered from this operation. There was another tumor, however, in the neck, which we determined to leave for a future operation, if such might be necessary. As the wound healed below, the tumor above has disappeared, but in place of what was a pretty firm tumor somewhat elastic and semi-solid, you can now feel a serous bag containing almost nothing but fluid or semi-fluid. This stands in connection with a few facts which we have recorded in which large celled sarcomata have been observed by several pathologists to disappear.

Another feature of this case is that for eight or ten years she has had more or less enlargement of the cervical glands. For the past four years two have been very much enlarged, and now she wants to get rid of them. Whether these two have any connection with the sarcomatous condition of the wrist, or rather whether there be any sarcomatous character about these two glands, we cannot say. The fact, however, that they have existed four years and have not enlarged much, is rather opposed to the idea that they are of a malignant or sarcomatous nature.

Examination.—The glands are entirely movable and seem to show no disposition to get well of themselves. Treatment has been of no benefit. The strumous nature of some of these glands that have opened here

years ago, has been shown by their progress toward a slow kind of suppurating terminating in disintegration and ulceration. This is ordinarily the history of strumous glands. So that I think we may consider that we are dealing here with two remnants of a neck full of probably strumous glands which show no disposition to absorption and go through the ordinary destructive processes which it is least desirable to procure.

Operation.—The central part of the tumor had softened, leaving a sort of capsule which had burst and shed its contents on the wound. The entire structure of one gland was involved in the cicatricial tissue of the other.

The wound was lightly dressed with carbolic acid. No drainage tube was used.

CASE II.—MALIGNANT FIBROMA OF THE BREAST.
—*History.*—Female, æt. 46. About six years ago patient was struck a sharp blow in the left breast. She suffered severe pain for some hours afterward, but it soon disappeared, giving no further trouble. About two months after this she noticed a small non-painful and non-tender lump on the inner and lower side of the breast, about the size of a pea. This remained the same, not increasing in size, and causing no trouble except at times slight stitching pains during exercise—until within the last two years. It then began to grow, became large and painful, and somewhat tender on manipulation. She has occasional periodical pains shooting in character, and the tumor seems to become much larger during the period of monthly illness. Her general health has not been interfered with. She is troubled with gastric disturbance and headache. Menstruation is regular. Has suffered from sore throat and weakness of eyes. Has some general symptoms of constitutional feebleness.

Examination shows a small lump about the size of a marble, situated in the inner and upper portion of the left breast, painful and somewhat tender on manipulation. It is unattached to the deeper structures, and is freely movable. The glands are not enlarged. Urine is normal.

This, gentlemen, is an extremely interesting history. There are certain tumors, either traumatic in their origin or to which we can assign no cause, which have a pathological character chiefly fibromatous. They present those changes under the integument which never grow very large and never disappear, but which are characterized by a quiescent period at first lasting a shorter or longer time. Then by a period of neuralgic paroxysms coming periodically, sometimes excited by a touch or blow, sometimes affecting the patient at the menstrual period; at other times manifesting themselves with the general condition of the system.

These tumors are situated in various parts of the body. They are very common on the outside of the thighs, on the arms, forearms, and sometimes occur on the back. They are called painful subcutaneous tubercles, and on microscopic section show no histological elements that are of a purely fibrous nature. They are known ordinarily not to go through any malignant course at all. They remain of a small size for an indefinite period. The very severe pain which accompanies these tumors is not due to any relation with the nerves. They are not developed on the nerves, and the pain is not a nerve pain, so far as the trunk of a nerve is concerned.

The breast is one of the seats of these subcutaneous tumors, and I hope in this case that the tumor complies with the classical characteristics which it ought to present.

Operation.—The history, gentlemen, has all the elements of one of these fibrous tumors, but I confess that it is larger and less attached to the integument than is usually the case. That leaves a certain shade of doubt in my mind as to whether it may not be one of the forms of softer tumor than the pure and simple fibroma. It is larger than any fibroma that I have ever seen.

In all cases of removal of tumor the first thing to be careful about is to be sure that the blade of your knife is down to the surface of the tumor itself, because then the connective tissue around the tumor is in one single plane. Whereas, if you cut almost down to the tumor and to some cellular planes interposed between it, you can wander a great distance without separating the tumor from the surrounding parts.

This, gentlemen, looks like a fibrous tumor. It has, however, a sarcomatous aspect. I could have raised it from its bed by enucleation, but I thought I was upon the surface of the gland, and the dragging might not be a wholesome process. I therefore dissected it out, although that was not absolutely necessary.

I ought to supplement what I have stated about the peculiar behavior of these fibromata. I would add that some of the smaller and softer ones appear to have a history of paroxysmal pain, tenderness and slow growth, and in many respects resemble the more benign tumors that are purely fibrous.

SELECTIONS FROM JOURNALS.

NERVE-STRETCHING.

Dr. Cocchi (Zts. *Sperimentale*, 1882), contributes a very complete and interesting summary of the literature and results of this operation. He divides his subject into two parts. In the first he collects the anatomical and physiological facts, and in the second he describes the operation, the indications for its employment, and the results so far obtained.

As to how much the nerve is to be stretched, he cites many experiments in animals, and gives Frombetta's careful experiments as to the weight the different nerves removed from the body are able to sustain. He does not think these experiments of much practical good; the surgeon must be rather guided by the sensation of greater or less elasticity and resistance which he experiences. The anatomical lesions are of the perineurium, capillary vessels, and nerve-tubes, causing exhaustion and degeneration. The physiological effects are interruption of the ascending sensory current and continuance of the descending motor current; hence, perhaps, the frequent failure of nerve-stretching in tetanus (Artaud and Gilson.) Quinquaud observed that in stretching one sciatic nerve, for example, there was also anæsthesia of the area innervated by the sciatic of the opposite side, and sometimes also in that of the crurals of the two sides. On stretching the right sciatic, there was anæsthesia of the right limb posteriorly; stretching shortly afterwards the left sciatic, there were anæsthesia of the left limb posteriorly, stretching shortly afterwards the left sciatic, there were anæsthesia of the left limb posteriorly, and return of sensibility in the right limb. When a nerve is stretched, the effect is therefore transmitted to the posterior part of the medullary axis. Labord and Debove divided the spinal cord and caused epileptiform movements; they stretched the sciatic nerve, and the movements were suddenly diminished. Wiet and Marcus found

that, when the pneumogastric was stretched, the movements of the heart were accelerated.

The conclusions from these facts, and, as corollary, that the stretching of a nerve produces ecchymosis under the perineurium, rupture of the nervous fibres, and ascending degeneration, as in partial section of a nerve, would be, that nerve-stretching causes loss of sensibility; that the sensory ascending current disappears, while the motor or descending current is preserved; that it affects the centres and may cause trophic disturbances with persistence or not of anæsthesia. Moderate stretching produces anæsthesia in the territory of the nerve without loss of motility; violent stretching causes prolonged and persistent anæsthesia with constant alterations of motility and nutrition. The frequency of functional disturbances of parts far from the seat of operation proves that the spinal cord is influenced by the stretching of certain nerves (the sciatic and brachial plexus); for lesser nerves and for cords farther from the medulla, further researches are necessary. Notwithstanding the microscopical lesions which have been observed, the manner in which the distension acts is not yet determined (Chauvel.)

In the second part, Dr. Ceccherelli describes the operation. He recommends the incision to be made as near the supposed seat of irritation as possible, the stretching to be made in the centrifugal and centripetal directions, and not excessive, with the finger or blunt hook. With the finger the surgeon is best able to judge, by the elasticity and resistance, of the force required. Nerve-stretching has been tried in many diseases, peripheral neuralgia, spasmodic affections, epilepsy, paralysis, tetanus, ataxy, anæsthesia in leprosy, etc. The author collects 252 cases, the results being 37 deaths, 16 failures, 34 cases improved, 156 cases cured, and 9 in which the result is not stated. Nerve-stretching has been most successful in peripheral neuralgia; out of 99 cases 74 were cured, 12 improved, 7 doubtful, and only 6 failures. In contractures, 14 cases, there were 12 cures; in facial tic, 7 cases, 6 cures; in traumatic spasms, 12 cases, 10 cures; in peripheral paralysis, 34 cases, all successful. Although experiment proves that nerve-stretching influences the spinal cord, in disease of central origin its effects are unsatisfactory. In 36 cases there were 5 cures, 16 improved, 7 failures, 8 deaths; epilepsy, 4 cases; 1 delayed success, 3 improved; tetanus, 45 cases; 14 successful, almost, if not all, cases of partial tetanus only; 2 results not stated, 29 deaths. In ataxy it has been most unsuccessful. Langenbuch gives 16 cases with 6 cured; but Bernhardt and Westphal say they have never seen a case improved or cured. Debove thinks the "lightning" pains may be relieved by it. Vizioli also thinks that mechanical distension of the hyperæsthetic nerves, inducing a changed position of nervous molecules, may modify the molecular grouping by which excitability was exalted, and the return to the normal state may ensue. The author concludes that in all cases in which the lesion is peripheral the effect is certain, almost without danger, and more prompt than by any other mode of treatment. In central lesion, all means fail; in extreme ills, extreme remedies; therefore it is only to be tried in extreme cases. If by it we could promise improvement or diminution of any one of the grave symptoms, it would be the surgeon's duty to operate, but as yet we cannot say even that much.—*Lond. Med. Rec.*

NITRITE OF SODIUM IN THE TREATMENT OF ANGINA PECTORIS.

Dr. Matthew Hay, Demonstrator of Practical Materia Medica in the University of Edinburgh, contributes to the March number of the *Practitioner* an interesting and valuable paper on the use of nitrite of sodium in the treatment of angina pectoris. Dr. Hay on three separate occasions took five, ten, and twenty grains of the salt, and found that it produced acceleration of the pulse, slight flushing of the face, and fullness in the head and eyes, accompanied by a throbbing sensation.

The similarity of the effects of nitrite of sodium, nitrite of amyl, and nitro-glycerine suggested that the peculiar action of these bodies was dependent on the nitrous acid present in them. Gamgee has shown that the clinical action of nitrite of amyl on the blood is identical with that of other nitrites, nitrite of sodium for example. Moreover, it is hardly conceivable that two salts such as nitrite of amyl and nitro-glycerine should so closely agree in their physiological action, were it not that the acid which is common to both is the essential factor.

The physiological action of the metallic nitrites has been investigated by Barth, Binz, Reichert, and Weir Mitchell. Barth's observations were made at Bonn in 1878, and were undertaken with the purpose of investigating the poisonous action on cattle of nitrite of sodium (Chili saltpetre) used as manure. Barth showed that these poisonous effects were due to the presence of nitrite of sodium as an impurity. Binz, as the result of a number of observations, found that the nitrite produced decided and often lethal effects. The animals first became drowsy and giddy; and frequently fibrillar contractions of the muscles, with yawning and vomiting, were observed. Soon the breathing became labored, and death occurred, unpreceded by spasm or convulsion of any kind. The nervous tracts were evidently paralyzed, and paralysis both of muscles and nerves was observed in frogs. Rabbits and dogs were frequently purged by a large dose of the nitrite even when injected subcutaneously, and if the dose proved fatal the mucous membrane of the intestinal canal was usually found reddened and inflamed. The minimum lethal dose injected subcutaneously was for a rabbit about three grains. A dog weighing nine pounds was killed in four and a half hours by a dose of four grains given subcutaneously. Binz attributes the irritating acid of the nitrite on the intestinal canal to the action of the salt being there set free and becoming decomposed, forming nitric acid and nitric oxide. Reichert and Weir Mitchell, from an exhaustive research on the properties of potassium nitrite, concluded that in physiological action it was almost identical with nitrite of amyl. They observed the effects of the salt on man as well as on the lower animals, and arrived at the following conclusions:

The salt exerts a very feeble narcotic influence on the brain of mammals, more marked in the case of the frog, and the convulsions are clonic in character, cerebral in origin. Nitrite of sodium paralyzes both the motor and the sensory portions of the spinal cord, acting much more quickly on the former; it diminishes the function of the motor and sensory nerves, ultimately paralyzing them. It primarily increases the pulse-rate, and secondarily diminishes it, and at the same time lessens the force of the pulse. It primarily raises the blood-pressure from a direct action on the heart, and secondarily lowers it by causing vaso-motor and cardiac paralysis. The respiratory centers are

first stimulated and afterwards depressed; and death is due to paralysis of the respiratory centers, when not dependent upon cardiac paralysis. It at first slightly elevates the temperature, and afterwards considerably depresses it; it finally paralyzes the voluntary muscles and merely impairs the function of the involuntary muscles; and it primarily stimulates, and secondarily depresses, the heart.

Dr. Hay gives a detailed account of a case of angina pectoris in which nitrite of sodium was given with very satisfactory results. His prescription is as follows:—*R Sodii nitritis* ℥ss, *aq. q.s.* ad ℥xij. *Solve.* Sig: Dose, one to two teaspoonfuls. This dose produces no perceptible throbbing in any part of the body, and no headache. Care must be taken to obtain the pure nitrite; for, unless carefully manufactured, it is apt to be contaminated with nitrate of sodium—*L. and M. Rec.*

WOAKES ON A NEW THEORY OF DIPHTHERIA.

There is no creed in medicine. The freshest confirmation of this doctrine is to be found in certain recent original observations on diphtheria, which have led Dr. Woakes to describe this disease as a simple atony arising in persons deficient in tone, especially in vaso-motor. It is by him considered to be in fact an atonic inflammation, and akin to a common cold in its theory of causation. The history of its production is thus to be read: The patient is in an exhausted nervous state (extremes of climate are particularly noted as accounting for this), and the vaso-motor control is consequently lowered. He is then exposed to some strong peripheral irritation or shock, e.g. cold. The impression so produced is conveyed by the afferent fibres of the sympathetic in the pharyngeal mucous membrane to their central cells in the superior sympathetic ganglion, and through these exhausted centres produces a vaso-inhibitory action by means of the efferent sympathetic fibres going to the pharyngeal vessels, which, under the circumstances, is not soon replaced by a healthy tonic reaction. There is persistent local inflammation of low type.

The parietic muscular condition is similarly explained. The vaso-inhibitory action extends to those vessels which supply nerves, as the vagus (*vasa nervorum*), and receive their vaso-motor fibres from the centre originally impressed by the peripheral irritation. Hence pharyngeal muscular paralysis, and a heart soon exhausted by rapid action unqualified by vagal control.

The contagiousness of diphtheria is treated on a different hypothesis. The infective element is supposed to be a modified constituent of normal tissue—namely, a lymphoid cell. A layer of these has been described by Luschka as found in the mucous tissue of the pharynx. According to the new theory of diphtheria, these undergo abnormally rapid development in the inflammatory process, and, on being shed at the mucous surface, many—probably almost as soon as formed—become the infective particles of the diphtheritic membrane, and are capable of exciting in any suitable—*i.e.* atonic raw or mucous surface—the train of changes to which they owe their morbid characters.

There is a good deal in the history of diphtheria which gives support to the vaso-dilator view of its causation. Thus, it has been frequently observed that persons from some cause enfeebled are readily affected by it; and common experience has shown that vaso-

motor changes are particularly associated with a physique impaired by over-exertion or underfeeding—witness the drained constitutions which are the subjects of hysteria. Moreover, the occurrence of the disease sporadically, it would appear—in high and dry localities exposed to winds, and presumably well ventilated—suggests a climatic agency.

Moreover, the view of lymphoid cell contagion is in certain points allied to that which recognizes the action of specific disease-germs, to which the communicability of diphtheria is now commonly ascribed. All these organisms alike belong to that low grade of vegeto-animal life which is characterized by the mutability of its forms, and no less by their apparently unlimited powers of self-propagation. Buchner held, with some reason, that the harmless hay-bacillus became, when bred in animal substances, identical with the highly infective bacillus of anthrax. The small-pox germ, conversely, has been found, on successive propagation through the cow, to become innocuous. The question may naturally suggest itself, Is it not possible for a lymphoid cell in a state of abnormal activity of growth to become a modified exponent of over-sensitive tissues? Perhaps the strongest argument in support of this view is to be found in the phenomenon of 'malignancy.' No bacterial clue to this condition has been demonstrated; but, instead, the rapidly growing cell-elements of the parent tumor reproduce its like in distant parts, and even, according to Dr. Creighton, infect normal gland-cells so as to make them take on a morbid action.

But it must be remembered that the only part of the new diphtheritic theory which rests upon proof, is that which describes the process of local congestion, the method of the disease. This is simply a history of inflammation, and is characteristic of that change in other than the diphtheritic state. We do not deny that apparently simple sore-throats found in the same house with diphtheria are suggestive of a common origin; but the concurrence is explicable on other theories than the purely vaso-motor, and we require to have it shown why, if atony and exposure constitute the causes of diphtheria, most feeble persons who have tonsillitic throats from exposure do not exhibit the other symptoms and characteristic sequelæ of that disease.

With regard to the lymphoid element of contagion and its effects on tissues favorable to its development, proof is wanting. No doubt the mucous tissue abounds in such elements, but the presence of bacilli and spores, especially in diseased states, has also been often demonstrated. By which of these means is the disease propagated? Which is the essential irritant of afferent nerve-fibres? In other infective diseases, as tubercle and anthrax, recent observation has shown beyond doubt that this power resides in the bacilli; and though investigation has not proceeded so far in regard to the exanthemata of diphtheria, still the persistence of specific peculiarities in each of these disorders, the transference of these unchanged from subject to subject, and the want of clear proof of the existence of hybrid diseases, support the view that in every such infective morbid state the essential agent is a special foreign germ, able to bring about in the animal body its own peculiar pathological state. How far this germ owes its characters to its habitat, and communicates a condition of which it is itself the subject rather than the primary cause, remains still open to question.

The means of contagion is therefore the point which has still to be settled in regard to diphtheria; and so far, we must admit that the bulk of evidence goes to show that this consists in some form of bacterium. Neurotic influence is the admitted method by which

any form of germ can produce its local manifestations ; but it has not yet been shown to be in diphtheria more than the mode of action of an undetermined cause.—*London Medical Record.*

VOHSEN ON ACUTE RHEUMATISM IN CHILDHOOD.*

Dr. Vohsen, within the limits of a brief paper, excellently summarises our present knowledge of acute articular rheumatism, without, however, adding much that is new. Concerning the vexed question of etiology, he is forced to confess that our information has not kept pace with our knowledge of the general course of the disease or its complications. He refers to the influence of cold as a cause, through arrest of skin-action, and the consequent retention in the blood of lactic acid and potash salts. Referring to the general opinion that acute rheumatism is not an infectious malady, he quotes Hirsch, to the effect that it frequently occurs in an epidemic form, and so independently of recognized external causes as to almost assume the character of an acute infectious disease.

The author goes on, in confirmation of this view, to give the results of twenty cases under his own observation from the years 1873 to 1881 inclusive, half of which occurred in the first half of 1880, the remainder being about equally distributed over the rest of the time. Lebert's experience in Zurich is somewhat in the same direction ; the yearly average of about forty cases suddenly increasing to about sixty-two in 1857. The discovery by von Recklinghausen of micrococci in a case of acute articular rheumatism is referred to, as being in favor of the infectious nature of the disease ; and, on the other hand, the favorable therapeutic results which follow the administration of salicylate of soda are regarded by many as presumptive evidence of its infectious character.

The author considers the relationship of chorea to acute rheumatism, and its associated endocarditis, as still an open question, notwithstanding the extensive discussion that has taken place. As illustrative of very opposite experiences, he quotes Steiner, who found only four of 252 cases of chorea that were associated with rheumatism ; whilst Sée, among 77,500 sick children, met with 48 cases of rheumatism and 67 of rheumatism and chorea. Roger, whilst believing in an interdependence of rheumatism, heart-disease, and chorea, nevertheless discriminates between a rheumatic, a cardiac, and a rheumatico-cardiac form of the last-named malady. Bouteille records an exceptional case of the occurrence of chorea in a man 80 years old ; but it is especially characteristic of the rheumatism of childhood, and, according to Soltmann, mostly occurs between the ages of 7 and 14 years.

Of the twenty cases which formed the basis of the author's experience, only one was complicated with a mild chorea, and in that an acute infectious disease developed in the course of the rheumatism.

Von Meynet, and subsequently Hirschsprung and others, have described numerous small tumors of the size of a pea, and larger, in the neighborhood of the affected joints, disappearing after a short time. Single examples of the rarer complications, "peliosis rheumatica," and "erythema nodosum," were met with in the twenty cases ; and the author's experience goes to show that there is no complication of rheumatism of joints occurring in adults which is not met with in children, whilst he is not aware that the paralysis of the ocular muscles, which is occasionally known to

follow the repeated rheumatism of the grown-up, has been found in children.

The average duration of mild cases in adults appears to be about two to three weeks, and in children five to eighteen days.

Passing to the very important question of the relationship of heart-complications to acute rheumatism, the author criticises at some length the claim of Bouillaud, who is generally credited with having been the first to point this out in 1836. That some connection does exist, is undoubted, Lebert, in 140 cases of rheumatism of joints, noted thirty-three with acute heart-complication. Von Dusch, out of forty-five cases of endocarditis, traced twenty to rheumatism. Of the author's twenty cases nine presented endocarditis, two of which exhibited pericarditis also ; of these he gives a detailed record, and the *post mortem* appearances of four.

The ages of the cases were between 9 and 14 years, and five were boys. The heart-complication commenced in the first week of the rheumatism in two of the children, in the second week in three, and the remainder in the fourth and fifth week.

The temperature never exceeded 103°, and the swelling of the joints was very slight ; the pain, however, being generally severe.

Dr. Vohsen thus formulates our present knowledge of this subject.

1. In almost half the cases of rheumatism of the joints there occur endocarditis, and, later, valvular defects.

2. The mitral valve and pericardium appear to suffer most frequently, and endocarditis is usually developed in the first week of the disease.

3. Whilst salicylate of soda exerts a most beneficial effect in relieving the affections of the joints, it has no influence in the course of the heart-complications.

4. The mildest form of rheumatism of joints, as shown by slight fever, little swelling, and very transient pain, seems especially to predispose to heart-complication, and hence indicates the necessity for careful examination in the mildest cases.

What determines heart-complications in acute rheumatism still remains most uncertain. No reason can be assigned on anatomical or physiological grounds for the only peculiarities of the infantile heart, viz., the nodules of Albinus situated at the cardiac orifices of the veins and the relative narrowness of the aorta at the opening of the ductus Botalli. These are most marked during the first year of life, when acute rheumatism and endocarditis are of most exceptional occurrence. Bouchut, from an experience of 200 necropsies, concludes that nine-tenths of children dying with febrile affections have endocarditis.

A possible explanation of the problem may be found in looking at acute rheumatism as an infectious disease, and regarding the infantile heart as possessed of slight resisting power to the virus of the infection ; and the figures of Von Dusch lend some support to this view ; for out of forty-five cases of endocarditis fifteen were idiopathic, twenty were associated with acute rheumatism, and the remainder with distinct infectious diseases. The fundamental similarity in structure of the endocardium and the synovial membranes, may account for the frequency of both being the sites of the structural manifestation of the virus.

Dr. Vohsen, in favoring this view, dwells on the frequent semi-epidemic character of acute rheumatism, and the well ascertained relationship between endocarditis and the recognized acute infectious diseases.—*London Med. Rec.*

*Jahrbuch für Kinderheilkunde Vol. xix., Part I."

DR. MATTHEWS DUNCAN ON STERILITY.

In the course of the third Gulstonian Lecture, Dr. Duncan observes: "It is scarcely an exaggeration to say that, in recent practical works on sterility, there is exhibited entire ignorance or entire neglect of the laws of fertility. Every woman from fifteen to forty-five is regarded as likely to breed. If she be sterile, a cure is at once set agoing; and, if a child be not born, the failure is not debited to the nature of the case, but to the want of ingenuity in the doctor. A reputation for curing sterility is spoken of as if it were founded on substantial claims. The prevalent methods of curing sterility are founded on an implied theory that it in most cases arises from impediments in the way of the spermatozoa reaching the ovum. Without sufficient evidence, strictures are assumed to exist, versions and flexions of the womb are held so to distort the interior passage as to prevent progress of the spermatozoa, cervical catarrh is believed to stop them by mechanical obstruction or by chemically poisoning them; and for these real or imagined evils sterile women are made the subject of treatment. It is the theory of mechanical obstruction that, by its simplicity and directness, has possessed the profession and the public; and accordingly many operations and modifications of operations, and very many instruments, have been devised to do away with the obstruction. The theory has had real rational support in the fact that dysmenorrhœa of a spasmodic kind does, as already shown, frequently accompany the sterility, and in the supposition that the same obstruction which causes sterility by impeding the entrance of semen, causes also dysmenorrhœa by impeding the exit of menstrual blood, or *vice versa*. It has had still more satisfactory support in the observation that the cure of the dysmenorrhœa does occasionally bring with it cure of the sterility.

"The very zeal with which the mechanical theory of sterility has been fostered, and its treatment in many ways pursued, has led to its present decadence, and there is now increased attention paid to other departments of fertility than conception. Especially and justly, the difficulties of naturally starting and healthily continuing pregnancy are brought prominently into view. The mechanical obstruction theory has begun to shrivel, because of the impression produced by the enormous, though inexact, proportion of the failures of the attempts to cure founded on it. Even the ignorant sterile women could see that, if the theory of causation were true, there was an easy and plain theory of cure; and they could also see that the failure of the so-called cure was prejudicial to, if not destructive of, the theory. The importance of the difficulties of pregnancy now brought into prominence will, on account of its great reconditeness, be received with no enthusiasm, such as welcomed the obstruction theory; and the physicians who entertain it can offer no such brilliant prospects of cure to their suffering patients. It is, however, a decided step of progress in a subject of great practical importance.

"It is in Germany that this department of sterility has been chiefly studied, and Grunewaldt of St. Petersburg is its best exponent. Recognizing the importance of this work, I take the liberty of using it to show the great incompleteness of even the most advanced accounts of the subject. For Grunewaldt, sterility is truly never a disease, but a symptom of a disease. Nature has, he says, set no limits to female breeding other than the natural changes in the sexual organs that are observed in the senile state. Sterility is one of the most frequently occurring disturbances of function

caused by diseases of the female sexual organs. In these views, and in his whole work, it is implied that sterility depends on disease of the sexual organs, including chiefly endometritis, mesometritis, perimetritis, and parametritis. The difficulties of conception, he says, have only a slight importance, compared with the disorders of the more important vital processes of pregnancy, and these disorders affect chiefly the tissues of the uterus."—*British Medical Journal*.

SALICIN AND RHEUMATIC ENDOCARDITIS.

In a paper by Dr. T. J. MacLagan on "Rheumatic Endocarditis," the author remarks, in conclusion:—"Salicin is the preparation to which I give preference, not because I regard it as superior to salicylate of soda as an antirheumatic, but because it may be given in large and frequent doses without causing such disturbance of the system as not unfrequently follows the use of the salicylate, and necessitates its suspension. My experience, too, is that those treated by salicin (which is a bitter tonic) convalesce more rapidly than those treated by the salicylate. There is an impression abroad that it is very expensive. It is not so. Two of the chief English manufacturers of it have told me that they are prepared to supply it to hospitals and dispensaries at 10s. 6d. a pound. Convalescence is so much more rapid under its use, that I am not sure that it would not in the long run prove cheaper than salicylate of soda. But, whichever is employed, let it be given in large and frequent doses. I make this appeal in the interest of the heart as well as of the joints. Let every case of acute rheumatism be regarded and treated as one in which heart complications may possibly be prevented, and it is probable that in some cases they will be prevented. But every hour is of importance, for it needs no argument to show that the danger to the heart is less in a case in which the course of the disease is arrested within twenty-four hours than it is in one in which three or four days are expended in the process. The fact has never been accepted by the profession that the course of acute rheumatism may in many cases be arrested within twenty-four hours of the time that treatment commences. The recognition of that fact is the keystone to all possible success in the prevention of cardiac complications."—*British Medical Journal*.

HEMORRHAGE FROM THE LACHRYMAL DUCT DURING EPISTAXIS.

Mr. D. Hoadley Gabb, M. R. C. S., of Hastings, describes the following remarkable case:—"Mr. S., aged 50, with mitral disease and albuminuria, sat out one of our recent sunny days, and caught a chill, which culminated in an attack of bronchitis and a relaxed state of the fauces and uvula, producing severe spasmodic cough; during one of these paroxysms, epistaxis, from the right nostril especially, came on of its own self, and I was sent for. There was no difficulty in arresting it by plugging the anterior nares with dry lint. In two or three hours, after a severe cough, the hæmorrhage returned, and a messenger was sent for me, saying the bleeding had come back, and was running out of his nose and eyes; and so I found that the blood had welled up through the right lachrymal duct, and was suffusing his eye, so that he was constantly obliged to wipe it, and the handkerchief was pretty well stained with the blood, and the discharge only ceased when the nose left off. I have never met with the phenomenon before, neither have others to whom I have mentioned it; and so, I think, perhaps it is worth recording."—*British Medical Journal*.

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A FURTHER CONVERSATION BETWEEN DRS. WARREN AND PUTNAM.

Dr. Warren. I omitted to say to you in our last conversation that, while it is true that the class of gentlemen who have been so long and so cruelly ostracised by the code, have indeed declared that they no longer rely exclusively, or in fact in any measure, upon moonshine as a remedy for disease, giving instead our own medicines in full doses, they still adhere to the doctrine of *similia similibus curantur*, and cannot therefore consistently drop their peculiar and distinctive name; but the fact that they hold this doctrine ought not to prevent our consulting with them, since their practice does not differ from ours. If they wish to open the bowels they do not give opium or morphine, which would be in accordance with their doctrine, but they give castor oil or epsom salts or some other recognized cathartic in good full doses. In case you were to consult with them and should wish to give any remedy in your materia medica they would not object. They only preach, but do not practice *similia similibus curantur*. What do you care about their preaching?

Dr. Putnam. Nothing. Only that it is apparent that both their preaching, and the peculiar title which they continue to retain, is intended to attract those clients who still believe in moonshine, and who think that honest men practice what they preach, and who, therefore, innocently suppose that by employing these gentlemen they are sure of being treated with their favorite medicine—the genuine and original Hahnemannian moonshine. To sail under false colors on the high seas is called piracy, and these gentlemen are sailing under false colors.

I could respect the honest simplicity with which the earlier pupils of Hahnemann accepted of the doctrine of infinitesimals, under which practice it was impossible to say whether the medicine (!) was acting under the law of similibus or not—but I cannot respect the moonshiners who repudiate moonshine, and who give a dose of castor oil to overcome constipation, and still pre-

tends that he is following the teachings of Hahnemann in any respect whatever.

You may think it desirable, in certain points of view, to countenance this fraud, but for myself I do not; nor have I ever felt that my liberties were seriously encroached upon when the medical profession adopted a code which declared consultations with those who practiced such impositions to be disreputable. To say the least, I am not over-anxious to extent to them the hand of professional fellowship.

You do not seem to understand that the code does not affect your rights as a free American citizen. It is not a part of the State or Federal law. The code is simply a social arrangement, of a purely voluntary character.

Dr. Warren. Beg your pardon, but I do understand that. Yet I submit whether it is wise or liberal to voluntarily place ourselves under such restraints. I know as well as you do that moonshiners are not medicine, and that the moonshiners have themselves publicly declared that it is not, and it is probable that I would not consult with them if the code were abolished, but I am unwilling to be bound by a written compact not to do so.

Dr. Putnam. It is unfortunate for your cause that your friends have not been as outspoken upon this latter point as you have. They seem generally unwilling to say publicly that they hold moonshiners in honest contempt, and that they do not expect to counsel with them; indeed they have publicly said that they intend to do so; and it is this very fact which seems, in my opinion, to render a code necessary.

If every man practiced virtue and morality strictly, no church organizations would be necessary, unless it was for the sole purpose of propagating a religious faith or dogma. Indeed there would be but little need of law, or restraints, of of any kind.

GERMS IN THE AIR.

The *London Lancet* of April 14, 1883, commenting on the recently published researches of M. P. Miquel, by which he endeavored to demonstrate the number and the nature of the particles which are constantly floating in the air, summarizes the nature and result of his researches as follows:

"In his experiments M. Miquel has employed a slight modification of Pouchet's aeroscope, which consists essentially of an inverted funnel, through which the air is drawn by an aspirator, having a slide covered with glycerine or other sticky material, placed opposite its narrow end, the whole being enclosed in an air-tight case. He first endeavored, by making hourly experiments throughout the day for several years, noting at the same time the concomitant and antecedent meteorological conditions, as the dryness or humidity and the temperature of the air, the influence of the seasons, and the like, to determine the laws which govern the appearance of the spores of various cryptogams in the air. The results he has obtained are: that the number of such spores diminishes in March and rises in April, it increases to a marked extent in May, and attains its maximum in June. It then slowly decreases to October, but is still considerable in November, and the minimum is reached in December. In the locality of the observatory in which the experiments were made, it appears that, speaking generally, a cubic metre of air contains 7,000 spores of fungi in the months of December, January and February, 12,000 in May, 35,000 in June, 23,000

in August, 14,000 in October, and 8,000 in November. If, however, instead of taking the average of several years, the successive periods of the same year are taken, the same order and regularity are not always preserved. Thus, the number of germs may diminish, notwithstanding that the temperature rises. In such case the effect is masked by that of another factor, the hygrometric condition of the air. This is only in accordance with what is generally admitted—namely, that the development of fungi is in relation with the varying conditions of heat and moisture, but it is remarkable that the influence of moisture differs with the seasons—that is to say, according to the temperature. In summer, for example, dryness lowers the absolute number of spores, in winter or the cold period, on the contrary, the number rises with dryness of the air. Humidity of the atmosphere produces opposite effects at these periods. Storms occurring during fine weather are followed by a great increase in the number of the spores. Heavy rain purifies the air for a very short time only, for it was observed that in from fifteen to eighteen hours after rain the spores became from five to ten times more numerous than before. Particles of mineral dust and many other kinds of microbes in great measure disappear until the evaporation of the moisture has taken place, enabling them to adhere to foliage and to the surface of the soil.

"M. Miquel remarks that the employment of aeroscopes by means of which the existence of the germs of fungi which are injurious to the cereals can be demonstrated in any locality might be of signal service to agriculture by showing their place of origin and enabling them to be destroyed. From a similar point of view the discovery of the existence of the spores of tinea, of diphtheria, or other contagious diseases in the air might serve to explain obscure and inexplicable circumstances connected with their development and extension. It is impossible to suppose that 300,000 spores can be introduced by the act of respiration into our bodies every day without some being of a noxious character."

If this method of research is perfected and rendered possible of application to one of ordinary intelligence we shall soon be able to determine the healthfulness of any given locality by examining a sample specimen of its atmosphere. Visions of hotel proprietors greet our prophetic gaze who will add to their other assurances, such as no mosquitoes, no malaria, a certificate proving the freedom of their superambient atmosphere from deleterious germs.

Truly we are living in an age of progress.

THE ANNUAL EXODUS FROM THE CITY AND ITS RELATION TO DISEASE.

"Of all the good things in the good world around us,
The one most abundantly furnished and found us,
And which, for that reason, we least care about
And can best spare our friends, is good counsel, no doubt."
—OWEN MEREDITH.

If the portion of our population who at the first approach of the hot weather of summer, abandon their city habitation and fly to the country, no matter where, so that it be out of town, were assured that in many instances they were exchanging good hygienic surroundings for bad, comfort for discomfort, and often health for disease, they would ridicule a statement so opposed to their preconceived views on this subject.

And yet it would nevertheless be true, as the experience of many a physician, many a sufferer from ty-

phoid fever or typo-malarial fever or malaria in any of its protean forms, which may have been induced by bad drainage, insufficient water supply or overcrowding, can testify to.

It would be impossible to attempt to combat this desire to get away from town during the hot months, and yet it is no doubt true of those whose means cannot command what may be termed the luxuries of proper hygienic surroundings—and they constitute the majority—that they would be more comfortable physically, if not mentally, in their city dwellings.

It is the province of the family physician to impress upon those over whose health he has charge, the great importance of proper hygienic surroundings, and to explain clearly what is meant by this. Some common sense advice from the family medical adviser would dispel the crude ideas held on this subject, and tend to avert many of the ills that their patients returning to town in the autumn seem inevitably heir to.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK COUNTY MEDICAL SOCIETY, APRIL 23, 1883.

A stated meeting of this society was held at the College of Physicians and Surgeons, N. Y., April 23d. The President, Dr. David Webster, presided.

After the transaction of routine business, Dr. D. B. St. John Roosa read a paper entitled

"THE EFFECTS OF NOISE UPON HEALTHY AND DISEASED EARS."

The following is an abstract of Dr. Roosa's paper and the discussion it evoked.

Many writers have referred to the phenomenon which is not infrequently observed, that some persons with defective hearing can hear better in a noise. Among those who had discussed it in their writings were Willis, Wilde, Kramer, Troltsch, Politzer, Burnett, Holt and others.

Hearing better in a noise never occurs except where disease of the middle ear exists but the nerve is sound. When it is ascertained how this phenomenon is brought about it will no doubt be possible to invent an instrument to enable those so affected to hear better when it is quiet.

Dr. Roosa cited a number of cases which had come under his care, in which the symptom of hearing better in a noise was present. If boiler makers were examined with a view of determining if this symptom existed the results would be disappointing, since their impairment of hearing depended on disease of the acoustic nerve.

As illustrative of hearing better in a noise, Dr. Roosa related the case of a boy of 16 who could not hear conversation under ordinary conditions, but when riding in a carriage he could hear with the greatest ease, so that this peculiarity was remarked by the parents.

These persons who hear better in a noise do not hear better when the voice is raised to a louder tone.

In 1874, with the assistance of Dr. Emerson, Dr. Roosa had made an extensive examination of boiler makers. It was found that their hearing was markedly impaired, and that they had a language of signs to express themselves while exposed to the din. That instead of their hearing being better in a noise, it was

worse, but better in quiet. The lesion found in these cases was not one of the middle but of the internal ear, of the labyrinth or acoustic nerve. They, as men in other occupations, frequently had impacted cerumen, and this, with catarrh of the middle ear often masked disease of the labyrinth.

The differential diagnosis between disease of the middle and internal ear could be made by the tuning fork.

If a healthy ear has the external auditory canal plugged up, the sound of the tuning fork "C" is diminished through the air but increased through the bone when applied to the mastoid process. If the tympanic cavity is plugged up by swelling or pus as in catarrh of the middle ear, bone conduction is increased. We have also found by experimentation that in healthy ears the tuning fork is heard longer and louder through the air. Now, if a patient with impaired hearing has his appreciation of the sound of the tuning fork dulled by bone conduction and increased through the air he has an affection of the acoustic nerve. It may be expressed by saying that weakened nerves hear better through the better way.

In Dr. Holt's paper on this subject he lays great stress upon the appearance of the membrana tympani and other external appearances, but I consider the tuning fork the crucial test in differential diagnosis.

No considerable number of cases of hearing better in a noise were cited since they were so common. It might be predicated of a case of impaired hearing that if the patient does not hear better in a noise the nerve is probably the seat of the lesion.

After citing some cases illustrative of boiler makers' deafness, Dr. Roosa gave a resumé of the results he had arrived at from his study of this subject in the following conclusions:

First. There is a certain class of people who have disease of the ear who can hear better in a noise.

Second. The impairment of hearing in these cases is due to disease of the middle ear, most frequently chronic catarrh.

Third. Impairment of hearing always results from continued exposure to excessive din and noise as in boiler-making.

Fourth. The lesion resulting from such exposure is one of the acoustic nerve.

Fifth. This class of persons do not hear better in a noise, but on the contrary less distinctly, and they improve when removed from the cause producing their trouble.

Sixth. That which is known as boiler-makers' deafness is often masked by catarrh of the middle ear, which latter may occur in other occupations.

Seventh. Where disease of the acoustic nerve does exist, the tuning fork "C" is heard louder through the air than through the bones of the head.

Dr. Knapp was called upon to open the discussion. He said that he could say but little on this subject since it was one dependent upon particular experimentation, and he had not as yet gone as far in this direction as Dr. Roosa. He would, however, as far as he had gone agree with him except in accepting what was said regarding the differential diagnosis of middle and internal ear disease.

Dr. Brandeis said that his experiments had led him to the same conclusion reached by Dr. Roosa. He had last year taken issue with Dr. Holt regarding the impairment of hearing in boiler makers, thinking it due rather to ankylosis of the ossicles than to lesion of the acoustic nerve. He had found great difficulty in determining how much of boiler-maker's deafness was due

to catarrh of the naso-pharyngeal membrane. He had found that many of them were able to hear better with the mouth open, and he had accordingly advised the use of respirators. The cotton used by boiler makers to stuff the ears not only acted as an irritant, causing local irritation, but also brought about a change in the arterial pressure.

In connection with these experiments he had also examined musicians and had found that there was unilateral impairment of hearing in violinists. It was possible that this was due to continued exposure to musical sounds. Not alone the auditory nerve but also the middle ear as well was diseased.

Dr. Pomeroy was inclined to place great stress upon the observations of Dr. Holt, that there was middle ear disease in many of these cases. Boiler makers were certainly exposed to the exciting causes of middle ear catarrh, and it was present in many cases. Therefore it was difficult to differentiate how much of the deafness was dependent upon middle ear trouble and how much was due to disease of the labyrinth. In regard to the evidence of the tuning-fork knowledge was still very defective, and statements regarding its value as a means of differential diagnosis should certainly be taken with a great deal of allowance. He was certain that there were many instances in which a patient heard the tuning fork better through the air than by bone conduction, and yet had no trouble of the labyrinth.

In a majority of instances a patient with middle ear disease heard better in a noise; but this was not diagnostic of middle ear disease, since some persons without middle ear disease heard better in a noise.

Dr. Andrews said that he had studied this subject carefully and believed in the present state of our knowledge it was impossible to make a differential diagnosis between middle ear disease and that of the labyrinth.

Since no post-mortem examinations had been made it was impossible to verify the statements made in Dr. Roosa's paper regarding the seat of disease in boiler makers' deafness.

Dr. Roosa, in closing the discussion, said that in regard to Dr. Andrew's criticism, that it was impossible to locate the disease till a post-mortem was had, he could not agree with Dr. Andrews. He had made statements in his paper which he had expected would be doubted, and they were doubted but not disproved. When he had a chance at a boiler maker he would most certainly have a post-mortem and endeavor to confirm his statements. He had the good fortune to be a pioneer in this method of investigation, and he had come to believe that in these two things, the tuning fork and the hearing better in a noise, were to be found the means of differential diagnosis between internal and middle ear disease.

There were some persons with impaired hearing who were incurable, and were better let alone than treated by any of the different methods in vogue.

Dr. Piffard invited the members of the Society to see four cases of leprosy which were now inmates of Charity Hospital.

Dr. Sturgis called the attention of the Society to the fact that an effort was being made by the United States Medical College in the New York Legislature to have the institution legalized. A petition against such action of the Legislature was signed by the members present, and in addition, on motion of Dr. Piffard, it was resolved to send a memorial to the same effect as the petition with it.

The Society then adjourned.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, APRIL 25, 1883.

The President, Dr. Geo. M. Shrady, presided. The minutes of the preceding meeting were read and approved.

Dr. Carpenter for a candidate presented a specimen of

"CARCINOMA OF THE MAMMARY GLAND"

with microscopical preparations.

The patient gave the following history: Mrs. P., aged 47, still menstruating, one year ago first noticed a small hard tumor in mammary gland. This did not grow rapidly until after Feb., 1883, when it suddenly grew in size and its growth was accompanied by some pain, although pain was at no time a prominent symptom. The glands were not much involved. The tumor was hard to the touch, irregular in outline and compact, pale gray on section.

Microscopical examination showed it to be composed of fibrillæ of individual oval cells and spindle-shaped cells, cells with double nuclei, molecular matter and debris of gland structure.

Dr. — presented a specimen of

"CARCINOMA OF THE BREAST."

The patient, a widow; native of Ireland, aged 62, noticed in July last a small tumor in the right breast. This tumor grew rapidly and patient suffered severe lancinating pains. Operation was done March 27th. The axillary glands were found to be involved. There was very slight hemorrhage, but patient died eight hours after operation. Cause of death supposed to be shock. The urine was not examined.

Dr. Northrup presented a specimen of

"FOLLICULAR ULCER OF THE COLON"

occurring in a child ten weeks old, who had suffered from ordinary infantile diarrhœa. On autopsy every follicle of the mucous membrane of the colon seemed involved in the inflammation.

Dr. Northrup also presented a second specimen, showing

TUBERCULAR ULCER

of the colon with deposits of tubercular matter in the abdominal organ. The patient from whom the specimen was taken was a child two years and eight months old. He regarded this form of ulcer as very rare.

Dr. Peters remarked that he had had a similar case and inquired the whole duration of the illness. Dr. Northrup replied that the child had been ailing for a year. He regarded it as singular that while the ulcers in the large intestine were infiltrated with tubercular matter those in the small intestine contained none.

Dr. J. Lewis Smith presented specimens taken from the same patient who had had

CHRONIC DIFFUSE NEPHRITIS OEDEMA OF THE LUNG, FATTY HEART, CIRRHOSIS OF THE LIVER, AND CALCAREOUS DEGENERATION OF THE CEREBRAL ARTERIES.

The patient, a female age 45, was brought to the hospital comatose and cyanotic. It was impossible to obtain any history. It was ascertained that she had albuminuria, hyaline and tube casts being found in the urine. She was given elaterium and stimulants but died 24 hours after admission. On examination very extensive disease was found. An interesting fact in this case was the subnormal temperature which was

only 96. It was remarkable what an amount of disease was sometimes borne. In reply to Dr. Carpenter. Dr. Smith stated that the liver weighed 3 10-16 lbs. Dr. Carpenter said he asked the weight of the liver since cirrhosis frequently accompanied mitral valvular lesions and there was no lesion of the mitral in this case.

On motion of Dr. Ripley the specimens were referred to the microscopical committee.

Dr. Van Giesen said that the case was remarkable, since it was very unusual to see a case of uræmia from Bright's disease in which the temperature was not very high.

Dr. Ripley said that it had been claimed a few years ago that the differential diagnosis between apoplexy and uræmia could be made by the temperature, but the temperature varied so that it was found to be no good test.

Dr. Van Giesen said he had examined very many cases of uræmia and had always taken the temperature which was higher than normal, in the last case he recalled, it had risen to 106, it was however usually 102 to 103. In cases of general atheroma of the arteries the temperature is low, and this may account for the low temperature in the case cited by Dr. Smith.

Dr. Ripley thought the temperature was no certain guide. In cases of peritonitis due to perforation, he had seen a temperature of 108 to 109, and in approaching death there was often a varying temperature.

Dr. Carpenter said he had seen a number of cases of uræmia at Bellevue Hospital in which the temperature was low, but they were pointed out as exceptional cases.

Dr. Van Giesen thought the cases mentioned by Dr. Carpenter should not be considered in this connection since they were cases of uræmia which had recovered from the urgent symptoms.

Dr. Ridlon presented a specimen of

"CHRONIC OSTITIS OF SHOULDER JOINT."

The family history of the patient was perfect, he was a young man, had never had any venereal disease and no injury. One year ago he began to notice stiffness in the left shoulder joint and a swelling was developed near the border of the axilla, which increased in size and became painful. This was opened and a copious discharge of pus resulted. When the abscess began to show itself he noticed that the muscles of the shoulder and arm of the affected side were atrophied. Two sinuses were left with undermined openings. He soon began to have cough, loss of appetite, and night sweats. The patient came to the hospital in this condition and was operated upon last Saturday, the pus being evacuated and the bone chiselled off. The man had done perfectly well, but his case suggested one or two points of interest. 1st. It is bad practice to open an abscess when it communicates with the joint, as the pus will often be reabsorbed. 2nd. It is easy to mistake these cases since reflex spasm prevents an examination by manipulation unless patient is under ether, and it is bad practice to examine such patients thus, since it may harm to the joint. Dr. Ridlon said these remarks applied to abscess of all the joints.

Dr. Ripley said that there was no doubt that abscess of the ankle joint was best treated by free opening and free drainage. Bryant of England had advocated this method and its practice had been very successful.

As to examination under ether, it should be done

even though new inflammation was lighted up since diagnosis was the first condition of successful treatment. He recalled the case of an old quack who had flourished many years ago in London, and whose success was due to his skill in breaking up adhesions in joint disease.

Dr. Ridlon said the point he had made was that these abscesses did better when not opened. No one would object to ether as a means of diagnosis but it was not often necessary to adopt this means of diagnosis in these cases.

Dr. Ripley said he wished to emphasize the point he had made that ether must be given in order to make a diagnosis.

Dr. Shradly said: I confess to a little surprise at the remarks of Dr. Ridlon since it is entirely contrary to the laws of surgery not to evacuate pus. Of course great care must be exercised when the abscess connects with the joint. Even in cases of cold abscess it is better to open them and hyperdistend them.

In cases of waxy kidney resulting from hip disease the operation for the cure of the latter relieves the former.

Dr. Carpenter thought that what Dr. Ridlon probably intended to convey was simply that better results had been obtained by the let alone treatment.

The Society then went into Executive session.

BOOK NOTICES.

Microscopical Morphology of the Animal Body in Health and Disease, By C. Heitzmann, M.D., late Lecturer on Morbid Anatomy at the University in Vienna, Austria—with 380 Original Engravings, Published by J. H. Vail & Co., New York, 1883.

After much heralding this work of Dr. Heitzmann's has been presented to the profession. One is at first impressed by its magnitude, next in glancing through it, by the general excellence of the illustrations and the thorough manner in which the publishers have done their work.

The book purports to have been written by Dr. Heitzmann and twenty coadjutors, but the views maintained are those of Dr. Heitzmann, so that as far as the originality or uniformity of the work is concerned it might all have emanated from his own pen. Most of the theories which are here systematically presented by Dr. Heitzmann and which are the offspring of his study and observations for the past ten years have been before presented to the profession in the form of papers and lectures. It is in this form we think that they should have remained, at least until more fully substantiated by further experimentation and observation. Truly theories have their place in medical literature but when they are still unproven this place is scarcely in what aims to be a standard work—what we wish to convey is that Dr. Heitzmann has too often presented his "*ipse dixit*" as the accepted revelation of a new gospel in microscopical morphology and without commenting on the modesty of this method of writing a book we may say that it is hardly conducive to scientific accuracy and practical value. The book is without an index a feature which we trust may be supplied in future editions as it is a serious fault in a book designed for reference.

Perhaps the most striking, as well as most novel, and if true, most important feature of the book is the claim made by Dr. Heitzmann that "he has arrived at a

point of perfection which allows him to tell with certainty the constitution of a person without knowing anything of his present or former life and even without seeing more of him than a few of his colorless blood corpuscles." Certainly marvellous if true and in its practical application invaluable and calculated to revolutionize the present methods of determining disease, but alas our credulity though great as regards the mysteries of microscopy will hardly permit us to accept the possibility of the truth of this claim.

There are many features of this book, many radical views presented, which we would fain dwell upon, but we forbear and commend our readers when in need of reflecting on the mutability of human opinion and the pride of man to peruse its interesting pages.

Lectures on Orthopædic Surgery and Diseases of the Joints. Delivered at Bellevue Hospital Medical College during the winter session of 1874-75. By Lewis A. Sayre, M.D., Professor of Orthopædic Surgery and Clinical Surgery in Bellevue Hospital Medical College; Consulting Surgeon to Bellevue Hospital; Consulting Surgeon to Charity Hospital; Consulting Surgeon to St. Elizabeth's Hospital; Consulting Surgeon to Northwestern Dispensary, etc., etc. Second Edition, Revised and greatly enlarged; with 324 Illustrations. D. Appleton & Co. New York: 1883.

With the merits and demerits of Dr. Sayres' presentation of his views on Orthopædic Surgery as embodied in the first edition of his book, our readers are already familiar. Without dwelling on these therefore, or endeavoring to critically analyze a work that claims only to be a report of extempore lectures, we will be content with a bare allusion to the additions made to the second edition. These are mainly, the introduction of some new illustrations and the re-writing of the chapter on lateral curvature. An effort has also been made to effect a more systematic arrangement of the subjects treated of. Aside from presenting, in connected form, the views of the most aggressive of modern orthopædists, some of which, however original they may be, are brilliant developments of some sound principles governing this department of surgery, the book embodies views which are still unproven and based on insufficient data, and could, we believe with advantage to the author and his readers, be made the subject of a far more critical searching and discriminating revision.

Labor among Primitive Peoples—Showing the Development of the Obstetric Science of to-day, from the Natural and Instinctive Customs of all Races Civilized, and Savage, Past and Present—By Geo. J. Engelmann, A.M., M.D., Professor of Obstetrics in the Post Graduate School of the Missouri Medical College; Master in Obstetrics of the University of Vienna; Fellow of the American Gynecological Society; of the London Obstetric Society; of the Pathological Society of London; Consulting Surgeon to the St. Louis Female Hospital; St. Ann's Lying-in Asylum; Mexico Hospital, etc. Second Edition—Revised, Enlarged and Re-arranged—Fifty-nine Illustrations—J. H. Chambers & Co., St. Louis, 1883.

Dr. Engelmann's book is a monument of careful research, a repository of curious facts regarding the methods of delivery in vogue among the primitive tribes of all nations, facts which illumine the anthro-

pological aspect of midwifery, which are not only wonderfully interesting to the obstetrician of to-day but significant of the overwhelming influence that instinct exerts in seconding the efforts of Mother Nature.

The publication of a second edition within so short a period after the first, and the simultaneous publication of a German edition at Vienna, are gratifying proofs of the appreciation the work is meeting with, and most justly merits. Many valuable additions have been made in the second edition, and the arrangement is more systematic and harmonious.

It is to be regretted that the author did not confide his manuscript to some more enterprising and liberal publishers, who would have gotten the book up in a more suitable dress, improved the illustrations, and in every respect presented an external form which would more fitly correspond to its original, and entertaining contents.

The Microscope and its Revelations. By William F. Carpenter, C. B., M. D., LL. D., F. R. S., F. G. S., F. T. S. Corresponding Member of the Institute of France and of the American Philosophical Society, etc., etc. Sixth Edition. Illustrated by Twenty-six Plates and Five Hundred Wood Engravings. Volume I. Wm. Wood & Co. New York. 1885.

The object which the distinguished author of this book states he has had in view in writing it, is in brief to supply the demand for information both as to the mode of employing the microscope, and its appurtenances, and as to the objects for whose minute examination it is most appropriate.

Not a few excellent works on this subject have been recently published. None, however, it seems to us, have discussed it, as this has, from a standpoint giving evidence of the broadest and most universal knowledge of its relations, and at the same time of the most minute and particular appreciation of the knowledge of detail requisite to master it thoroughly, and apply its revelations to the evolutions of scientific deductions.

The enthusiastic student of microscopy will turn to it as a fountain bubbling over with the information he seeks, and will find in it an incentive to painstaking, and sustained and properly directed work.

To those ignorant of the scope of this new science, it will come as a revelation of its usefulness and possibilities. It does not, however, seem designed for those who simply desire to dip into the mysteries of microscopy, and acquire but sufficient superficial knowledge of it to apply to the simple microscopical problems that present themselves in the practice of medicine, a far simpler, more practical, less elaborate work would suffice these. It is better adapted to suit the wants of those seeking to master the possibilities of microscopy and its application to the study of biological phenomena. It will therefore, it seems to us, have a limited number of readers, but by these will be highly prized.

LECTURES.

PHLEGMASIA DOLENS.—ILIAC ABSCESS.

A CLINICAL LECTURE

BY

WM. M. POLK, M. D., Visiting Physician to Bellevue Hospital, Etc.

GENTLEMEN :—The first case I will show you to-day is the one we operated upon at our last clinic for lacerated cervix. An unusual complication has arisen and I therefore show her to you again to-day. Everything went on well until Tuesday morning, about 24 hours after operation, when she began to complain of pain in the iliac region above Poupart's ligament. I thought that it was probably due to mild cellulitis and accordingly ordered hot fomentations and enough opium to keep her entirely free from pain. By Wednesday morning, however, the pain had extended to the crural region and to the leg, which was swollen, as you see it now, fuller and harder than its fellow. This swelling is noticeable about the ankles, but is most marked, as you will notice, in the upper part of the thigh. There was also for the first few days a decided difference in the temperature of the two limbs. When the pain came on there was slight elevation of temperature and some digestive disturbance, but these symptoms passed off at the end of four days.

Now, this condition did not exist last Monday, the day of operation, when the patient's general health was very good. What is her trouble? Let us note the chief symptoms: they are, pain above Poupart's ligament and swelling involving the ankle and thigh. You will readily divine that this is phlegmasia dolens, due to some disturbance of the circulation. This is a very rare complication of operations on the cervix. It is more frequent after parturition or typhoid fever, or in cancer or phthisis.

You will naturally inquire what is the cause of this. If we cut loose from our books and consider how this has been brought about the answer is a very simple one. Why do we have swelling? Because the circulation of the lymphatics or the blood vessels has been interfered with. The swelling is confined to one leg, therefore the difficulty, if it has its origin in the vessels, must be below the bifurcation of the descending vena cava; if arising in the lymphatics, the glands below the lumbar glands must be the ones involved.

We had a surface that was torn and in closing it we had to go close to the utero-vaginal junction where is situated a thick plexus of vaginal veins, so thick that some contend that the vagina is an erectile organ. Connected with this plexus is another which again connects with the iliac vein. Now, an inflammation starting from that point—the utero vaginal junction—could extend along the internal iliac, be communicated to the external iliac, causing coagulation of the blood and the symptoms developed in this case.

Or on the other hand we might have had simply a lymphangitis. It would be an easy matter for the inflammation from the wound made by ourselves to extend to the lymphatics underneath the broad ligament and above Poupart's ligament. This would cause stoppage of the glands and a tendency to accumulation of lymph in the lymph channels, thus this secondary or lymphatic circulation is interfered with and as a result of this we have the symptoms already described.

In the case before us I believe the symptoms to be due to disturbance of the lymphatic circulation. You notice that the swelling is chiefly confined to the upper

part of the limb and this is more characteristic of lymphangitis than of phlebitis. That portion of the limb is swollen which is supplied by the iliac lymphatics.

If the trouble were due to plugging of the veins we would probably have a hardening extending along the line of the femoral vein. As a matter of fact, no such indurated tract exists in the present instance.

The way these inflammations travel is either by the veins or by the lymphatics or it may be by both.

Now if we have a coagula formed in a vein it would be foolish to interfere with it by pressure or by rubbing, and why? Because as you know it would break down readily a portion become dislodged, go directly to the heart through the pulmonary artery to the lungs and such a thrombus might terminate fatally. If a large one it will certainly cause death. So much for one of the dangers of this condition.

Absolute quiet therefore is of the first importance. Never allow such a patient to get out of bed before 3½ weeks. By that time absorption will have taken place.

To prevent swelling the limb is bandaged from the toes up and covered with oil silk. After 3½ weeks we may use stimulating liniments as the ordinary soap liniment and vigorous friction from the toe up. You will however find that the tendency to swelling is so great that it will persist for six months, or even a year, and will have to be combated by an elastic stocking.

In some cases there is permanent occlusion and we are then sure to have varicose enlargement of the veins. But this introduces us to an aspect of the subject which we will not have time to dwell upon.

The next patient is one who shows a very interesting condition of things, interesting both on account of its comparative frequency and the excellent results obtained by treatment.

About ten days ago my attention was called to this patient who had a swelling in the iliac region which was painful but unaccompanied by increase of temperature. We found by palpation and percussion that this swelling occupied the whole iliac space. On introducing my finger into the vagina I found the uterus fixed and drawn over to the left side. I thought I was able to discover fluctuation in this mass but was not certain. I introduced a catheter into the bladder and found that though closely applied to this mass the bladder was still distinct from it. The history the patient gave me was that she had received a kick in this region. What was the tumor?

The fixedness of the tumor and the other symptoms convinced me that we had to deal with a cellulitis which had gone on to purulent inflammation and pus was seeking exit near Poupart's ligament.

Our next step was to introduce the aspirator which gave us the assurance that it was an abscess. The moment we put in the knife out gushed the pus. Passing in the finger we carried it up midway between Poupart's ligament and the umbilicus. The purulent inflammation had pushed the broad ligament aside and forced the fold of the peritoneum upward and backward.

Next we wished to ascertain how deeply this abscess extended into the pelvis. If deeply there were probably pus pockets and we might have to make a counter opening to secure thorough drainage. We found the bottom of the abscess ended with the pelvic brim, and by having the patient lay on the right side we obtained efficient drainage, washing out the cavity and inserting a drainage tube.

There was one sinus running along the broad ligament. The extent of this we could not determine. If this does

not fill up we will still have to make a counter opening. How shall this be done? The main point to consider is not to injure the bladder. Introduce a catheter into the bladder so as to know the extreme limit of the posterior wall; carry your finger down into the sinus until it touches the catheter, then take a blunt instrument, as this catheter I show you, attach a piece of drainage tube to it by a string passed through the eye and you are in a position to press the instrument through the vaginal wall, and by means of the string can draw the drainage tube into position and remove your catheter. The base of the bladder has no doubt been somewhat injured by this manipulation, but the ureter not at all. This is the manner in which I expect to treat this case. In addition to this we must wash out the cavity from time to time and attend to the general health of the patient.

HOSPITAL REPORTS.

NEW YORK HOSPITAL, NEW YORK. INTERNAL HÆMORRHOIDS—OPERATION.

SERVICE OF

GEO. A. PETERS, M. D.

R. T., widower, journalist, admitted to N. Y. Hospital December 2, 1881.—Family history good. No specific or alcoholic history. Had an attack of acute inflammatory rheumatism 4 months before admission, but no cardiac trouble. Since then has gradually lost flesh. Three and a half years ago noticed slight protrusion of the gut during defecation, which gradually increased and became painful, and could only be reduced on patient's assuming a horizontal position. Tenesmus soon came on, and patient had from five to six stools a day, although but little was passed from the bowel. These symptoms became more and more aggravated until about a year ago when he first noticed blood in the stools, which at that time became still more painful.

Condition on Admission.—Patient poorly nourished, weak and anæmic, appetite poor, suffers much pain at stool.

Examination shows a small ring of pendulous tissue about the external sphincter, not congested except when straining, not painful, nor tender to the touch. Internally are three superficial ulcerated masses about the size of a bean ½-inch from the sphincter.

Liver much enlarged, extending three inches below the free border of the ribs and well over toward the left side.

Heart.—A direct aortic bruit is heard over the base of the heart and conducted along the vessels of both sides; action slow and regular. Examination of urine negative.

Treatment.—Patient kept quiet and laxatives administered; operation decided upon.

Operation.—Ether. Patient placed in lithotomy position and sphincter dilated. The external and internal masses found to be connected. Each pulled down separately with forceps and separated with the scissors from its connection with the muscular and submucous tissues upon which it rested, so that it was connected only by an isthmus of vessels and mucous membrane. The pedicle was then ligatured with strong silk ligature as high up as possible, and the mass cut off. Very slight hæmorrhage resulted.

Suppository of opium was inserted and T bandage

applied with a pad over the rectum, and patient sent to the ward. Recovery from ether good.

At 9 P. M. patient complained of severe pain, and Mx. of Magendie were given; 12 P. M.—Pulse 90. Temperature 96°. Respiration 14. Pupils well contracted. Ordered spts. vini gal. $\frac{3}{4}$ ss. every 3 hours and tr. digitalis Mxx. Applied hot bottles. The day following temperature normal, 100°. Respiration 14. Patient weak and stupid and drowsy, but answers when spoken to, although quite slowly. Pupils still contracted. Nervous twitching of muscles occur now and then. At 1 P. M. patient was more stupid and stimulant was increased to $\frac{3}{4}$ ss. every 2 hours with tr. digitalis Mxx. Water drawn at 12 M., but only $\frac{3}{4}$ ii. could be obtained. This was examined and 5% of albumen found, no casts. Patient was cupped over the kidneys and Pacquelin's cautery applied and large poultice.

6 P. M. patient in condition of great prostration, lungs oedematous, sweating freely. Chest cupped anteriorly and posteriorly, also the kidneys. Stupor increasing, pulse 90, and hardly perceptible at the wrist; respiration 30 and stertorous, temperature 98°. Twitching of muscles more frequent.

7.30 P. M. patient seized with convulsions and died suddenly.

CASE II.—M. H., æt. 32, married, dentist. Admitted January 11, 1882.

No history of syphilis or rheumatism. Family history good. Patient first noticed hæmorrhoids about ten years ago, one or two small masses, which would protrude at times during defecation, and were quite painful, but did not bleed, and could be easily reduced by pressure, pain ceasing after reduction.

This condition continued about four years the piles slowly increasing in size. Six years ago the patient's habits were very irregular, and he suffered from habitual constipation. At this time the piles came down and have not since been reduced. They have slowly increased in size and number, and become swollen and inflamed at times, when they would bleed and the inflammation subside. For the past year patient's habits have been more regular and bowels have acted well although much severe pain has occurred after stool.

Condition on admission.—General condition good. Patient well nourished. Examination shows two small external masses about the size of a walnut, which lead up to and connect with several similar masses internal to the sphincter, one of which is slightly ulcerated and very tender on manipulation.

Treatment.—Allingham's operation done January 14th. Ether. Patient placed in lithotomy position, sphincter dilated, and the three masses pulled down separately with pile forceps. Mucous membrane and tissue cut up at the side, the pedicle ligated close to the wall of the rectum and cut at a good distance from the ligature. Recovery from ether good. Opium suppository inserted and T bandage and compress applied.

Jan. 20th.—Doing well. Opium and belladonna suppositories have been given to allay irritation and wound dressed daily by simple washing. All irritation has now subsided, the wounds are healing nicely. Patient had good movement of the bowels.

Jan. 25th.—There still exists a small mass external to the sphincter but this occasions no inconvenience. Patient discharged cured.

CORRESPONDENCE.

THE CODE OF ETHICS.

To the Younger Members of the Medical Profession—

BROTHERS: For years and years New York has been regarded as the great medical Metropolis. There the genuine *Magi* dwell. The *Illuminati* shine there. Thence come the innumerable progeny of the *Literati*, illustrating the scriptural statement: Of the making of books there is no end. There the Gamaliels stand in the Academy, surrounded by countless footstools on which we all have sat as admiring auditors. Boston may be the Hub, but New York is the axle round which the hub dutifully revolves. Philadelphia, it cannot be denied, is no mean city, but then it is so far, far away. New Orleans has its Yellow Jack, St. Louis its Mississippi, Chicago its corners in grain, and San Francisco its Golden Gate for the easy exit of Chinamen; but New York is and must be forever the medical Mecca of the western world.

Alas, that a skeleton should exist in every closet, even a medical one. Alas, that Paradise itself must be invaded and broken up by a tempter, who taught that the trammels of law are incompatible with personal freedom and happiness. In the Metropolis a great trouble has arisen. It has been diligently fomented; but fomentations seem only to aggravate it. The *Magi* dwell together, but not in unity. The *Illuminati* spread their radiance, but in flashes of angry lightning. The fecundity of the *Literati* is still undiminished, but the offspring seem disposed to worry and devour each other. The Academic groves resound with the clamor of contending factions.

In this emergency, when the infallible utterances of the very oracles have become discordant and conflicting, will you tolerate a few homely suggestions from a country practitioner who can offer, for his utter lack of urban elegance and eloquence, only a strong desire to promote the honor and welfare of a noble profession.

He addresses you, young men, because you have no rooted prejudices to overcome, no party victories to achieve, and because life has as yet lost none of its promise, none of its glorious sentiment.

MEDICAL ETHICS.

There are three codes of Medical Morals: the National, the New York, and the "Gentlemen's." The National is the one to which you and every member of every medical society, County, State, or National, has deliberately subscribed and promised allegiance. For nearly forty years, it has been the standard and mentor of the profession in all English speaking countries. Its wise precepts embrace the duties of physicians to one another, to their patients, and to the public. It is not a collection of arbitrary and rigid impositions, not a formidable array of mental gyves designed to cripple investigation, to hinder progress, or to restrain the free exercise of generous and gentlemanly impulses. It is simply a letter of advice such as every wise and good father should be glad to write to a beloved son, whose honor he would keep untarnished and whose usefulness and welfare, throughout his medical career, he would promote. *Read it*, and you will acknowledge that the young practitioner cannot study it too closely; that the old can never outgrow its principles; and that both should be thoroughly imbued with its noble spirit.

The New York Code does not differ essentially from the National Code, except in the matter of consulta-

tions. The National declares in effect that consultation with those whose avowed principles and professed practice are wholly unlike ours, is derogatory to the dignity of the profession. The New York Code repeals this section, and declares that consultations may properly be held with all legally qualified practitioners, of whatever faith or practice. The No Code, or the Gentleman's Code, as its advocates seem proud to call it, would abolish both the National and New York standards, with their guiding precepts, so valuable to the young and inexperienced; their admonitions and wholesome restraints; and leave every practitioner to be judge and jury in his own case, and to decide whether his lawless conduct is that which becomes a physician and a gentleman. Curiously enough, the advocates of this Code are at present zealously coöperating with the New York Code men. Their sincerity cannot be doubted, but, according to their own confession, they are bitterly opposed to the New York Code as well as to the National, and they are avowedly waiting for an opportunity to desert their allies and to overthrow all written codes.

Why should we prefer the National to the New York Code? A widely-spread conviction exists that the principle of fair-play was violated in the substitution of the New York for the National at the meeting of the State Society in 1882.

At a very slimly attended meeting; against the protests of some of the most faithful and respected members; and in spite of the requests to postpone action for one year, so that the profession might consider a proposition so unexpected, so radical, and so revolutionary, a vote was forced by the united strength of the New Code and the No Code men, and the New York Code was adopted by a two-thirds majority. The shrewdness of this precipitate action, so unnecessary and so unkind, is manifest, when we consider that the obnoxious Code could not have been adopted at the meeting in 1883. The grand uprising of the profession throughout the State, as shown by the action of forty county societies condemning the New Code, falsifies the prediction made by one of the Revising Committee, that if the New Code were adopted without delay, the profession would acquiesce, and the subject would never again be brought up.

It is not surprising that the snap judgment of the accidental if not pre-arranged majority in 1882 should have provoked sharp retaliation. Those who sow the wind should not complain of a plentiful harvest of whirlwind in after days.

The County societies expressed their disapproval of the new code almost unanimously, and then they went quietly to sleep, unwisely trusting that respect for this unanimity would secure a restoration of the National standard.

2. The National Code is the one believed in, and supported by, the great body of our medical brothers throughout the Union and wherever the English language is spoken. In spite of all the iterated and ingenious arguments and appeals and inaccurate statements, with which a half dozen enthusiastic and untiring gentlemen in New York have inundated the land, in circulars, and pamphlets, in newspapers and medical journals, in strong, nervous English and in captivating German, the allegiance of an immense majority of the profession to the National Code remains firm and unshaken.

The wisdom and ingenuity of these few eminent and persuasive writers is cheerfully conceded to be great. They may be so situated that they cannot sympathize with the general practitioner; but they are honorable

members of the profession; their honesty is unimpeachable; their motives are above suspicion; their opinions are entitled to respect. But the wisdom of the many—and the many in this instance embrace the vast multitude of the wisest and best in the medical profession—is superior to the wisdom of the few.

3. Subscription to the National Code is required of all who would become members of the American Medical Association. This grand Association has been stigmatized as a peripatetic, a junketing, a Rip Van Winkle concern managed by a few fossils.

The sneer is unworthy of its authors. It shows to what straits the advocates of a weak cause are sometimes driven.

It is hardly necessary to state that the American Medical Association is composed of delegates and members from every State and County society. Its officers are nominated by a committee of one from each State, selected by the delegates from that State. It is reasonable to conjecture that the County and State Societies select their best men to represent them in the Association. If the best are fossils, the condition of the remainder cannot be specially animated.

The Association holds its meetings in different parts of the country. It is always invited, always welcome. It is therefore peripatetic. Nine hundred and fifty healthy peripatetics assembled at St. Paul last June. The British Medical Association, with its nine thousand members, is also peripatetic. Doubtless it is Rip Van Winkle too. And it junkets. But somehow it is not specially unpleasant to junket with such men as Jenner and Wells, Bristowe and Paget, Lister, MacCormac and Ernest Hart; and Gross—the Nestor of Surgery—and Davis—the father of the Association—and Austin Flint, senior and junior, and Gouley, Sims, and Thomas, Sayre and Moore, Bigelow—the Lithoclast—and Roosa and Jacobi and all the thousand other good fellows of infinite jest and digestion whom one meets at these junketing Associations. Our State society closed its very last meeting with a grand junket at which none but New Code men uttered a word.

You, young men, who do not dare to meet the great luminaries of the profession, lest you should be tempted to junket, will vote for the New York Code. But you, young men, who hope one of these days to become members of this noble National Association, to take part in its excellent meetings, to fill honorable positions among its officers, and to learn, by personal observation, that there are some worthy and eminent and scientific and progressive men outside the city and State of New York, should vote and work for the restoration of the National Code.

4. The National Code disapproves of meeting in consultation those who have nothing in common with us; those who claim to possess a totally different and better system of practice. What is a medical consultation? A comparison of opinions. Concerning what? Anatomy, physiology, chemistry, histology, the *Bacillus* discovery? No. Simply concerning diagnosis and treatment. The questions rightfully asked by the patient are: What ails me? What will cure me? It will not be denied that the good of the patient should be the sole object of the consultation. If the consulting physicians hold totally dissimilar therapeutic views, then the pretended consultation is a disgraceful sham. It is worse than this. It is a fraud. If the consultants take pay for a conference, when it is known that there can be no agreement or compromise, then a downright robbery has been committed. No matter if the patient and his friends ask for the meeting. We are guilty, all the same, if we, taking advantage of their ignorance,

consent to hold a bogus and necessarily useless consultation, and then fleece them of their money. The public and the newspapers will yet come to understand that when we refuse consultations with those who differ from us as darkness does from sunshine, we are not the illiberal and bigoted and narrow-minded wretches they have imagined; but that we are the true friends and protectors of the people, because we are the friends of honesty and fair dealing.

After a time the people will learn to appreciate at their true value those who consent to hold, and take a fee for, a consultation which was foreordained to be a farce and an imposition.

Is this a practical question? Are there physicians who differ from us thus radically? The regulars and the homœopaths, for instance, do not seem to see exactly eye to eye. But are their principles and practice really so unlike that there can be no compromise in a consultation, and so no benefit to the patient? If they are, then a pretended consultation, instead of being an evidence of liberality and freedom from intolerance, is a proof of lying and swindling.

And the National Code, which discourages such fraud and robbery, deserves earnest support. And the New York Code, which authorizes it, should be repudiated.

The high-toned "Gentleman's Code" of course does not condemn it; it reprobates nothing; it approves of that which the performer himself claims to regard as conduct becoming a physician and gentleman.

Look at this matter a moment. Our distinguished contemporaries, the homœopaths, hold to the doctrine *similia similibus curantur*. They hold to it with invincible tenacity. They inscribe it on their banner and spike the banner to the mast, sink or swim, survive or perish, they are for the law of similars. *Aut similia aut nihil*. And their practice conforms to this law. The regulars deny the existence of any such law. They claim that the few facts which seem to support the doctrine are overbalanced by the multitude of facts which oppose it.

The practice founded on this exclusive dogma, they regard as unscientific and perilous to the welfare of the public.

Surely from such discordant views no harmonious consultation could result beneficial to the patient.

The homœopaths assert that "the totality of the symptoms constitute the disease." The regulars believe that symptoms are but the signs of an under-lying morbid condition—the signals which disease displays—and that disease might exist without any recognizable symptoms. The homœopaths consistently strive to find out and remove the symptoms; the regulars are not content till they discover that which produces the symptoms.

Again the system of "proving" adopted by the homœopaths seems quite irrational and absurd to the regulars. To take a dose of medicine and then attribute every trifling ache or itching or uneasiness experienced, even at the end of forty days, to the drug employed, so that should a similar itching or ache ever arise this drug will be indicated as the proper remedy, appears to the regular practitioner but as the immeasurable credulity of utter dementia.

But the greatest difference between the regulars and the homœopaths is found in the size of the doses employed. The homœopaths, not universally, but with a few factional and unimportant exceptions, hold, as a cardinal tenet, that the power of a drug against disease increases in proportion to its dilution, its potentization as they call it. Their practice of course is strictly in accordance with their theory. They give

small doses. Where the regular would give a grain of a certain drug, they give an extremely small fraction of a grain. They give the fourth or fifth dilutions or potencies. It would take thirty barrels of water to carry all of one grain of medicine to the fourth dilution; and three thousand barrels to the fifth potency. For each dilution is one hundred times weaker than its predecessor. Now if a patient could swallow the whole of the thirty barrels of the fourth potency, or the whole of the three thousand barrels of the fifth dilution, he would actually take but the single original grain of the drug employed, unless its therapeutic power were increased in some way by the dilution. But the homœopath does not give the whole thirty or three thousand barrels at once. He does not usually give even a single drop. He moistens a hundred pills of pure sugar with a drop of the dilution employed, and then he gives five, ten, or more of these pellets for an efficient dose. The regular believes that a dose of this minuteness must be utterly impotent and valueless.

But the homœopath does not stop at the crude fifth potency. He employs the thirtieth, the sixtieth, the two hundredth, the three thousandth dilution. And he claims that he has better success with the high potencies than with the low.

A distinguished mathematician of Washington, made, at the writer's request, a careful computation. His determination can be verified. It will not be denied by the homœopaths. This is his report: If a person at the time of Adam had commenced counting at the rate of a hundred a minute, and had continued without intermission till the present hour, he could not have counted the globes of water, each the size of our earth, which would be required to carry one grain of medicine to the sixtieth dilution. A distinguished homœopath asserted to the writer his belief that a single drop, taken anywhere from this somewhat immense amount of fluid, would exhibit the specific quality of the drug employed and would be a potent and sufficient dose.

It is hardly necessary to announce that the regulars, without exception—the National Code conservatives, the New York Code liberals, and the *quæsson* please No Code men—are united in the belief that every part and parcel of the homœopathic creed is fallacious, and that their medication is no better than diluted moonshine, and is a trifling with human life.

It is not the purpose of the writer to decide whether the homœopathic or the regular practice is the better. He casts no ridicule; he charges no dishonesty; he impugns no motives. For the purposes of this discussion, he assumes that every homœopathic practitioner is sincere in his belief and honest in his practice. And this concession being made, he claims that a consultation held with him by a regular must be a fraud and a swindle.

The difference between them is infinite. There can be no compromise. One or the other must give up wholly. And as neither can yield without abandoning principle and self-respect, the consultation must be a sham and the fee a robbery. Hence the liberty to hold such a pretended consultation should not be granted by any code. It is not granted by the National; it is expressly allowed by the New York; the Gentleman's Code folds its æsthetic hands and says nothing. Can it make any difference in a question of ethics that these consulting parties have certain *legal* qualifications? Can the fleeced patient derive any satisfaction from the knowledge that the conspirators who robbed him have genuine diplomas? Moral principles, like

the multiplication table, and the law of gravitation, cannot be changed by the caprice of a Legislature, even one so pure and illustrious as that which meets at Albany. It was feared that the Legislature during the past week would have legalized the medical diplomas of a certain machine in Western New York. If four opposing votes in the Senate had been cast for the bill, it would have passed. And then would the holders of these diplomas, obtained possibly without study or a day's attendance on lectures, have been any more fit consultants than if they possessed no license whatever?

The simple truth is this, and no amount of learned sophistry can begot it: The aim of the laws concerning physicians is to protect them in the exercise of their calling, and to protect the public from their misdoings. It is not to enforce or promote consultations with those who tenaciously hold opposing views in principles and practice.

If it be asserted that homœopaths do not actually adhere in practice to their avowed principles; that they really give regular medicines in orthodox and heroic doses; that they are simply using a name as a cloak to gull a certain class of credulous people; and that therefore regulars may properly consult with them; the answer is ready. If the homœopaths are honest, as they are conceded to be in this article, consultation with them is useless and improper, and rightfully forbidden. If they are dissemblers, and wolves in sheep's clothing, and liars and cheats, then consultations with them should be shunned and prohibited, as contrary to good morals, as giving countenance to imposters and swindlers.

The epitome of all this is that the National Code should be upheld:

1. Because it receives the support of the great mass of the wisest and best of the profession, here and elsewhere.

2. Because adhesion to it is necessary if we would be in affiliation with the American and regular State Associations.

3. Because its repeal by the State Society deprived a large majority of the profession of a cherished right to representation and membership in these Associations.

4. Because this unnecessary, precipitate, and unfair repeal has engendered wrath and wrangling, which threaten to alienate permanently those who have been and should be brothers.

5. Because the old Code stands firmly by the right, and frowns indignantly upon the wrong.

6. Because it would be a poor bargain to trade off national and international brotherhood and adherence to moral rectitude for the paltry and never-to-be-exercised privilege of consulting with those who have no fellowship with us, either in word or works.

Finally, my young friends, do not be seduced by captivating appeals to your love of liberty.

The statutes against theft and perjury and murder are very stringent. Are they oppressive to *you*? Do you demand their repeal, because they are illiberal relics of a barbarous age? Do you say: "I don't wish myself to steal or swear falsely, or kill anybody; but I want all restraints on the liberty of my friends removed, so that they can decide, each one for himself, just what to do?" No. You proudly declare that a good law is never a trammel to a good man. You assert that liberty without law is communistic license. And you deny the statement, so industriously circulated by those who would throw off all restraint, that the National code was instituted to put down quackery, and that, having failed, it should be repealed. You know that the National Code simply

exhorts us to avoid improper associations; and you know too, that every quack in the land is a vociferous supporter of the New York Code.

Hold fast that which is good.

I have the honor to be

Yours, for the tried and true,

H. D. DIDAMA.

Syracuse, April 28. 1883.

MEDICAL NEWS AND NOTES.

The city of brotherly love is not to be outdone by her medical rival, New York, in supplying the latest and most approved methods of medical instruction. She has in operation a Polyclinic modeled after the N. Y. Polyclinic. She has not, however, the hospital facilities that her more fortunate rival commands.

Contagious Diseases of Cattle.—The investigation of cattle diseases about to be undertaken by the Department of Agriculture on its experimental farm near Washington is a hopeful step toward the solution of both a scientific and a practical problem. Its object is to ascertain the causes, prevention and cure of Texas cattle fever and other diseases. The experiments will be under the direction of Dr. Salmon and will be especially conducted with a view of developing practically the Pasteur system of inoculation as a means of preventing the spread of cattle plagues. The experiments already made by Dr. Salmon with cases of Texas fever seem to demonstrate that this disease may be successfully inoculated by using material from the spleen of sick cattle. A peculiar micrococcus has been found in this material and cultivated outside of the body, but in such cultivations it is said to lose its virulence. In 1880 the French experimenter Tous-saint announced the important discovery that inoculation of susceptible animals with anthrax blood previously heated to 131 degrees for ten minutes enabled such animals to resist subsequent inoculations with the active virus. In an experiment with twenty sheep inoculated at Alfort with his prepared virus four died and sixteen recovered. The partial success of preventive inoculation with the cultivated virus of chicken cholera also warrants the hope that further investigation will lead to the discovery of a safe and sure method of protecting fowls from this contagious disease. In fact, Pasteur has prepared a variation from the germ of this contagion with which he has inoculated chickens and found that they survived and were afterward insusceptible to further attacks of the plague. In conferring the medal of the Paris Academy on Pasteur last year M. Jamin said that the medallist's researches had opened "a new era for medicine by proving that every virus may have its vaccine matter." While this conclusion seems too sanguine there is ample experimental proof that the method of preventing the spread of contagious diseases by protective inoculation is capable of a vast and varied extension. The new enterprise of the Department of Agriculture therefore promises much for the welfare of American stock raisers.—*N. Y. Herald.*

The following bill has been reported favorably by a legislative committee on public health, making it a misdemeanor to sell or offer for sale "any packet, box, bottle or other enclosure containing any pills,

powders, troches, lozenges, cordials, syrups, nervine or other medical preparation held out or recommended to the public by the maker, proprietor or vender thereof as remedies or specifics for any disease, diseases or affections whatever affecting the human or animal body, unless such packet, box, bottle or other enclosure shall have upon the label thereon, or in some other conspicuous place upon said packet, box, bottle or other enclosure, a true and full statement of the ingredients of which said medicines, remedies, specifics or other preparations so contained as aforesaid are composed."

In an obscure part of the Bellevue Hospital yard there is a photograph gallery which has become an important adjunct to that institution.

The hospital photographer takes photographs of all the unknown dead who are brought to the Morgue. He places the coffin containing the dead body in an upright position in an angle of the Morgue building, and makes a photograph of the face.

How to Take Exercise.—The aim of exercise, says *The London Lancet*, is not solely to work the organism which is thrown into activity, though that is one, and a very important, part of the object in view, because as the living body works it feeds, and as it feeds it is replenished; but there is another purpose in exercise, and that is to call into action and stimulate the faculty of recuperation. The difference between being accustomed to exercise and able to work "without feeling it," and being barely able to accomplish a special task, and having it "taken out" of one by the exploit, whether mental or physical, is the difference between possessing the power of rapid repair by nutrition, and not having that power in working order—so that some time must elapse before recovery takes place, and during the interval there will be "fatigue" and more or less exhaustion. Exercise with a view to recuperation should never so much exceed the capacity of the recuperative faculty as to prostrate the nervous energy. The work done ought not to produce any great sense of fatigue. If "exhaustion" be experienced, the exercise has been excessive in amount. The best plan to pursue is to begin with a very moderate amount of work, continued during a brief period, and to make the length of the interval between the cessation of the exercise and the recovery of a feeling of "freshness" the guide as to the increase of exercise. We do not mean that false sense of revival which is sometimes derived from the recourse to stimulants, but genuine recovery after a brief period of rest and the use of plain nutritious

food. If this simple rule were carried into practice by those who desire "to grow strong," there would be less disappointment, and a generally better result, than often attends the endeavor to profit by exercise unintelligently employed.

The following is a comparison of the deaths from pneumonia, consumption and bronchitis in New York during the past two years:

	Deaths from all causes	Deaths from consumption	Deaths from pneumonia	Deaths from bronchitis
1881	38,624	5,312	3,261	1,511
1882	37,924	5,251	3,472	1,583

As evidencing the decay of homœopathy, the following statistics from the *London Lancet* of April 14, 1883, are interesting:

The *Homœopathic Directory*, published by Leath and Ross in 1862, indicates that the system was in its infancy in this country more than half a century ago, having been represented in 1830 by a single practitioner. In its twenty-fourth year (1853), according to the same authority, it had so grown as to be represented by 213 members. In 1862, after nine more years, the same *Directory* shows 218 qualified practitioners; that is a small increase of five. A few years later the numbers had increased, according to the *Homœopathic Directory*, published by Turner of Fleet street, in 1866 to 227, in 1867 to 246, in 1868 to 258, in 1869 to 268, and in 1870 to 273, representing a total increase of 55 qualified practitioners in eight years. In the subsequent and most recent decade all substantial increase from the ranks of the profession soon ceases. In 1871 there were 278 practitioners; in 1872, 279; 1873, 284; in 1874, 279. Then, according to the *Directory* of the Homœopathic Publishing Company, Finsbury-circus, in 1875, there were 269 qualified practitioners; in 1877, 249; 1878, 268; 1879, 275; 1880, 275. Thus there was an increase in the decade, counting from 1870, of only two practitioners. Considering the increase of population and the increase in the numbers of the profession generally, the schism had evidently been losing ground during this decade, notwithstanding the establishment of a London School of Homœopathy, founded with the express object of promoting the system amongst members of the profession, and notwithstanding also, as I have reason to know, the promise held out to students of a lucrative speciality. In 1881 the number of practitioners willing to enter themselves in the *Homœopathic Directory* had actually diminished to 267, and in 1883 the whole number amounted to only 260—a serious fact for a system which is nothing if not belligerent and increasing.

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THIRD CONVERSATION BETWEEN DRS. WARREN AND PUTNAM.

Dr. Putnam.—Does your zeal hold out in the cause of Liberty?

Dr. Warren.—It is not one whit abated. Close up your armor and put yourself in an attitude of defence, for I am going to throw another lance. If a code of ethics is needed in the profession of Medicine, why is it not needed, also, in the professions of Law and Divinity?

Dr. Putnam.—So far as the Lawyers are concerned, I reply, that Law is in many respects like the Military Art—a profession of war, in which it is deemed justifiable often to resort to deception, and to openly declare that you believe or intend to do what you do not believe or intend to do. A code of ethics made to sit easily and comfortably upon a lawyer would have to be as loose as a Roman toga. It must permit him to insult the opposing counsel in the presence of the Court, to blacken the character of witnesses whose reputation he knows to be as pure as his own, and to do a thousand other things which no man could do outside of the courts and be considered a gentleman. Not that all lawyers do this habitually; but many of them do, and rarely incur the censure of the Court in consequence, and pretty uniformly receive the approbation of their clients. Nevertheless it is not true that lawyers have no code of ethics. All bodies must have bounds, and there are offences, such as taking a client's money under false pretences, for which a Judge is permitted to disbar a lawyer; forbidding him any longer to practice in the courts. So, also, there is in the allied profession of war a code of ethics, which renders infamous the man who enters the lines in disguise. He is not treated as an honorable enemy would be, but is tried by drum-head court-martial and gibbeted, and buried without a mark to indicate the spot. Imagine, if you can, a lawyer when his case is called in court, addressing the judge as follows:—Your Honor, I wish to say a word in

reference to Mr. Kraft, my associate counsel in this case, as the conditions of his employment and his mode of practice are peculiar, and perhaps unusual; yet my client insists that he shall take part in the conduct of his defence. Mr. Kraft is a regularly authorized practitioner, according to the laws of this State, but he is a "Slyhooven" lawyer.

The Judge.—What is a Slyhooven lawyer?

Counsel.—I beg your Honor's pardon, but I thought you must have heard of this famous sect in law, although, hitherto, they have not practised in our Courts. A Slyhooven lawyer is one who adopts the principles of Slyhooven, a celebrated German jurist, who has written a book upon the subject. He holds that the less the evidence the stronger the testimony, and that if you can make the evidence infinitesimal you are certain to persuade the jury and to win the case; provided, however, that in all cases you use that kind of evidence which does not antagonize or contradict the evidence presented on the other side; but which, whilst it is not precisely the same as that offered by the other side, is as near like it as possible without being actually the same. Thus, for example, my client is accused of stealing a horse. Now a mule bears the closest possible resemblance to a horse, but it is not a horse. Mr. Kraft will, therefore, present the least possible evidence that our client stole a mule—the less the better for our client. That, in short, your Honor, will be Mr. Kraft's course of procedure, in so far as he has the management of the case.

The Court.—You certainly cannot be serious in what you say, Mr. Dobbins.

Mr. Dobbins.—I certainly am serious, your Honor. A good many lawyers in Germany have tried this system of practice and have proved successful. Some lawyers who were doing little or nothing before, have got rich by it, and there are several reputable lawyers in this city who have invited Mr. Kraft to aid them in the trial of cases, if the courts are once opened to him.

The Court. Well, Mr. Dobbins, this court has only to say, that it cannot waste its time in listening to such nonsense; and that your client will have to go to some other court if he wishes his case tried by these methods.

Mr. Dobbins. Then your Honor proposes to exclude from this court a regularly licensed practitioner of law, and to deprive an humble, but free American citizen of what he considers his only chance of escaping punishment and perpetual disgrace.

The Court. Yes, this is what I propose to do, judges have always exercised certain discretionary powers not specifically named in the laws; and one of these is not to permit idiots or lunatics to practise in the courts.

Mr. Dobbins. But, your Honor, we are not idiots or lunatics. Neither Mr. Kraft nor myself believe a word in all this foolery, but our client does; and it has generally been found easy to convince a jury, composed of the most intelligent citizens, to believe in it, and to persuade them to give their verdict in our favor.

The Court. I might have added that the judges have always exercised the right, also, of excluding from the bar self-acknowledged rogues, criminal offenders and self-convicted imposters.

It is our duty, also, not only to protect the court from such insults, but to protect the people as far as possible from imposition, by refusing to give our official countenance and support to imposters.

If you are not ready to try this case without the aid of Mr. Kraft and his peculiar system the clerk will call the next case on the calender.

Dr. Putnam. As to the profession of divinity, it is encompassed with a code of ethics as firm and inelastic as a coat of armor.

The canons and rules forbid its priests to teach false doctrines, or doctrines contrary to the teaching of the Church, while they wear the sacerdotal robes. To do otherwise is to challenge censure and expulsion. Outside of the church one may adopt such doctrines as he chooses, and sensible men generally withdraw from the church when they change their religious opinions, rather than incur the chances of being thrust out.

Our medical code is gossamer compared with the iron-clad code of the churches. Think of it, Dr. Warren. Among some of our most numerous and influential religious sects, a clergyman is not permitted to dispense the Gospel of Christ to the people in a church which has not been regularly and officially dedicated by a priest of their own denomination. And yet it is no unusual thing for these same religionists to declaim against our lack of liberality in refusing to consult with moonshiners.

We could justify a Christian clergyman in preferring to hold a private consultation with a Mormon or a Mahomedan priest over the case of a dying man, in which the two were to decide how to save his soul; but it is another thing when he refuses to preach in a building not consecrated.

Our code does not teach or intimate, that I may not tie an artery or give my medical or surgical opinions in a moonshiner's house or hospital. In view of these facts, these gentlemen may properly restrain their indignation at our conduct.

Dr. Warren. Permit me to ask one more question. If we need in this country a medical code of ethics, why is it not needed also in Europe and other countries?

Dr. Putnam. That is a very pertinent question, and one which perhaps naturally suggests itself to every medical man not born and educated under our peculiar republican system,—a system which differs in many essential points from even the republican systems of other countries. It is a system of States within a State; each State has a limited, not absolute autonomy, so also have counties and municipalities. There is in reference to most matters no such thing as national centralization of authority, and to this peculiar feature of our political institution must be traced many of our social institutions, including many of the restraints which we voluntarily continue to impose upon ourselves, and without which, experience has taught us, there would grow up gradually the rankest social evils. What government cannot do, or has not done, for us, because of its lack of centralization, and perhaps partly because of its intensely democratic tendencies, we combine to do for ourselves. We do, I repeat, by association what law cannot or does not do for us. But I must beg you to permit me to defer a more full reply to this question to another occasion.

THE TRANCE CONDITION IN SURGERY.

The activity of interest manifested in the curious psychological phenomena of mesmerism has awakened widespread inquiry regarding the nature of the trance state, and has established some few truths, along with dissipating many errors.

Not the least important of the questions that have been suggested by a study of these psychical phenomena, and by far the most interesting to the surgeon, from a practical point of view, is the possibility of per-

forming surgical operations on patients in this state, with the same immunity from pain as is obtained by the use of ordinary anæsthetics.

An experiment was recently made by some N. Y. physicians to aid in elucidating this problem, the result of which tended to establish the fact that on patients who are suitable subjects for the induction of the hypnotic state, it was practicable to perform minor surgical operations without awakening consciousness.

The operation done, was the removal of hypertrophied membrane from the nasal septum by the wire snare.

The rapidity with which the mesmeric state may be induced, as well as dissipated, and its freedom from disagreeable after effects, as compared with ether, would render it a valuable substitute for that anæsthetic in minor surgery, if further experiments tended to confirm those already made.

The chief objection would seem to be that its application would necessarily be limited to those few who could readily be mesmerized, and that surgeons would either have to acquire, if they did not possess, the mesmerist's art, or add a mesmerist to their staff of assistants.

THE RECENT GRADUATES FROM MEDICAL COLLEGES.

The recurring commencements of Medical Schools have added their annual quota to the great army of medical men.

Though a time worn and hackneyed topic the GAZETTE cannot refrain from a repetition of some well-known facts that these many graduates may have heard before, but which are perennially true and fresh and will therefore bear repetition.

These hundreds of medical men are coming into a profession which is greatly overcrowded. What knowledge, or what talents, have they which will fit them for the struggle before them, for to the majority of them it must be a struggle, and to many necessarily an unsuccessful one.

They will have to contend with those who have been specially favored by education, or ability, or opportunity, as well as with those whose only claim for the patronage of their fellows is unlimited self-assurance. They must practice among people who are becoming more and more intelligent as regards medical knowledge and must contend against wide-spread skepticism as to the value of medicine and the necessity for their existence as physicians.

What are the qualities, what the accomplishments which will enable them to rise superior to the flotsam and jetsam of scoffing criticism and to establish their right to be the advisers of their fellows on such supremely important questions as the physician is called upon to solve.

After all it is themselves rather than anything outside of themselves that they have most to fear.

They must be thoroughly grounded in the principles of their profession, and these include the exercise of a large amount of common sense.

They must continue to grow, to develop their medical knowledge in all directions, and to endeavor to make their knowledge thorough, to rid themselves of that superficiality which must necessarily now characterize their attainments.

They must be aggressive if they would succeed, nor allow themselves to be supplanted in the esteem of the people by the blatant charlatan from lack of ability to do what is vulgarly termed sounding one's own trumpet.

pet, and the exercise of this quality is not inconsistent with the maintenance of a proper degree of reserve and dignity.

Above all, they must endeavor to acquire a knowledge of human nature, without which they will not succeed though they have the most solid and brilliant attainments. They must strive to acquire if they do not already possess a degree of tact without which they will stumble along through the world jostling against other people's prejudices and offending their self-esteem, and effectually nullifying the prospect of that degree of success they might otherwise lay claim to, without ever being conscious of what they lack.

It is by such means as these, by the acquirement of such qualities, that they will not only deserve success, but what is far more satisfactory to the average mortal, command it.

THE CHANGES IN THE CHARACTER OF MEDICAL LITERATURE.

It has been often said, that a man's character, may, be correctly judged by the books he reads, or a nation's character by the nature of its literature.

It is equally true, perhaps more strictly so, that the nature of the literature of any age, or period may be estimated by a knowledge of the prevailing character of the people of that age.

It would not therefore be regarded as unnatural that the concentration, the tendency to the almost exclusive cultivation of the practical, which characterizes the people of to-day would have already indelibly stamped the nature of their literature.

In no department of literature has this thirst for the practical been more clearly indicated than in that of medicine, where the discovery of so many new facts regarding diseases and their treatment, the activity of experiment and research, and the necessity to the practitioner of keeping up with the rapidly developing phases of his profession, have crowded out from his library many elaborate treatises whose profundity of theory and profuseness of verbiage has long ago rendered them unsuitable to his literary wants. If not crowded out, they have at least been relegated to the obscure corners of the library and in their place we find the "new literature" books which have endeavored to exclude all but the useful, which are written to aid in actual every day work, not to journey into the realms of speculative theory. The present is indeed a transition stage in medical literature.

CONDENSED MILK AS FOOD.

The French Society of Hygiene has received, through M. Meynet, the report of a committee appointed to examine a memoir by MM. Pellet and Biarel, on the composition and analysis of condensed milk, including also a discussion of the question of milk as an article of general food, especially for newly-born infants. The conclusions arrived at by the "Commission" have been tested and corroborated by consulting the analysis made by M. Chesnel, of the National Agronomic Institution. Also those made at the Municipal Laboratory on analogous products. MM. Pellet and Biarel begin their memoir by furnishing the following analysis.

The analysis of one hundred parts of condensed milk gave the following result :

Water	26.68
Ash.....	1.70
Lactose.....	13.80
Crystallized sugar.....	42.80
Butter and fatty matter.....	6.87
Nitrogenous substances.....	7.00
Not estimated, and loss.....	1.44

Total 100.00

Thus 100 grammes of condensed milk contain 42.80 of added crystallized sugar; and 31.12 of dry matters contained in milk.

The "Commission" arrive at the following conclusions: 1. Condensed milk containing sugar, diluted with twice or four times its weight of water, may be considered as an article of food, and in some cases would prove useful. 2. Artificial milk thus prepared is incontestably inferior to good cow's milk. It is a healthy article of food, but only slightly nutritive. 3. The directions given in the prospectus are calculated to mislead the public. Condensed milk, diluted with from six to ten times its weight of water, cannot be classed as an article of food. 4. Newly born infants, which have been suckled for three or four months, may be weaned and fed with good cow's, goat's, or ass's milk, not mixed with water, and given in sufficient quantity. Condensed milk containing sugar, diluted with from two to three times its weight of water, may form part of the daily nourishment of such children; but it would be certainly imprudent to use it alone.

The above report from the *British Medical Journal*, April 21, 1883, is interesting as tending to oppose the notions regarding the nutritive value of condensed milk prevalent among the laity and the profession as well.

The question is one of supreme importance in its bearing on infant mortality, and nowhere should its solution be regarded with more satisfaction than among American practitioners, since the evils of artificial feeding are probably greater here than in any other country.

BOOK NOTICES.

The Medical and Surgical History of the Rebellion—Part III, Volume II—Surgical History, prepared under the direction of Joseph K. Barnes, Surgeon-General United States Army. By George A. Otis, Surgeon United States Army, and D. L. Huntington, Surgeon United States Army. First issue. Washington, 1883.

With the present volume the surgical series of the Medical and Surgical History of the War of the Rebellion is complete.

The treatment of regional injuries of gun-shot origin is continued, and those of the Lower Extremities are taken up and thoroughly discussed in chapter X. Miscellaneous injuries, not strictly gun-shot in character, but incident to the military status, form the subject of Chapter XI. Chapter XII, on Wounds, and Complications includes facts of general interest and of statistical value relative to wounds: to the nature, peculiarities, and effects of missiles and projectiles; to conditions affecting the course and results of wounds, with especial reference to the graver complications of secondary hæmorrhage, erysipelas, pyæmia, gangrene, and tetanus; and, finally, a condensed summary of operations and treatment. Anæsthetics, with reference to their use in the army, are

treated of in chapter XIII. A brief historical sketch of the Medical Staff, and a description of the *Materia Chirurgica* will be found in chapter XIV. The methods of field, railway and water transportation of wounded are detailed in the concluding chapter XV.

The plates and illustrations are fully up to the high standard of excellence of those appearing in Volume I.

This grand work is in every respect one of the literary monuments of the age, and will be treasured by posterity as the supreme treasure house of medical and surgical lore.

The Dispensatory of the United States of America. By Dr. Geo. B. Wood and Dr. Franklin Bache. Fifteenth edition. Re-arranged, thoroughly revised, and largely rewritten, with Illustrations. By H. C. Wood M. D., member of the National Academy of Science; Professor of *Materia Medica and Therapeutics* and of *Diseases of the Nervous System* in the University of Pennsylvania. Joseph P. Remington, Ph. G., Prof. of Theory and Practice of Pharmacy in the Philadelphia College of Pharmacy; First Vice Chairman of the Committee of revision and publication of the Pharmacopœia of the United States of America. And Samuel P. Sadtler Ph. D., F. C. S., Professor of Chemistry in the Philadelphia College of Pharmacy and of General and Organic Chemistry in the University of Pennsylvania. J. P. Lippincott & Co., Philadelphia, 1883. Price \$8.

This last edition of the Dispensatory will be chiefly interesting to our readers on account of its variation from former editions. This revision represents the labors of three able judges of the requirements of a book such as this.

Without very materially altering the form of the work, they have modernized it, so to speak, added a more comprehensive index, a few illustrations, and a list of analyses of American Mineral Springs and some European Springs of note.

The most important changes are in those sections treating of Medical Properties and Uses. These have of necessity, been for the most part rewritten and will constitute to the physician, the chief claim for the acquirement of this latest edition.

*Insanity—Its Causes and Prevention—*By Henry Putnam Stearns, M. D., Superintendent of the Retreat for the Insane, Hartford, Conn.; Lecturer on Insanity in the Medical Department of Yale College, etc., etc. Published by G. P. Putnam's Sons, New York. 1883. Price \$1.50.

This little book, which is written in an easy, popular, readable style, does not aspire to rank as a text book or comprehensive treatise addressed to specialists. It is, on the contrary, designed for the laity and those in general practice.

It discusses, intelligently, such topics as The Increase of Insanity, The Relation between Insanity and Civilization, The Insane Diathesis, The Influence on Insanity of Education, mental and moral, physical and industrial. Also the relation to this disease of consanguineous marriages, sex, alcohol, tobacco, poverty, religion, and insufficient sleep.

The conclusions arrived at are: "That the prevention of insanity must come mainly from education received at home and in the school. That educational processes may be improved—1. By securing a larger degree of individuality; 2. By more attention to in-

dustrial education; 3. By more efficient home education. Changes in certain habits—1. In reference to the use of alcoholic beverages; 2. In the use of tobacco; 3. The importance of longer periods of rest and recreation; 4. Improved sanitary surroundings in those portions of cities occupied by the poor and laboring classes of society.

In conclusion, the author dwells on the importance of systematic measures for the prevention of insanity. Among such measures he suggests that one or more of the members of State Boards of Health shall be physicians whose special duty it shall be to ascertain and make public reports upon the prevalence of such conditions as conduce to the production of mental disease.

It will no doubt serve to dissipate some popular errors regarding insanity, and do much to direct inquiry regarding its nature and prevention into right channels.

Brain Rest. By J. Leonard Corning, M. D. Formerly Clinical Assistant to the Manhattan Eye and Ear Hospital, Nervous Department, and resident Assistant Physician to the Hudson River State Hospital for the Insane. Member of the Medical Society of the County of New York, of the New York Neurological Society of the New York Medical Legal Society, of the Society of Medical Jurisprudence, etc. G. P. Putnam's Sons, 1883. Price \$1.

This monograph is an amplification of views which the author has at various times published regarding brain rest, its necessity and means of attainment, and more particularly of the effects of what is termed mechanical regulation of the cerebral circulation.

The chapters on "Internal Remedies" "Baths" and "Electricity" as agents controlling insomnia, though they comprise nothing novel, state clearly the influence exerted by these agents and will be of interest to the reader.

The chapter on the mechanical regulation of the cerebral circulation is a condensation of the authors monograph on "*Carotid Compression and Brain Rest.*"

The theory presented seems most plausible, but until further experiment shall have demonstrated its truth and more ready applicability, mechanical compression will, we think, fail to take the place of therapeutic and hygienic agents in controlling the cerebral circulation.

ORIGINAL ARTICLES.

SIGNIFICANCE OF PSORIASIS OF THE TONGUE FOLLOWING SYPHILIS, WITH A CONSIDERATION OF THE INOCULABILITY OF LATE LESIONS AND THEIR RELATION TO MARRIAGE.*

BY

FESSENDEN NOTT OTIS, M. D., Clinical Professor of Venereal Diseases, College of Physicians and Surgeons, New York; Attending Physician, Charity Hospital; Consulting Surgeon St. Elizabeth Hospital, etc., etc.

CASE. N. M. W.; 30. At 22 had an initial lesion of syphilis, which remained unhealed under local applications up to the fourth month after infection. It was then excised. Healing took place by first intention; several small mucous patches where then

* From Advance Sheets of Practical Clinical Lessons on Syphilis and the Genito-Urinary Diseases. Published by Bermingham & Co., N. Y., 1883.

present in the mouth and on the tongue; the superficial lymphatic glands were enlarged and indurated at all usual localities. The patient was put upon pil. duplex (hyd. mass. 2 gr., ferri sulph. exsic. 1 gr.) thrice daily, and this was continued, somewhat irregularly—omitting several times for several weeks, whenever some tenderness of the gums appeared—for a year and a half. No intercurrent lesions during this time. Glands still somewhat enlarged; mist. biniodid. hyd. (potas. Iod. 8 grs., hyd. biniodid. $\frac{1}{16}$), a teaspoonful as a rule thrice daily, but not seldom neglecting it, for the following six months, when no further evidences of syphilis having developed—the patient in excellent health—treatment was suspended. Not the least sign of syphilis for the next four years, when slight soreness of the right side of the tongue appeared, chiefly along the edge. This was attributed to the excessive use of cigarettes, to which the patient was addicted. On ceasing this there was immediate improvement in regard to the soreness, but a pale, thin pellicle, appeared in two spots on the tongue, about the size of a split pea, a thin film along the edge, and a patch of the same, as large as a dime, on the inferior surface of the same side, and all within a few days. The patient was put again upon the biniodide mixture, and took it faithfully for several weeks, making application locally with a saturated solution of nitrate of silver, every day or two, without any very decided benefit. In point of fact, the spots on the tongue became slightly elevated and whiter, apparently from accumulated epithelium, giving the characteristic appearance of a simple psoriasis of the tongue. An application to these spots with Paquelin's gas cauterizer, the platinum point at a white heat, was carefully made, and the internal treatment continued. The result was an immediate improvement in the appearance of the spots, and after the second application, about a week after the first, the patches were quite freed from the pellicle. The patch under the tongue was then treated in the same manner, carrying the cauterization as far as possible through the thickness of the pellicle, subsequently simply brushing the platinum point quickly over the surface. Altogether, half-a-dozen applications were made in the course of four weeks, at the end of which time there was complete disappearance of the pellicle, and scarcely a trace of the lesion remained. The internal treatment was suspended, and at the end of three months, there was no indication of return of trouble.

Remarks.—The foregoing case would, I think, be best characterized as a psoriasis, induced by tobacco, causing irritation of a surface predisposed to such action, by the previous occurrence of local syphilitic lesions in this vicinity, during the active period of the disease. It has been in my experience to see quite a number of such cases, with or without superficial ulcerative lesions, and which had been classed, by previous medical attendants, as chronic mucous patches, with the distinct understanding that they possessed the power of communicating syphilis. It should be understood that mucous patches are simply papules, occurring on mucous membrane, and cannot exist as specific lesions after the active stage of syphilis has passed. It may, I think, be safely stated, that, after the third, and at farthest after the fourth year, lesions of the mouth of whatever character,—either *superficial glossitis*, which is recognized by oval or circular, small or large patches, or tubercles of thickened sub-mucous cellular tissue; or the *deep glossitis*, which causes a general hypertrophic thickening,—are due to accumulations of gummy material, so-called; and, whether accompanied by ulcerations, superficial or deep, are of the same

nature as all the other lesions of so-called tertiary or late syphilis, which have been incontestably proven to be free from the contagium of syphilis. The occurrence of superficial erosions of the tongue, from a few to many years after the termination of the active stage of syphilis, is not infrequent. The habitual excessive use of tobacco has seemed to me more likely to produce superficial ulcerative lesions, than where syphilis has not been experienced, especially where the lesions of the active disease have occurred in the mouth. Often, in such cases, simple abstinence from tobacco will cause such ulcerations to heal, without further trouble. In other cases, the iodide of potassium acts quickly to relieve, but, in all, the apprehension of communicating syphilis is an ever-present horror, and when, as is sometimes the case, such ulcerations, either from vices in the digestive processes, or from permanent cicatricial disturbances of the affected tissues, continue for years, the condition of such patients is sometimes, indeed, pitiable. It is true that we have the weight of an authority, so great as M. Fournier, in support of the *possibility*, nay, the probability, of infection of syphilis for many years, or, indeed, indefinitely in such cases, as is shown in the following, quoted from his popular work on "Syphilis and Marriage."* "These lesions are always superficial, limited, and mild. They are readily cured by cauterization, aided by some local care; but they are only cured to be reproduced,—to renew themselves incessantly. In themselves they are of no importance, but they become only the more dangerous in respect to contagion. Such, for example, is the case of a patient whom I treated some time ago. This young man had been infected with a syphilis, five years before, which one could fairly call mild, since the initial chancre was only followed by roseola, a palmar syphilide of slight intensity, and a sore throat. He treated it almost from the beginning sufficiently well; several times he submitted, under my advice, to a strong mercurialization (15 to 20 centigrammes of proto-iodide daily). Well, in spite of this treatment, and in spite of all my efforts, the patient (who, by the way, is a smoker: a circumstance essential to note) has not ceased to be affected, *during a period of five years*, with lingual syphilides *almost continuously*. I cured him of one breaking out; one or two months later a new one attacked the tongue; then came a new treatment, followed by a new cure; then reappearance of the malady, and so on. To be brief, I always cured him, and 'it always began again,' to use his own expression. Now that he has completely given up tobacco, at my earnest solicitation, the eruptions become less frequent, but have not altogether ceased; and quite lately I have again seen him with syphilis coming on the back part of his tongue. Now, what would have happened if, relying on the mild nature of his disease, and satisfied as to the treatment followed, I had allowed the patient to marry between the two outbreaks of such symptoms? What would have happened, I need not predict theoretically, because I have had a practical demonstration. This young man took as a mistress, last year, a woman who, till then, was perfectly healthy: exempt from every venereal symptom. Some weeks later he brought her to me, affected by an indurated labial chancre, manifestly received from the lingual syphilides of the patient."

This case is presented as a typical one, to illustrate

* "Syphilis et Mariage." Leçons Professees a l'Hopital Saint Louis. Par Alfred Fournier, Professeur a la Faculté de Médecine de Paris, Médecin de l'Hopital Saint Louis, Membre de l'Académie de Médecine. Paris, 1880. Page 122.

the possible persistence of contagious lesions after many years, notwithstanding the disease is of mild form, and has been systematically, persistently, and efficiently treated from "almost from the beginning."

It will at once be seen, that, as such lesions of the mouth may appear, several years after the apparent cure of syphilis, no real guarantee against the danger of communicating syphilis, for a very long period of years, can ever be given, and if such guarantee cannot be given, *no man, it appears to me, has ever a right to advise, or even to consent to, marriage of a person who has once had syphilis.* It becomes a matter of vital importance to know, whether or not, there is a form of late lesion of syphilis, which, unlike all other late lesions, still retains the power of infection. M. Cornil says (p. 34, Am. ed. 1882): "The inoculations made by Diday render it probable that the tertiary lesions are not inoculable, and consequently not contagious." Bumstead & Taylor (ed., 1879, p. 443): "*Hence we doubt the blood and the secretions in tertiary syphilis innocuous.*" Hill & Cooper (London, 1881, p. 11), say: "*All attempts to propagate the disease with secretions taken at this period have failed.*" Baumler says of the cessation of the inoculable stage of syphilis: "This takes place in the majority of cases, and at the expiration of eighteen months or two years the infection is entirely exhausted." (Ziemssens's "Encyclopædia," Am. edition.

The most complete and irrefragable evidence, in favor of the view that the infective power of syphilis is self-limited, and does not extend over a period of more than three or four years, is that presented by M. Fournier, in his recent work on "Syphilis and Marriage," adduced to justify his previous statement of opinion, that persons having had syphilis *under certain circumstances may marry.* The statement, a very strong one, appears on page 18 of his work, thus: "Then, yes; a hundred times, yes: one may marry after having had syphilis, and the results of such a marriage, contracted under these conditions, may end absolutely happily, medically speaking. This I affirm, and fearlessly proclaim from the house-tops, after having conscientiously studied this grave question, both clinically and socially, and after having religiously consulted numbers of observations of my own and others. It is for me an absolute fact, an undeniable truth;" and at page 15, *ibid.*: "The truth is that, with some very rare exceptions, syphilis only constitutes a temporary bar to marriage." In support of this positive opinion he says,* "For my part alone, I have in my hands, to speak only of written facts, eighty-seven observations relative to syphilitic subjects, undoubtedly syphilitic, who, having married, have never communicated to their wives the least suspicious phenomenon; and, moreover, these eighty-seven have produced among them a total of one hundred and fifty-six absolutely healthy children."

In examining the clinical records of these eighty-seven cases, given at page 231, *et seq.*, of his work, we find that thirty-six out of this number of men who were thus proven free from any power to transmit syphilis, either by direct contact or by heredity, were subjects of late or tertiary lesions of syphilis *after marriage*—some before and some after the birth of children.

These lesions comprise almost all the accidents of late syphilis, thus: gumma of penis, palmar psoriasis, dry tubercular syphilide, gumma of velum palati, cerebral syphilis, papulo-tubercular syphilide, and costal

periostosis, cerebro-spinal symptoms (evidently of specific origin), diplopia, passing attacks of hemiplegia, nasal syphilides, ecthyma of legs, specific tibial periostitis and glossitis, specific sarcocele, nasal ulcers, ulcerative laryngitis, papulo-squamous palmar and plantar syphilides, sclerous glossitis, papulo-scabby syphilides of circinate form, tubercular ulceration, syphilide of nose.

This would appear to be sufficient evidence that M. Fournier, presenting these cases to show that they lacked entirely the contagious element, was a firm believer in the non-transmissibility of syphilis from late lesions.

Another case, quite in line of the first case cited, which seemed to prove indefinite capacity for infection, appears inadvertently to have slipped into M. Fournier's 87 cases. This is Case XLIX. (p. 237 *ibid.*) Thus runs the clinical history: "Hard chancre, roseola, palmar psoriasis, syphilides of the mouth; iodide treatment; no mercury. Married four years after infection: wife remained free: two healthy children. *After the birth of the second child the husband infected the wife through a syphilide of the mouth; pregnancy the following year which ended in a miscarriage.*"

Lacking any other explanation from M. Fournier, this case would, then, appear to be, like the first case presented, one where a late lesion of the mouth had communicated syphilis, and this at least seven years after the original infection, and even after several years of marriage, during which the wife had escaped, and two healthy children had been born. Exceptions of such vital importance—the first cited as a typical exception, and the second supporting it with great force—in order to be accepted, should, it appears to me, be quite free from reasonable doubt, on all essential points. Let us examine them as critically as the meagre details will permit.

In the first case, after a mild and thoroughly treated syphilis, in a patient, who was an inveterate smoker, lesions of the mouth recurred constantly, for a period of five years, influenced only temporarily by treatment—promptly benefited by leaving off his tobacco. Physician (M. Fournier) fears that this lesion is an exception to the lesions of syphilis which occur at so late a period.

M. Fournier's experience in regard to inoculability, at so late a period, are given in his work, as at p. 101, where he says: "In those cases where I have seen syphilis pass directly from the father to the child, without contamination of the mother, *I have always* observed, that the paternal infection, was of a comparatively recent date, that is to say, *had not exceeded* the maximum of *three or four years.* Beyond that time I have *never* firmly established the transmission of syphilis by paternal heredity." Again at page 132: "A patient comes to us in the full secondary period, and we submit him to the usual treatment. Now, what occurs, nineteen times out of twenty, at least? First, that the patient is subjected for some months—even for the first year—to secondary eruptions, more or less numerous, more or less intense, corresponding to the quality of the diathesis, but generally mitigated and lessened by treatment. And beyond—from about the second year—these eruptions continue to decrease. . . . Then, still later, the lessening is more marked, or becomes complete with the third, or, later, with the fourth year. From that time, the secondary period is done, and, with it, the contagious accidents which accompany it, and which constitute the principal dangers of marriage. Such is the rule: that this rule has exceptions

* Fournier, "Syphilis et Mariage." *Ibid.*, p. 16, also p. 231.

I know but only too well; and I have already given examples of such exceptions" (p. 122 *ibid.*), [case above cited]. In this case a young man takes a mistress, who some weeks later presents with an initial lesion of the lip. The conclusion appears to have been promptly arrived at on the following basis, viz.: *possibility* of contagion from patient's buccal erosions, (which did not yield to anti-syphilitic treatment, but which did improve when tobacco was withheld); *probability* that the mistress acquired her labial chancre from the secretion of this very exceptional kind of syphilitic lesion, if it was syphilitic.

Now, is such a conclusion sufficiently warranted by this evidence, on a matter of such moment? Let us look at other causes, equally possible, equally probable. The young man did not take for a mistress a woman whose virtue was above suspicion. Such a coincidence as the contact of such a woman's lip, with some other lip, with fresher syphilitic lesions, would not be so extraordinary, as the acquirement of syphilis, from a buccal lesion, *five years after infection*. Such a woman, would be quite in line of coming in contact with persons having active syphilis, and, either directly or by mediate contagion, might have acquired her labial chancre, even if she had not become this man's mistress, without exciting especial comment.

Let me here place in contrast to this, a case taken from my own experience. A young man had undoubted syphilis—characteristic initial lesion, general gland enlargement, roseola; no pronounced papular eruption; mucous patches on tongue and inner surface of cheeks. After a somewhat desultory treatment of two years, he was apparently cured. Remained well for two years; began to have ulcerations at side of tongue, thin pearl-colored at edges; characteristic appearance of the so-called chronic mucous patch; was greatly addicted to tobacco—tongue resisted local treatment, unless accompanied by exclusion of tobacco; repeated recurrences for nearly five years; not markedly affected by specific treatment, which was tried from time to time. At last he married a virtuous girl, since when already two years have elapsed, and she has not yet acquired syphilis.

In regard to M. Fournier's second case: this is rendered especially remarkable, by the fact, that, besides the alleged acquirement of syphilis, by the wife, from a buccal syphilide in the husband seven years after infection, that without any specific treatment, the wife remained free from syphilis during the early years of marriage, and, besides, gave birth to two healthy children during this period. The acquirement of syphilis, from other and unsuspected source, would be much more in accordance with the probabilities of this case, than that this most extraordinary development of active syphilis, upon a diathesis which had slumbered through the initiation and development of two healthy children, should break out finally in infective buccal lesion. The theory of re-acquirement of syphilis, from a fresh source, is not so difficult to accept.

The experience and teaching of all the leading authorities, to-day, are against the acceptance of any claim for inoculability of the secretions of syphilitic sequelæ, and any cases, militating against this view, should be free from suspicion of imperfect observation, imperfect facilities for observation, and from conclusions not based upon thoroughly well-authenticated facts.

Case 1 on page 46 will show how easily active syphilis in a wife may appear to have been acquired from a husband who had had syphilis many years previously—and yet, against all presumptive evidence, she may

be finally shown to have acquired the disease in a manner more in accordance with all that is now positively known of the disease. The evidence in favor of the innocence of M. Fournier's females was no greater than in my case, and yet the latter was proven guilty out of her own mouth.

What the profession needs now, more than anything else, is some reliable guide towards the formation of an opinion, as to the time it is necessary to treat syphilis, before the patient may be considered free from the danger of communicating the disease to others. It would seem probable, that an explanation of the course pursued in M. Fournier's 87 cases might afford light on this matter. In point of time we find that the average time of marriage in the 87 cases was 5 $\frac{1}{2}$ years, that 25 per cent. were married within three years after infection, and over 10 per cent. within two years. In regard to the length and quality of treatment: over 12 per cent. of the 87 cases had a treatment of less than a year's duration, several with only a few months, one with the iodide of potass. only, and another with no treatment at all (marriage seven years after infection). It would appear, then, that the contagious element of syphilis is not necessarily dependent upon *treatment* for its eradication. This would confirm the claim made in the earlier pages of this work, that syphilis, in its contagious phase, is self-limited, and that the value of a prolonged and systematic treatment, consists chiefly, in its power to prevent that damage to the tissues and organs of the body, which may finally eventuate in important lesions in after years, viz., the *sequelæ* of syphilis in their various forms. The time during which the treatment should be continued should certainly cover all that period, during which the affected organism contains any contagious element. This question must be settled by clinical observation. If we find that there are well-authenticated cases of communication of the diseases, after many years, *without re-infection*,* and that we cannot tell by the degree or quality of the syphilis, what cases may behave in this manner, we are then assuming unwarranted responsibility, in allowing any persons with syphilitic antecedents to marry. If, however, we can find by strict scrutiny that such cases are not only very rare, but are not well proven, we are then justified in assuming the known facts, as ascertained by the experience of the best observers, as a basis for our decision. For instance, in the great and well-considered experience of M. Fournier we find the following statement (p. 101 *ibid.*):

"In cases where I have seen syphilis pass directly from the father to the child without contamination of the mother, I have observed that paternal infection, was of comparatively recent date, that is to say, that it had not exceeded the maximum of three or four years. Above that term, *never* have I firmly established the transmission of syphilis by paternal heredity." Again, [p. 101 *ibid.*): "If not always, at least in the enormous majority of cases, the husbands who communicate syphilis to their wives are those who have married *with a syphilis still young*: that is to say with a syphilis which *does not date back more than a few months or a year, perhaps two: more rarely three or four.*" It is in regard to such points, that the profession need exact observation and information. While we are prepared to accord much value to such statements as the foregoing, from so valued an authority, and to accept them as aids to judgment, to be rendered in practice: we

*For facts and arguments showing that re-infection of syphilis is not infrequent, see Cornil on Syphilis, Am. ed.; Henry C. Lea's Son, Phil., 1882, p. 19.

are left in some doubt on account of the mode of expression used. "If not always," intimates that M. Fournier has seen cases where husbands have communicated disease when the disease was not recent : that is to say within four years. He does not cite a well-authenticated case in his own experience. In more than thirty years' experience I have never seen such a case, nor any account of one, which would with fair scrutiny, warrant the claim that it was well authenticated. The time of treatment of the active stage of syphilis, is a most important one for the profession to be agreed upon. As to the means and mode they are quite in accord. It may be safely said that all authorities are also agreed, that the treatment should be persevered in, as long as any tangible or appreciable evidences of the disease remain. In America the steady, gentle mercurial course, continuing throughout the usual period of active manifestations, and not less than one year, is usually insisted on, and this followed with the so-called mixed treatment (mist. biniodid. or its equivalent) for from one to two years longer : the same course also insisted on, no matter how late in the actual period the treatment is begun. The practice in Great Britain is, I believe, much the same. M. Fournier, who is the leading authority in France to-day, insists upon the same but a longer treatment. Four years he puts down as the minimum. He says (page 102): "Three to four years—such is, according to my view the MINIMUM [note well the word if you please], the indispensable minimum, in order that the diathesis may sufficiently disappear, under the double influence of time and treatment, and that the patient, returning to a healthy position, may have the right to aspire to the titles of husband and father, and head of a family."

M. Fournier is somewhat peculiar in his mode of administration of the mercurial : proceeding by periods of activity and repose—giving it for a month or two, and then omitting for about the same period. It will thus be seen, that, practically, he administers little if any more of the mercurial, than we, who administer the drug at the point of easy toleration, throughout the whole of the active period. For the settlement of questions so important as those which have been briefly touched upon in the foregoing pages, it is essential that those especially interested in, and familiar with, syphilis in its various forms, in its relation to scientific medicine and to humanity, should record with scrupulous care all *unquestionable* facts, concerning the duration of syphilis as an active contagious disease. That cases, proving disputed points or disproving them, should, when thoroughly satisfied with their value and susceptibility of proof, be forwarded to some convenient medical journal. Let an invitation be extended to those interested, to add a case in point, an opinion, or an analysis which might tend to strengthen facts, or expose errors of diagnosis, or imperfect observation. In this way, I believe, it need not be very long, before the great questions as to the duration of the period of possible communication of syphilis, would be narrowed down to such a point, at least, that the subject of syphilis might, within a reasonable number of years—say three or four, or even five—at least, resume his ordinary association with his kind, without the ever-present dread of communicating syphilis, from an ever possibly recurring, periodically active, mucous patch. Prolonged existence of the contagious element in the seminal fluid through a series of years, has been claimed, and instances have been cited, with great appearance of truth. M. Fournier quotes one related by M. Jonathan Hutchinson :

"Thus a medical man contracted syphilis and for about six months treated himself. Believing himself cured and being relieved of all pain, three or four years later he married. *His wife remained healthy*, and became *eniente* eleven times. First pregnancy, child born dead ; second pregnancy, child born dead ; third pregnancy, child born alive, but syphilitic, and dying with the usual symptoms of hereditary syphilis. On the contrary, the seven last children, although born syphilitic, resisted the disease and lived."

Here is a case of a healthy woman, giving birth to a series of children claimed to be syphilitic. In order to make this case of value, the evidence must be fuller and more explicit. The simple death of the child is not sufficient evidence of syphilis ; repeated miscarriages are not necessarily from syphilitic influence ; and in case of the third and fourth children, we are not informed as to exactly what constituted the evidences of hereditary syphilis. Various forms of imperfect development, and apparent disease of the foetus, result from scrofulous taint, from hereditary diseases not syphilitic, and from disease of and impressions on the female generative organs, and these propagated through successive pregnancies. Eruptions, called *scrofulides*, occur in the newly-born that are, sometimes, absolutely identical in appearance with those of syphilis. Cases of the character of the foregoing, may be true as far as the attainable evidence goes, but they must remain as doubtful, when the history is imperfect—because they are opposed to all that is known, with any certainty, of the nature of the disease. The man, after four or five years, with no appreciable disease, infects children, *while the mother remains healthy*. According to the results of M. Mireur's experiments in inoculating healthy subjects, with the semen of syphilitic men, in the active stage of the disease, *the semen does not possess the contagious property*. M. Fournier says, ("Syphilis et Mariage," p. 26, note) :

"It has long since been established that *the semen of a syphilitic subject is not susceptible of transmitting contagion*." If this be the fact, how, then, could the children be contaminated by the husband, independently of any disease of the wife—who, it is claimed, *remained healthy*? It is certainly the fact, that, with the exception of some rare and anomalous cases (such as the one quoted), the weight of the evidence of every authority has been given, in favor of a gradual diminution of the contagious element in syphilis, and its complete disappearance within three or four years. Under the influence of the old views that the later lesions—the sequelæ—were also capable of transmitting syphilis, it was difficult to set a limit to the time, when a man could be said to be free from danger of communicating the disease, but as it has now been satisfactorily proved, that the active stage of the disease, does not as a rule exist more than three or four years, and that the secretions of the sequelæ and the blood are free from the contagious element, apparent exceptions to this law must be accepted as proved, only after the most rigid scrutiny, and refused admission, except on absolute proof.

Note.—In the spring of 1860, and thus over twenty years ago, I was called to see an infant about a year old, the daughter of a prominent merchant, a most upright and religious man. The child had been vaccinated some three months previously without any unusual local result. About a month afterward a rose-colored eruption made its appearance, and, while fading somewhat, it remained, and began to create some apprehension lest it had resulted from an impure

vaccine virus. When I saw the child, the eruption was exactly like that of a fading syphilitic roseola, slightly red, and inclining to a coppery hue, chiefly well-marked on forehead and cheeks, breast, back and abdomen. The date of its appearance, following vaccination, suggested syphilis, also its color, first rosy, then inclining to a coppery hue. I communicated my suspicion to the father and at the same time inquired into his venereal antecedents. He acknowledged to a gonorrhœa in early youth, which had caused him much remorse, but he denied knowledge of any syphilitic lesion. The wife was apparently in good health. There were three healthy children older than the little girl. The physician who performed the vaccination, stated its source, which was unobjectionable, and stated, also, that he had vaccinated at least a dozen children with the same virus as that used on this little patient, without any sign of such trouble following. Having scarcely a doubt of the syphilitic character of the eruption, I put the child on a systematic mercurial treatment; this was continued for six months, without any especial change. I then called in the late Dr. Bumstead, (my predecessor in the Chair of Venereal Diseases in the College of Physicians and Surgeons, N. Y.) in consultation. My previous diagnosis was confirmed, unhesitatingly, and, for another six months, the same treatment was continued. Not yet making any impression on the eruption—the child otherwise in excellent condition—Dr. Wm. H. Draper, who then occupied the Chair of Cutaneous Diseases in the College of Physicians and Surgeons, was then called in consultation. The case was accepted as most singular, but previous diagnosis, after careful consideration, was again confirmed, and, for another six months, the treatment was rigidly enforced, at the end of which time I took the responsibility of stopping the mercurial, as, up to that time, apparently, no benefit had accrued from its use. I then tried a mild arsenical preparation for a few months, with equal ill success, the eruption still remaining distinct and coppery in all regions previously occupied by it. During the next *ten* years the child grew fairly well. She was somewhat delicate, and of a nervous, lymphatic temperament, and occasionally received a little aid to her nutrition, such as might be afforded by extract of malt, cod liver oil, etc. My attention at this time (when the child was now over twelve years of age) was called to several *exostoses* on the radius and ulna, both at the distal and proximal extremities on the inner aspect, also on the outer and inner sides of the head of the tibiæ. This seemed to confirm the original diagnosis, which I had long previously abandoned. I was contemplating a renewal of the treatment, adapted to the later stage of syphilis, when it occurred to me to call in Dr. A. Jacobi, then Professor of the Diseases of Children of the College of Physicians and Surgeons. The eruption was somewhat faded, but still distinct, on the cheeks, forehead, and breast, especially well-marked during any excitement, mental or physical. Professor Jacobi expressed an opinion against the idea of syphilis, and considered the eruption a *scrofulide*, and the *exostoses* *rachitic*. This fully explained the anomalous case of syphilis, as it had been supposed to be, and was then accepted, as rachitic, and was subsequently treated by me, in accordance with this view. The family leaving New York, soon after went to reside in another city. Here, after consultation with the new family physician, the patient underwent another course of mercury, and this time with iodide of potassium for many months, and finally, having about a year since become quite lame from the growth of

the *exostoses*, and their interference with muscular action a distinguished surgeon from New York was called in consultation, to see if any surgical aid could be afforded. A brother of the patient called on me a few months since to say that my old view of the case had turned out to be correct, and that no surgical aid was thought advisable, but the young lady *had been put on a thorough course of mercury and the iodide of potassium.*" During the several years which had intervened, since the case had been previously considered one of syphilis, the change of opinion had been lost sight of. Meeting the surgeon soon after his examination of the case, I recited the patient's former history which had not been made at all clear in the later consultations; since this time I have reason to believe that the anti-syphilitic treatment has been again suspended.

The father of the young lady whose history has been given above—after apparent proof that the vaccination was not at fault—became morbidly remorseful on account of his early gonorrhœa. The later consultations were influenced by a statement of the sons, that their father, just before his death, some years before, had given them to understand that he had transmitted the disease to their sister through a youthful folly.

It may be safely stated that the diagnosis of syphilis has often been made, on much more slender ground than in the foregoing case, and the source of infection accepted, not because there was any reasonable proof, but because it was not positively accounted for in any other way. The mere suspicion of an attack of syphilis in a man's youth, in the minds of many physicians, appears to warrant the assumption of an ever-present contagious element, and to account for any and every obscure trouble, which may afflict himself, his wife, or his children to the end of life.

LECTURES.

MITRAL STENOSIS WITH CHRONIC ENLARGEMENT OF LIVER AND SPLEEN.

A CLINICAL LECTURE.

Delivered at the N. Y. University Medical College.

BY

F. R. S. DRAKE M.D.

CASE I.—Boy æt 18. Occupation lithographer. One year ago he complained of shortness of breath. Had chills and fever, three years ago. In pursuing his avocation he is obliged to lift heavy weights. He gives a history also of having received a blow on the chest.

Inspection reveals a pigeon chest. There is a prominent apex beat which on applying the hand becomes diffused. A purring thrill is felt in the region of the heart. When we have a purring thrill we are almost certain to have a mitral stenosis. This is carried out by the clinical history of such cases, revealing on post mortem this lesion. The right lobe of the liver is about one inch larger than normal.

Now shortness of breath following directly after an injury would look towards endocardial trouble. We often find cardiac trouble in some shape in these cases of pigeon breast. I think a great portion of the displacement of the heart in this case is due to the malformation of the chest. There is marked palpitation and marked hypertrophy of the heart. The anæmia present in this case may cause the loud murmur. In the majority of cases of heart murmurs we find that

when the patient's nutrition is good the murmur will not be so loud except where there is a great deal of thickening or where the endocarditis is recent; that is, where the contraction and the formation of new connective tissue have not gone on for any length of time. Very often we find patients that come into the hospital who are anæmic and who have very loud murmurs and after being under treatment for a time the murmurs become softened and in some instances entirely disappear. How much the malarial poison in this case has to do with the shortness of breath is an unsettled question, such patients often have an anæmic murmur without any valvular lesion.

Treatment.—This boy should be obliged to change his occupation. He should avoid all hurried exercise should be kept out in the air as much as possible and should remove from malarial districts. As the malaria produces a chronic congestion of the liver and spleen, the heart is called upon to do extra work. Each attack of malaria brings about a fresh congestion of the liver and spleen and calls upon the heart for extra work to carry on the capillary circulation in those organs. The boy is badly nourished. He should be put on cod liver oil in the hope of improving his nutrition. He should also be given iron reduced by hydrogen as the stomach manages this form of iron better in patients afflicted with heart disease than any other. He should also avoid exposure to cold. For if he should get bronchitis for example he is liable to have pulmonary congestion. He should therefore be dressed warmly. He should wear flannels all the year round.

As to diet, he should have easily digestible food. His heaviest meal should be taken in the middle of the day. He should have a light supper, so that by the time he goes to bed his stomach will be tolerably empty. He should avoid stimulants, for the first action of alcohol is to increase the heart's action.

Digitalis is not indicated here, because the heart's action is sufficiently forcible. When there is irregularity in the heart's action and the dilatation is exceedingly great so that the apex beat becomes very feeble, and diffuse, and the heart's rhythm becomes disturbed, then we would give digitalis. Under such circumstances the effect of digitalis must be watched very carefully. You must make a careful examination of the heart when you commence the digitalis, and after three or four days make another examination and note in your mind the difference which the digitalis has produced. If you find that the heart is beating steadier, that its force is increased, then you are warranted in going on.

We have another element to treat in this case, viz., the malaria. This must be treated by quinine, but before giving quinine a cathartic should be administered. The quinine should be given chiefly as a tonic. This boy has had malaria for two years, but he does not give us any history of chills and fever for the past two years. He shows us, however, that his system is saturated with the malarial poison from the fact that he has an enlarged liver and spleen. It is a question in my mind whether antiperiodic doses of quinine or tonic doses of quinine will diminish the size of the liver and spleen. It makes no difference in the administration of quinine whether the heart is diseased or not. You might try him with a few large doses of quinine once in 24 hours, and see the effect. I do not think that you will get any benefit from quinine. I should prefer arsenic or Warburg's tincture. This acts better than either arsenic or quinine in such a case.

Where the liver and spleen are enlarged counter-

irritation often does a great deal of good. The counter-irritation should be applied in the shape of a lead ointment.

This boy will never get well because he has back of his troubles a vicious constitution, as shown by the pigeon-shaped chest, but he can be kept comfortable.

Iron may also be administered in 5 grain doses of Vallet's mass.

ACUTE DIFFUSE NEPHRITIS—CHRONIC MENINGITIS.

A CLINICAL LECTURE DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, N. Y.

BY

FRANCIS DELAFIELD, M.D.

Prof. Practice of Medicine, College Physicians and Surgeons, etc., etc.

CASE 1. — Acute Diffuse Nephritis.—Boy æt. 16. Was in good health until five months ago. Then suddenly he was attacked with well-marked febrile disturbance, nausea, vomiting and headache. He was confined to bed. His urine was examined pretty frequently from the commencement of the disease, and within five days after the invasion of the disease it was found to contain a considerable amount of albumen and has continued to contain albumen up to the present time. The urine passed was scanty in amount but contained no blood. Now he passes an abundance of urine. The fever lasted for ten days and then disappeared. Dropsy came on and this has continued up to the present time.

Physical Examination.—The heart is a little larger than normal and the impetus is more forcible. A very loud murmur is heard at the base. He has some fluid in the abdominal cavity and the shape of the abdomen shows that it has been distended more than at present. There is dullness over the spleen but this I imagine is due to the condition of the pleura. For when there is fluid in the pleural cavity the spleen is only enlarged backwards and upwards and not forwards.

Diagnosis.—The diagnosis here lies between acute parenchymatous and acute diffuse nephritis. The absence of blood with the other symptoms of marked severity points to the existence of parenchymatous rather than diffuse nephritis. On the other hand the severity of the symptoms and the persistency thereof point rather to the existence of diffuse nephritis. We would be assisted in the diagnosis if we knew what sort of casts he had in his urine. That element in the diagnosis is wanting here. Taking into consideration the duration of the case and the severity and persistency of the symptoms together with the fact that the heart is somewhat hypertrophied, the probabilities are that he is suffering from an attack of acute diffuse nephritis.

Prognosis.—On the whole I should consider the prognosis rather favorable. I should think it probable that the boy will get well; but I cannot tell how long it will be before he is entirely well. It may be a number of months.

Treatment.—The best thing for him to do is to go into the hospital, where the treatment could be fairly carried out. The indications for treatment now are mainly the condition of the blood. I should treat as for a case of simple anæmia. I should put him at once upon the use of iron, oxygen, and fat in some shape. He is not fairly nourished on account of the irritability of his stomach. To avoid the vomiting he

should be put upon the use of milk rendered alkaline by bicarbonate of soda, and perhaps a little oxalate of cerium. Begin with teaspoonful doses every half hour. Under this plan of treatment he will begin and continue to improve. The dropsy and general symptoms ought to go away within a month.

CASE II.—*Chronic Meningitis*.—Male, æt. 17. Occupation, plumber. Well until last summer. Then after exposure to the sun he had an attack of sun-stroke, which was tolerably severe, so that he was a good deal prostrated for two or three days. Was unable to return to work for a couple of weeks. After this he went back to work and was well till two months ago. During these two months he has been in an apathetic condition. He desires to lie down constantly and keep quiet. Does not care to talk or to be disturbed. Apparently complains of nothing, though if asked about his head he says it hurts him. Has lost appetite, but his bowels have remained regular, and there seems to be no other marked symptoms.

There appears to be some tenderness over the top of the head and over the upper part of the spinal cord. He has had strabismus of the left eye for a long time. The hearing appears to be about the same in both ears. He seems to be intelligent enough when spoken to. There seems to be no loss of power anywhere, and there is no lead line about the gums.

The patient is probably suffering from chronic meningitis.

The indications for treatment here are the use of persistent counter-irritation over the nape of the neck. He should have blisters applied there. Internally, he should take the iodide of potassium combined with a little syrup of the iodide of iron, which should be carried up gradually from five grain doses to thirty grains three times a day.

HOSPITAL REPORTS.

NEW YORK HOSPITAL.—NEW YORK.

SERVICE OF

ROBERT F. WEIR M. D.

Bubo—Pneumonia—Secondary Pleurisy—Emphyema.

S. P.—Native of England, æt. 26, single, wool broker, was admitted to N. Y. Hospital March 21, 1881. He gave the following history:—Two years ago had gonorrhœa and soft chancre. In Sept. last states that a sack of wool fell on him and that two weeks after an abscess appeared in the left groin. This was opened but has not healed, having burrowed deeply into the tissues of the thigh. Three days ago he developed pain in left chest with cough and fever but had no chill. His physician diagnosed pneumonia.

Condition on Admission.—General condition poor, much pain in chest, with cough and scanty, viscid, rusty, sputa. Examination shows evidences of consolidation over middle portion of left lung posteriorly. In left groin is a deep ulcer extending down into adductor muscles of thigh for a distance of two inches discharging unhealthy pus. Edges of ulcer hardened, and red, has appearance of a chronic ulcer: P. 98. R. 40. T. 103. 6°.

Treatment.—Ordered S. V. G. $\frac{3}{4}$ ss q. 2 hrs. and chest to be enveloped in a 1—20 mustard plaster to be changed once in 24 hours. Digitalis when pulse is

over 100. Is very restless: during the night slept but 3 hrs.

March 22nd.—Ordered quinine grs. x morning and evening and enough morphia to relieve pain.

March 24th.—Mustard plaster has blistered the skin. Oil silk jacket substituted. No change in physical signs. Bubo dressed with red wash.

March 25th.—Coughs slightly, no pain, passed a comfortable night. P. $\frac{108}{108}$. R. $\frac{38}{34}$ T. $\frac{102}{104}$.

March 27th.—No signs of resolution P. $\frac{108}{112}$ R. $\frac{36}{32}$ T. $\frac{102}{104}$.

March 30th.—Is looking better. Some sibilant and sonorous rales heard over considerable portion of lung. Very slight yellow expectoration.

March 31st.—Breathing better over left lung. Loss of vocal fremitus, flatness on percussion over lower lobe, line of flatness not changing with position. Voice sounds heard all over chest.

April 4th. Hyp. introduced into left chest and bloody serum withdrawn. No complaint. Expectoration increasing.

April 7th. Crepitant friction rales over lower part of left chest posteriorly with some sonorous rales. Abscess closing up.

April 9th. Had retention of urine. Relieved by catheter.

April 10th. Again had retention. Relieved by catheter.

April 12th. Passes urine voluntarily this A. M. Is very comfortable. Coughs a great deal with very slight expectoration. Bubo healed with exception of short sinus.

April 13th. Fluid still at lower portion of chest with some thickening of the pleura. Vesicular respiration returning.

April 18th. General condition slowly improving. Chest shows loss of expansion. Diminution of vocal fremitus with dullness on percussion, below the angle of the scapula. Also marked thickening of pleura above. Broncho-vesicular breathing at angle of the scapula conducted below the fluid level. Occasional exacerbations and remissions of temperature A. M. and P. M.

May 3d. Ulcer almost healed. Chest punctured to-day and pure pus withdrawn.

May 10th. Has marked hectic. Much sweating. Very anæmic.

May 27th. Since last note patient has had hectic temperature varying between 99° and 102°. Profuse sweating and anorexia. Emaciation very marked. To-day a silver tube was introduced by means of a canula in the ninth intercostal space midway between the axillary line and a line vertical to angle of the scapula. The tube entered a cavity but no pus flowed out and no air was drawn in. Tube withdrawn and wound dressed under Lister with spray. No shock followed.

June 6th. Another attempt was made to reach the pus in chest. An incision was made in the 8th intercostal space near the axillary line and continued down to intercostal muscles. A hypodermic syringe was used to explore, but only a few drops of pus withdrawn; operation was abandoned, it being decided that pus was in too small quantity to warrant opening the chest. Wound sutured and dressed.

June 8th. Sutures removed.

June 10th. Examination reveals compression and condensation of lung below angle of scapula. Signs being marked bronchial voice and breathing above and just below angle of the scapula with loss of vesicular murmur, and modified voice and breathing below

flatness on percussion and absence of voice and vocal fremitus below angle of scapula. Compensatory hypertrophy of this lung anteriorly and also of other lung.

June 17th.—Puncture with hypodermic reveals pus. Phys. exam., shows marked compression of lung due to fluid. Hectic continues though fever ranges low.

June 24th.—No change until this P. M., when pt. complained of sudden pain in the left chest just below the nipple, dyspnoea with rapid pulse, cough, and blood tinged sputa and pt. expectorating large amount of thick yellow pus. Ordered Tr. digitalis gtts x t. i. d. and S. V. G. qs.

June 25th.—Coughing continues. Dyspnoea and pain less. Examination reveals air in chest. Signs are broncho-cavernous voice and breathing, flatness below angle of scapula and succussion.

June 27th. General condition very good. Signs of air in chest more marked, breathing amphoric.

June 20th.—Much pleuritic pain and cough. Profuse night sweats, marked hectic and emaciation.

July 4th.—Patient failing every day. Appetite poor and constant insomnia. Hectic continues unabated.

July 7th.—Amphoric voice and breathing all over the chest with occasional metallic tinkle but no click or succussion. Retraction of chest very marked with only slight displacement of heart.

July 9th.—Just below left nipple is a small tender elevation giving impulse on coughing. Probably a tendency to empyema opening outward.

July 11th.—Severe attack of dyspnoea last night, no marked change otherwise.

July 15th.—Lung united to chest anteriorly. Head-ache, vomiting, insomnia, purulent expectoration.

July 22nd.—Tumor under nipple daily growing larger, fluctuation made out.

July 24th.—Ether, horizontal incision and large quantity of pus evacuated, tube inserted, Lister precautions, Lister dressing.

Aug. 14th.—Has done very well since last note, no fever since chest was opened. Counter opening made to-day in 9th intercostal space.

Aug. 29th. Wounds all healed, gradual improvement since last note. To-day is discharged cured.

MEDICAL NOTES AND NEWS.

How Colds Are Taken.—A person in good health, with fair play, says *The Lancet*, easily resists cold. But when the health flags a little, and liberties are taken with the stomach, or the nervous system, a chill is easily taken, and according to the weak spot of the individual, assumes the form of a cold, or pneu-

monia, or, it may be, jaundice. Of all causes of "cold," probably fatigue is one of the most efficient. A jaded man coming home at night from a long day's work, a growing youth losing two hours' sleep over evening parties two or three times a week, or a young lady heavily "doing the season," young children over-fed and with a short allowance of sleep, are common instances of the victims of "cold." Luxury is favorable to chill-taking; very hot rooms, soft chairs, feather beds, create a sensitiveness that leads to catarrhs. It is not, after all, the "cold" that is so much to be feared as the antecedent conditions that give the attack a chance of doing harm. Some of the worst "colds" happen to those who do not leave their house or even their bed, and those who are most invulnerable are often those who are most exposed to changes of temperature, and who by good sleep, cold bathing, and regular habits preserve the tone of their nervous system and circulation.

Probably many chills are contracted at night or at the fag end of the day, when tired people get the equilibrium of their circulation disturbed by either overheated sitting-rooms or underheated bedrooms and beds. This is specially the case with elderly people. In such cases the mischief is not always done instantaneously, or in a single night. It often takes place insidiously, extending over days or even weeks. It thus appears that "taking cold" is not by any means a simple result of a lower temperature, but depends largely on personal conditions and habits, affecting especially the nervous and muscular energy of the body.

Dr. Wm. Farr, C.B., who recently died in England, was for many years the head of the Statistical Department of the Registrar General's office. He was instrumental in bringing about many important sanitary reforms and ameliorating social conditions. In his earlier life he was a medical journalist, and for many years he retained a deep interest in the progress of medical journalistic literature.

The London hospitals are, financially speaking, established on a very insecure basis. They are, at the present time, making strenuous efforts to secure funds. One institution has been compelled to appeal to the public for \$750,000. An appalling amount to be in arrears.

Dr. F. S. Dennis has been appointed Professor of Surgery at Bellevue Medical College to fill the vacancy caused by the death of the late Dr. Van Buren.

The Abuses of the Dispensary System have been recently discussed by the Philadelphia County Medical Society. It was stated that Philadelphia had 32 free dispensaries which treated 161,019 cases a year, or about one-fifth of the entire population.

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EDITORIAL.

THE DURATION OF HUMAN LIFE.

We see so much in both the medical and popular print about the wear and tear of modern existence, the increased severity of the struggle for life and its prizes, the great tension to which people are now-adays strung, and the consequent comparatively early waste of vitality and the premature decadence of the mental and physical powers, that the impression is very generally current that the duration of life is decreasing. This is in reality not the fact.

To those who are accustomed to regard the human race as passing through a process of evolution, toward a higher and more perfect ideal, physical and mental, to the sanitarian, to the physician, to all who take a bright view of human life, or who have been instrumental in preventing disease or conserving individual or public health the deductions which may be drawn from an analysis of vital statistics will give comfort and encouragement. In a recent paper read before the Statistical Society, of London, by Mr. Noel Humphreys the author answers the question, "Has the duration of life in England increased during the last thirty years?" very decidedly in the affirmative, and bases his answer on a careful analysis of vital statistics.

"After a critical examination of several attempts which have been made to decide the question whether the duration of life in England is longer now than it was thirty years ago, the paper, which was entitled, 'The recent decline in the English death-rate, and its effect upon the Duration of Life,' compared in detail the rates of mortality of males and females in 1876-80, with those that prevailed in the seventeen years 1838-54, which supplied the basis for Dr. Farr's English Life-Table, No. 3. A new out-line life-table was then based upon the reduced death-rates of 1876-80, it being clearly pointed out that the life-

table method alone gives trustworthy indications of the true mean duration of life.

"With the help of this new life-table, Mr. Humphreys was able to calculate what effect the maintenance of the recent reduction in the English death-rate would have upon the mean duration of life. It is satisfactory to note, moreover, that the decline in 1876-80 was more than maintained in 1881 and 1882, in which years the unprecedentedly low death-rates of 18.9 and 19.6 were recorded.

"By Dr. Farr's *English Life-Table*, the mean duration of life, or mean after-lifetime of males at birth, was 39.9 years, whereas, by the new table, it becomes 41.9, representing an increase of two years, or an addition of 5 per cent. to the mean duration of the lifetime of males. The recent addition to the lifetime of females appears to be still more marked. According to Dr. Farr's life-table, the mean duration of life of females was 41.9 years, whereas the new table makes it 45.3 years, representing the addition of nearly three years and a half, or more than 8 per cent. to the average lifetime of all females born.

"So far, the paper proves that the reduced death-rates signify an important addition to the lifetime both of males and of females. In order, however, to be able to answer such inquiries as, 'Are we young longer, or mature longer, or old longer?' it was necessary to determine at what periods of life the additional years of male and female existence are lived. For this purpose, the 40 years from 20-60 are classed as the useful period of human life, whereas the years lived before 20 and beyond 60 years, are termed the dependent period. According to the new life-table, 1,000 males will live 2,009 more years than they would by Dr. Farr's table, and the paper shows that 1,407, or 70 per cent. of those years are lived between the ages of 20 and 60 years; 22 per cent. are lived under 20 years, and 8 per cent. over 60 years. The increased number of years lived by 1,000 females is 3,405, 65 per cent. of which are lived at the useful ages between 20 and 60, 18 per cent. under 20 years, and 16 per cent. above 60 years. Thus 66 per cent. of the increased duration of human life in England is lived at the useful and productive period, and not more than 34 per cent. at the dependent ages either of childhood or old age. These facts appear to supply a complete refutation of the assertion, with reference to the reduced death-rate, that "the improvement effected by science" consists in a prolongation of the passive endurance of life, rather than an extension of the power of true vitality, or any increase of the opportunity for good work and for intellectual enjoyment."

It may be urged that the conditions of life are not the same here as in England—that the deductions drawn by Mr. Humphreys would not apply to this country. We believe, however, that they would. Certainly minor comparisons of the comparative mortality tend to confirm this belief.

Are our statistics sufficiently comprehensive to make a similar comparison in this country practicable? We believe they are, and that their careful analysis would show an increasing duration of life here, despite the croaking of pessimists who would move back the hand on the dial of time; who would have us believe that in the intensity of our life lies the danger, forgetting that repair and waste are the complement of each other, that in the development and use of all the faculties lies the secret of highest health. Here is a subject pregnant with interest to humanity. Who will solve the question for this country as Mr. Humphreys has done for England?

HOSPITAL COLLEGES FOR MEDICAL STUDENTS.

In the progress that is being made in methods of medical teaching in this country, we have reason for congratulation.

There remains, however, much undone that could be done, many valuable means of instructing students that are unemployed, or at least not used to their full capacity.

In London three of the prominent Hospitals have resident colleges for students attached to them, and a fourth is to follow their example. Why should we not have them in New York or other of our medical centres? The advantages of such a system are obvious. The *British Medical Journal* in advocating the more general adoption of such a system in London, remarks: "The student in college can stroll round the walls after his dinner, accompanying his house-surgeon, and thus gain invaluable practical experience without fatigue. When a case of strangulated hernia, or an accident requiring immediate operation, is brought in at night, the resident student can be called up by the porter. In short, the advantages of residence in college are so great as to justify, according to our belief, the establishment of hospital colleges in connection with all the metropolitan schools that as yet do not possess them. Third and fourth year's students should ever be preferred as inmates. By this arrangement the wards would be utilized for educational purposes to their highest possible degree, and not merely reserved for students on duty for the day, as dressers or clerks. In fact, for senior students, a college offers even more incontestable advantages than can be afforded to first and second year's men by residence at the house of a tutor. It affords two years of clinical experience, in place of some six months of work as dresser or clerk, work often confined to a few hours in the morning and afternoon."

There are of course many practical objections to the adoption of such a system, but none that could not, we believe, be overcome.

There is no doubt but that in spite of the many clinics held at our hospitals, comparatively few medical men—only the small number who become internes enjoy the advantages that are afforded by the opportunity for constant observation that residence grants.

Here is a method by the adoption of which the present advantages of the few may be conferred upon the many.

What College and what Hospital will be the first to emulate its European predecessors in this important method of teaching?

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, APRIL 11, 1883.

Dr. G. F. Shrady, the President, presided. The minutes of the preceding meeting were read and approved.

Dr. Carpenter presented for a candidate a specimen of

"CYSTIC TUMOR OF THE OVARY."

Dr. Wyeth presented a specimen of the

"INTERNAL JUGULAR VEIN"

taken from a subject whose vessels had been injected

with plaster of Paris. The specimen showed the capability of this vein for distension, and pointed to the practical deduction that when the circulation was obstructed it might assume an abnormal position, so that in operations it was necessary to bear this in mind.

Dr. Northrup presented a specimen of

"CIRRHOTIC LIVER"

taken from a child four years old. The child had been an inmate of the Foundling Asylum and had died of diphtheria. On autopsy the liver was found to be the seat of cirrhosis. The liver was smaller than normal, with rounded edges and characteristic hob-nailed surface. The kidneys were congested. The glands enlarged. There had been no history of syphilis, and previous to the diphtheritic attack the child had been in good health. The condition had been rarely observed in children, the records of the London Pathological Society showing only three cases. Where cirrhosis occurred before dentition it was to be attributed to syphilis; after that time to alcohol, though by some it was thought it had its origin in other causes than this, such as irritating food.

Dr. J. C. Peters remarked that specimens of cirrhosis of the liver had been presented to the Society which had been taken from children twelve or fourteen years of age, in which there had been no history of alcoholic abuse.

Dr. Heineman thought it was very reasonable to suppose that intestinal irritation accompanied by functional disorder of the liver might be followed by organic disease of that organ.

Dr. J. Lewis Smith said that three kinds of cirrhosis had been described, syphilitic, alcoholic and malarial. In young children the alcoholic variety could be excluded. He thought if no history of syphilis could be made out in such cases it was rational to attribute them to malarial influences.

Dr. Holt presented specimens of the

"LUNGS, KIDNEYS, SPLEEN AND LIVER"

taken from a child of four. He had obtained the specimens for presentation through the courtesy of Dr. Ripley. The family history was negative. The child was poorly developed, had the snuffles, croup, constipation and fever. The glands were enlarged, and the teeth the seat of caries. There were abundant evidences of rachitis. The child was sent to Dr. Ripley, who, on examination found general bronchitis and a cavity in the right lung. The patient was put on anti-syphilitic and tonic treatment for a month, without improvement. The symptoms became more marked, and soon onychia was developed upon both hands. There were no cerebral symptoms, no vomiting. The urine was free from albumen, except on one occasion, when a trace was found. Death took place by asthenia.

On autopsy the lungs both contained cavities, and pleuritic adhesions existed. The liver was larger than normal and studded with nodules. On its surface were miliary tubercles. There was a clear history of congenital syphilis, the tuberculosis being apparently secondary to this.

Dr. L. H. Sayre presented a specimen of

"SARCOMA OF THE BREAST,"

removed from a patient fifty years of age. The axillary glands were found to be involved, and were also removed. There was no history of malignant disease in the family.

Dr. Sayre also presented a specimen of

"AMPUTATION OF THE LEG"

at the knee joint, which had been done by a modification of Stephen Smith's operation. The patient was a girl sixteen years old. The operation was done under antiseptic precautions and the patient had done perfectly well, the temperature not rising above $100\frac{1}{4}^{\circ}$.

Dr. Gibney said he had seen so many patients with irritable stumps after amputation that he often thought resection might have been done with greater advantage. He inquired of Dr. Sayre if he would have performed resection in his case if the plaintiff had been an adult.

Dr. Sayre replied that in his opinion the artificial limb would have given more comfort to the patient than an elevated shoe.

Dr. Wyeth thought that osteotomy might have been tried with advantage in this case. About twenty-five per cent. of cases of resection of the knee joint terminate fatally.

Dr. J. Lewis Smith presented a specimen removed from an infant fifteen days old. The lungs showed the lesions of embolic pneumonia. On careful examination a thrombus of the umbilical vein was found, which was no doubt the cause of the pulmonary trouble.

Dr. J. C. Peters alluded to the prevalence of scarlet fever among horses. The Society then went into executive session.

LECTURES.

LINEAR RECTOTOMY.

A CLINICAL LECTURE DELIVERED AT THE NEW YORK HOSPITAL, NEW YORK,

BY

ROBERT F. WEIR, M. D.

History.—Female æt. 37, married. Gives no syphilitic or tubercular history. First delivery fourteen years ago. Had a miscarriage eleven years ago. A few weeks after that she began to have diarrhoeal disturbances. From that time up to the present she has had variations in the movements of the bowels, which have been alternately constipated and fluid. Sometimes the discharges were mucoid, and mingled with pus. Six years ago the patient had a fistula in ano, and the passages after that were noticed to be quite small in size. Shortly afterwards the rectum was examined by a physician, and a stricture was recognized. The treatment by dilatation was begun and has been continued by the physician till six or eight months ago. Patient has obtained slight relief. The dilating bougie gave rise to a great deal of pain and irritation after a time, so that she was oftentimes compelled to intermit its use for a week or ten days.

This, gentlemen, is a common source of error among physicians who use bougies that fit a rectal fistula too snugly.

Mr. Allingham expressly states not to use a tight fitting bougie in the rectum. Rather pass in a tolerably loose one.

The lower end of this stricture is about 2 inches from the anus which will only admit the tip of my finger. Below the stricture there are several points of ulceration, and opening into the bowel are one or more tracts that communicate externally as fistules.

All of these, singularly enough, begin below the stricture and open externally as usual.

We find then that ulceration has been set up in the bowel, which ulceration has developed abscesses at the lower part, giving rise to fistula in ano. This ulceration in cicatrizing has drawn upon and puckered the bowel.

The causes of stricture of the rectum are various. Tubercular ulcerations usually appear higher up in the bowel. It may arise from constitutional deposits in the walls of the rectum, which will break down and form ulcerations. It may possibly come from a chancreoid discharge, starting from the vulva, running down the anus and affecting the bowels in that way. Sometimes these ulcerations are found in cases of enlarged prostate.

Here we have the results of an ulceration, and I shall perform the operation of dividing the stricture in the rectum. In internal urethrotomy you divide only the strictured part of the urethra. This does not work so well in the rectum. The irritability of the bowel is very much diminished by stretching or cutting the sphincter ani.

The old operation which was evolved by the English and subsequently revived by Nélaton, consisted in puncturing the gut above the point of stricture, and then passing a wire or chain écraseur around the strictured gut and cauterizing it. Owing to the fact that the destruction of tissues over which the galvanocautery écraseur is drawn, is followed by more or less sloughing and damage, the English surgeons have simplified this operation by the following, which is also employed among American surgeons.

A bistoury is taken and passed through the stricture making a nick, so that the finger can be passed up and the bowel examined. An incision is then made in the median line posteriorly nearly to the sacrum, and the cut is carried clean through until the anus is prolonged to the coccyx. Anatomically the peritoneum will come down on the sides of the rectum posteriorly to a point about four or five inches from the anus; according to French authors 11 centimetres. If we find the stricture within four inches from the anus we can safely make this cut. After stopping the hemorrhage I should wash the parts off with bichloride of mercury and then insert a plug of carbolized gauze.

The operation is intended, if possible, to obviate the necessity of a colotomy. This is not because colotomy is so much more hazardous, but for the reason that the patient will by this operation discharge the fæces by the natural passages, and if the stricture is not too high up, she will have control after a very little time of her passages.

In the twenty-seven cases reported by Allingham where this operation was performed, only seven had incontinence of fæces after the operation. In the four that I have operated upon this condition has only been observed in one.

In addition, the operation of colotomy is very offensive. Patients with artificial anus are annoyed oftentimes with immense prolapses.

Of the twenty-seven cases above recorded, eight occurred in malignant stricture. Some had quite an extensive ulceration, others very little. Only one died after the operation. The remaining ones were all relieved of the symptoms of stricture. Of eight that were kept under observation, the cure was said to be absolute.

BOOK NOTICES.

Manual of Gynecology.—By D. Berry Hart, M. D., F. R. C. P. E., Lecturer on Midwifery and Diseases of Women; School of Medicine, Edinburgh; Late Assistant to the Professor of Midwifery, University of Edinburgh; Late President of the Royal Medical Society, etc.; and A. H. Barbour, M. A., B. Sc., M. B., Assistant to the Professor of Midwifery, University of Edinburgh; Late President of the Royal Medical Society. Volume I. With eight plates and one hundred and ninety-two woodcuts. Wm. Wood & Co. New York, 1883.

The authors state that they have endeavored to write a book embodying the most recent views from the various literatures instead of giving those of one school, and with the belief ever before them that the Anatomy, Physiology, and Pathology of the Pelvic organs form the foundation of good clinical work.

The book is copiously illustrated, some of the plates and woodcuts serving excellently well their purpose, others being worthless, had been better omitted.

The illustrations, to facilitate study, are grouped under the following heads: Anatomy, Naked Eye. Sectional Anatomy. Microscopic Anatomy. Pathology, Naked Eye. Microscopic Pathology. Gynecological Examination. Instrumental Operations. Volume I. is divided into five sections. Section I. treating of the anatomy and physiology of the female pelvic organs. Section II. Physical examination of the female pelvic organs. Section III. Affections of peritoneum and connective tissue. Section IV. Affections of the Fallopian tubes and ovaries. Section V. Affections of the uterus.

The book contains some formulary and in the portions devoted to treatment is minutely explicit.

As a manual it lacks sufficient condensation.

It seems, however, a carefully gathered exposition of the Anatomical, Physiological, and Pathological facts relating to Gynecology and of the theories of different gynecological schools, so that the reader may draw from the facts his own conclusions as to treatment, or select that of his preferred teacher. It often fails, however, in fulfilling a prime indication of a manual, by treating of its subjects too diffusely.

The Practitioners Ready Reference Book. A Handy Guide in Office and Bedside Practice. By Richard J. Dunglison, A. M., M. D., Author of "A New School Physiology;" Editor of "Dunglison's Medical Dictionary" and "History of Medicine." Secretary of the American Academy of Medicine, etc., etc. Third edition. Thoroughly Revised and Enlarged. Published by C. Blackiston, Son & Co., Philadelphia, 1883. Price \$3.50

It is a trite saying that nothing succeeds like success. We may set up the highest ideals of scientific excellence and originality as our standard to judge books by, but to what purpose is the comment of the critic, if author and reader are in unison as regards the manner of book wanted, though this may not be either original or of special scientific or literary value.

The volume before us, which has gone through three editions in a few years, is a compilation of facts, and rules, and indispensable bits of knowledge relating to the practice of medicine, which have been assimilated by the author and carefully arranged and prepared for the mental digestion of Doctors. It abounds with practical hints. Judged by the standard of utility,

we must pronounce it a success and commend it to our readers, however much we may regret the superficiality of medical attainments which makes books of this nature a feature of the medical literature of the day.

Dr. Dunglison has added much that is novel to the third edition, making it more complete, and the book in its present revised form will no doubt meet with a still more extended appreciation.

Transactions of the New York Academy of Medicine, Instituted 1847. Second Series. Volume III. 1883.

This latest volume of The Transactions of the Academy is as regards the bulk of matter embraced in it much smaller than its predecessors.

The quality of paper, the illustrations and general form are inferior to the volumes of transactions before published.

The papers, however, selected for publication have been carefully chosen, and embody the best of those read before the Academy during the past year. The Committee on publication have, we think, acted wisely in excluding many papers read before the Academy, whose merit did not warrant their permanent enrollment in the transactions.

The contents of volume III are as follows:—List of officers for 1883; list of committees for 1883; list of Presidents of the Academy since its organization; list of Vice-Presidents of the Academy; list of Orators of the Academy; list of Fellows of the Academy; list of non-resident Fellows; list of Honorary Fellows; list of Corresponding Fellows; list of Contributors to the Building Fund of the Academy.

Following this are the papers, the names of which are as follows:—"The Galvanic Accumulation for Storing Dynamical Electricity for Cautey and Illuminating purposes."

By Louis Elsberg, A.M., M.D.

"Lesions of the Orbital Walls and Contents due to Syphilis." By Charles Stedman Bull, A.M., M.D.

"Pyæmic Parotitis." By Charles A. Leale, M.D.

"The Early Diagnosis of Chronic Bright's Disease." By T. A. McBride, M.D.

"On Spontaneous Version and Evolution in Shoulder and Arm Presentation," By I. E. Taylor, M.D.

"Some Clinical Observations on Diabetes Mellitus, with Cases." By A. A. Smith, M.D.

"Persistent Recurring Reflex Spasm of the Bladder during a period of over Twenty Years, Resulting in Thickening of its Walls, Dilatation of the Ureters and Hydronephrosis—Death from Uraemia." By Fessenden N. Otis, M.D.

"Cases Bearing on the Diagnosis and Localization of Cerebral Diseases and Their Difficulties." By E. G. Janeway, M.D.

"On Excision of the Chancre, As a Means of Aborting Syphilis." By P. Albert Morrow, A.B., M.D.

These papers have been published in the Medical Journals, and among them are some notable ones, which will sustain the reputation of the Academy for the scientific excellence of this portion of its work.

The book is not indexed, but this feature is readily dispensed with on account of the small number of papers.

HOSPITAL REPORTS.

NEW YORK HOSPITAL, NEW YORK.

TYPHUS FEVER—COMPOUND FRACTURE OF NOSE AND FRONTAL BONE.

SERVICE OF

ROBERT F. WEIR, M. D.

W. H., æt. 57. Native of Ireland. Single. A porter, admitted to the Hospital April 11th.

At 2 A. M. was brought to Hospital by ambulance, having fallen while drunk and sustained injuries.

Patient intoxicated, emaciated; his friends state that he has been a drunkard for years. Examination shows contusions of both eyes, small subconjunctival ecchymosis over outer half of right eye ball, and small lacerated wound over right eye. No evidence of fracture anywhere. Wounds dressed with carbolic dressing.

12th.—Patient delirious all day but answers rationally when addressed. Some œdema of the legs. Takes fluid nourishment readily. Bowels acting freely. Bromide of chloral administered as hypnotic. Got out of bed to-day and became so noisy as to need restraint. P. M.—Still delirious. Temp. $103\frac{1}{2}^{\circ}$ this P. M. Slight tremor of muscles, with hallucinations of sight, and restlessness.

13th.—This A. M., Temp. normal. Patient quiet and stupid, though easily aroused, answers rationally. Complains of heaviness in the head. Pupils contracted and do not react to stimuli. Subconjunctival ecchymosis not increased, but there is marked ecchymosis about both eyes. Skin of face and abdomen hyperæsthetic, and muscles of left arm and both legs rigid. There is also rigidity of neck and muscles of the back with marked tenderness along the spine. There is a profuse macular eruption bright pink in color all over the body, and especially abundant over abdomen and back. Spots vary in diameter from that of a pin point to two inches, and disappear under pressure. No paresis; urine and feces passed involuntarily; liver small; spleen not made out on account of distended colon. Abdomen tympanitic. Chest normal anteriorly, not examined posteriorly. Arteries atheromatous. Temp. 99° at 1 P. M. In the evening general condition worse. Pulse rapid, though still good. Stupor increasing. Respirations rapid. Ordered brandy and infusion of digitatis. 3 P. M., Temp. 102° . 5 P. M., 103° . 6 P. M., patient comatose, respiration sighing, pulse feeble, sordes on teeth, and patient unable to swallow. Patient died at 7 P. M. It was subsequently learned that patient had been living in a house in which cases of typhus fever existed.

Autopsy.—Reveals congested meninges, effusion into both ventricles, right lung in state of hepatization, marked enlargement, congestion and softening of the spleen. Also parenchymatous degeneration of both kidneys. A small amount of effused blood was found beneath the tissues of the scalp corresponding to the scalp wound mentioned in the history. No other pathological changes found.

CASE II.—Pt. æt. 35, native of Ireland, single, shoemaker, admitted May 30th. Was struck over the head last night during a fight, receiving injuries. Remembers nothing more of his history or injuries.

Is fairly nourished. Examination shows lacerated wound beginning over middle of left eyebrow running inward and downward to inner canthus of left eye, over middle of nasal bone, and here giving off a small cut running across to right alae. Flap laid over on right cheek, which discloses fracture of right nasal

bone and slight crushing of superciliary ridge. Deformity very marked. Whole of right side of face swollen, giving right eye the appearance of being moved outward. Eyelids œdematous and ecchymosed.

Treatment.—Nasal bone elevated and drainage tube introduced into the wound, which was brought together with sutures and cold applications made.

June 1st.—Swelling very marked. Some sutures and part of drainage tube removed. Sight good. Pain slight. No discharge from wound.

June 2d.—Slight amount of purulent discharge at lower part of wound. Rest of wound healed by primary intention. Remaining sutures and drainage removed.

June 4th.—Wound doing well.

June 6th.—Wound entirely healed.

June 8th.—Much thickening over left side of nose remains.

June 13th.—Patient discharged cured.

ABSTRACTS AND SELECTIONS.

INJECTION OF SULPHURIC ETHER FOR THE TREATMENT OF SCIATICA AND LUMBAGO.

The successful results I have invariably found attending this system of treatment, which I have adopted for the last four years with my rheumatic patients, have decided me to give publicity to the course from which I have seen so much benefit derived. Its plan is simple enough. After preliminary dry-cupping over the seat of lesion, I inject subcutaneously ten minims of sulphuric ether, gradually increasing it till I have injected thirty minims (assuming I find no marked progress, in the course of a week, of the treatment above-named). I have found it advisable to precede this by a brisk purgative at the outset, and to administer a mixture, containing five grains of salicylate of soda in an ounce of infusion of gentian, every two hours, concurrently with internal and external applications. In not one case have I yet found this curative system fail; but, in about a week's time usually, the patient is cured. Sufferers from lumbago have come to me nearly bent double with pains in the lumbar region, and have walked away erect and free from their distress after dry-cupping. I have seen sciatic patients come in limping, and go out free from the least indication. I can especially instance the case of one patient, an old man, who had been the round of all the London hospitals to no avail, for nine years previous to his consulting me. He had been given up by all as a hopeless case. On my asking whether he was willing I should try a method of treatment on lines hitherto unattempted, and, on his consenting to the same, I pursued the system of subcutaneous injection already described, until I attained the administration of a drachm of sulphuric ether. Marked improvement followed this course, which I, however, was obliged to suspend, owing to the formation of a hard cicatrix over the seat of the sciatic nerve. Nevertheless, after this was removed, the patient ultimately found himself completely recovered; and, during the five years which have elapsed since he first came to me, has sustained but one attack of sciatica, of a very slight character. I sincerely hope these few remarks on my own practical experience of this system of treatment of cases, the persistency of

which so frequently baffles the efforts of the most experienced practitioners, may prove of some practical utility in similar cases.

J. BRINDLEY JAMES, M.R.C.S.
—*British Medical Journal*.

HERNIA OF THE OVARY.

Within twelve months, British medical literature has been enriched by a couple of original monographs on hernia of the ovary, written by two writers of great authority. Dr. Robert Barnes's paper, read before the Royal Medical and Chirurgical Society in January 1882, is already well known. That obstetrician discussed at length the relation between enterocele, epiplocele, and ovarian hernia, and dwelt particularly on physiological points illustrated by observations on ovaries thus displaced. An ovary in the inguinal canal is in a peculiarly good position for observation. Those who are skeptical about detection of a diseased ovary by bimanual palpation, will be less doubtful about the changes observed week by week in an ovary subject to hernia, provided they agree about diagnosis. Dr. Barnes described the swelling of an ovary concurrently with the increased tension of the vascular system before menstruation, and directed attention to the swelling of the round ligament under the same circumstances—an important fact in relation to the share which the uterus takes in the menstrual process. It was urged, in the same paper, that some tidal change, rising primarily in the ovary itself, caused nervous and vascular tension, the menstrual flow being a phenomenon standing third in order in relation to the two previous conditions. The relations of cause and effect in the above changes, from the normal quiescence of the ovaries midway between two menstrual periods, were much elucidated by Dr. Barnes's observations.

In the eighteenth volume of the *St. Bartholomew's Hospital Reports*, just issued, we find an interesting article on Hernia of the Ovary by Mr. Langton. As surgeon to the City of London Truss Society, the author has had great opportunities of observing the relation of this condition to herniæ of other kinds. Mr. Langton's remarks in the discussion that followed the reading of Dr. Barnes's contribution, formed a kind of abstract of the paper now published in full. The author states that he has observed hernia of the ovary chiefly in early infancy. The examination of ovaries subject to this condition gives, in the case of infants, no more pain than is dependent on the manipulation of any other protruded abdominal organ. Adults frequently appear to experience the same sickening kind of pain observed when the surgeon presses a healthy testicle. This symptom is often absent, probably through ill development of the ovary. The use of a fine trocar will settle the question of diagnosis between this affection and cysts due to an incomplete and partial closure of the canal of Nück. Mr. Langton found that, in most cases that came under his care, after the menstrual period had been established, the monthly tenderness and enlargement of the protruded bodies were well-marked. In no case could any malformation of the genitals be made out. On rectal examination in adults, the uterus was found, as a rule, to be slightly deflected to that side on which the ovary had become herniated.

By means of a valuable series of details, statistical and descriptive, Mr. Langton throws much light on the relations of congenital inguinal hernia to displacement of the ovary. The proportion of cases in which

bodies having all the characters of ovaries, as far as can be judged by palpation, were found in a series of this variety of hernia, proved to be one in fourteen. On the other hand, the ovary appeared to be involved in but one out of forty-five of a large series of cases of inguinal hernia, occurring in females of all ages over the first year of life.

Mr. Langton has observed, in all, sixty-seven cases of suspected ovarian hernia. Forty-three were congenital; out of these, twenty-nine were reducible and fourteen irreducible. The remaining twenty-four were acquired, appearing for the first time after the age of one year; the reducible cases in this series were eight—that is, half as many as the irreducible. The proportion of cases of right, left, and double hernia of the ovary can hardly be established authoritatively from so few cases—numerous, no doubt, when the cavity of the affection is considered, but scanty for statistical purposes. In one instance, the suspected ovary was found to lie immediately superficial to the saphenous opening; but there was reason to suppose that the ovary had issued, not out of the crural canal, but through the external abdominal ring, descending over its outer pillar into Scarpa's triangle. In only two cases did Mr. Langton find that the patients suffered so severely, at times, that the question of removing the ovaries was suggested; and in neither of these could the consent of the patient be gained. The author finally expresses his belief that further experience will teach us, that the ovary is more frequently involved in a hernia that has hitherto been suspected; but that cases calling for surgical interference are, comparatively speaking, very rare.—*British Medical Journal*.

ON TRANSFUSION. By J. F. LE PAGE, I.R.C.P., Eng., etc., Fellow of the Obstetrical Society of London.

The operation, to matters concerning which I wish to direct attention, may justly, if not logically, be styled both old and new; old, because it was practised in England by Dr. Lower, of Oxford, and by Sir E. King, in the year 1665—six generations back; new, for the reason that a large majority of general practitioners have never had the opportunity of witnessing it—an operation which is untaught in our schools; which has never received the recognition it deserves; which has not yet attained to its legitimate place in surgery and in obstetrics.

When, from hæmorrhage, our patient having sunk to the lowest ebb, life is flickering, and dissolution apparent, hope is still justified, resuscitation is still possible; and more, it is the very general result of this most important operation. How, then, is it, that its use is almost limited to specialists? Is it not because the general practitioner does not fully realise its precise indications, nor indeed the pathological nature of the conditions which require it?

Let us suppose that we have a patient who, having suffered excessive hæmorrhage, is rapidly sinking. What do we observe? A gasping for air; an absence of pulse; jactitations, and so on. And we say, death is resulting from the draining away of vital fluid. We consider it a very proper thing to attempt to give stimulants, and to supply nutriment by enemata. But what is the result? Our patient dies, and we are satisfied that the case was beyond the reach of human aid.

Surely it is time that the marvelous discoveries in

physiology and pathology should open to the sight of the intelligent physician that vista through which he may distinctly discern the relationships existing between effect and cause; the pathological nature of the conditions; and the basis of a rational and scientific treatment. It is utterly futile to attempt to administer stimulants, when the functions of the stomach are altogether suspended, or when it rejects everything; and to inject nutritive enemata, when the absorbent system is completely paralyzed, and has lost its faculty of assimilation. Now, in such a patient, the first thing we notice is a gasping for air. But what is gasping? It is an indication that the respiratory centre in the medulla oblongata is not duly stimulated; or that, being stimulated, the force is not at hand for it to transmit. Let us note that the natural stimulant of the respiratory centre is carbonic acid, and that, when carbonic acid is in excess in the blood, respiration is abnormally rapid; provided that the force is not deficient, as in sleep, or almost entirely absent, as in the partial stasis of profuse hæmorrhage. No inspiration, as an involuntary act, could, in health, take place, were it not for the presence of carbonic acid in the venous blood traversing the medulla. How, then, does it come that this centre fails after hæmorrhage? In this way: The respiratory centre is the transmitter, at regular intervals, of nerve force to the respiratory muscles; but it is not the mechanism which transforms matter so as to develop that force. Whilst carbonic acid is essential to the inspiratory act, oxygen is equally essential in the generation of that force which the centre transmits. Well, there is a deficiency of oxygen because there is a deficiency of blood in the brain; and what little is there, is in a state approaching stasis. Propel more blood through the cerebral vessels, and what happens? Oxidation goes on; force is developed, which the inspiratory centre, stimulated by the carbonic acid in the blood, rhythmically discharges, and respiration is reestablished.

Again, we notice the absence of pulse after extreme hæmorrhage. Pulse is the wave of propelled fluid dilating the arteries. But what if there is no fluid to propel? The absence of the pulse is the result of the heart's dynamic inability to work when deprived of that on which to spend its energy. Give it blood to propel, and propulsion will follow.

This leads me to the indications to which these considerations point. Oxygen must be sent to the brain, carbonic acid to the respiratory centre in the medulla, and fluid to the heart. And how can we accomplish this? I have adopted this plan in patients who were not actually *in articulo mortis*; and, so far, with complete success. First, place the head low and raise the pelvis, so that blood may gravitate to the medulla; then autotransfuse; that is to say, transfuse the patient's own blood from the extremities to the vital centres. This is done by firmly bandaging both legs and arms, commencing at the feet and hands. At this stage, ether may with very great advantage, as a most valuable means of stimulating nature's powers, be injected intermuscularly; and I venture to suggest that it would be both rational and expedient to inject a minute quantity of strychnine with the ether, for strychnine we know to be a most powerful and certain stimulant of the inspiratory centre. It now becomes our duty to supply the patient with such nutriment as is capable of sustaining life; and to this end, should the stomach still reject liquids, the assimilation of nutritive enemata will meet the case.

Striking as is the success of this treatment, desperate cases do occur in which there is absolutely no hope

excepting by placing directly into the circulation new fluid capable of arousing and sustaining life; and in these cases, as in the resuscitation of the drowned, there is ground for hope even after death has practically taken place.

A question of no little importance is that of the form in which the aliment shall be used. There are many cases on record in which *whole* blood has been used with complete success. The same thing may be said of defibrinated blood, and also of saline alcoholic solutions. The objection to the use of pure blood is its tendency to coagulate. Clotting may take place in the heart, in the vein, or in the instrument. How, then, can we avert its coagulation? By the very careful exclusion of air, by preventing cooling of the blood, and by the admixture of a small quantity of ammonia. In the first drawings of my transfusion apparatus, I had a device by which I could inject small quantities of ammonia into the blood as it passed through the instrument. As this involved a more complex mechanism than I desired, I was led to an experiment which, so far as I know, is original. Not only ammonia, but salines generally, retard fibrination; and it occurred to me that a very convenient process would be that of preparing the blood of the giver before it was drawn from his vein. I need not here explain the experiments I made at length; but the deduction was this, that by administering, ten minutes before blood is drawn, as large a dose of a saline with ammonia as can well be borne, fibrination is very materially retarded. I infer that, with the precautions against cooling and the admission of air, this preparation of the blood will effectively remove all danger from clotting.

Defibrinated blood has its advocates; and their grounds of preference are, that all danger of coagulation is avoided, and that it is unnecessary to bring the giver of the blood into the room.

In favor of the saline alcoholic solutions and milk, may be urged the impossibility, which must often present itself, of obtaining blood at the time when alone it can be of any avail; and the fact that they are always available at short notice. Dr. Hodder records, in the *Practitioner* of 1873, the case of two patients, moribund from cholera, in whom he injected pure milk, in one fourteen ounces, in the other twenty-eight ounces. Both recovered. And here there was not simply a draining of blood to contend with, but a most potent poisonous influence. A teaspoonful of common salt, half a teaspoonful of carbonate soda, with two teaspoonfuls of alcohol in a pint of water; or even simple water, with a few drops of ammonia in it, may be used. Half the mischief arises from the heart and arteries having nothing to contract upon; and hence we see how it is that these simple fluids answer the purpose. It is, of course, necessary to follow up transfusion by warm enemata of beef-tea, with brandy, and probably a little opium; to keep the legs and body warm, and, as soon as deglutition can be performed, to give brandy and hot water.

The operation itself is performed thus: Transfix transversely a fold of skin pinched up in the course of a vein at the bend of the elbow. Seize the vein and raise it with forceps, which are made for that purpose. Then open by a longitudinal incision. An assistant may now compress the vein with his thumb, whilst a vein is opened in the same way in the giver's arm. Then, having carefully charged the instrument with a warm saline solution, insert the canulas into the veins; of course, pointing centrally in the patient's and distally in the giver's arm. Now, propel the blood slowly

and smoothly, and watch the effect. Six or eight ounces will probably be ample. Then remove the canulas, apply a compress, and bind with broad tape with figure of eight round the elbow.

Of a certainty, the pouring away in very profuse *post partum* hæmorrhage must be arrested by styptics, or otherwise, before we begin to replenish. Let us not, however, rest satisfied because the styptic is effective in arresting, and in preventing a recurrence of, the hæmorrhage: for the patient may sink rapidly from the loss sustained.

In cases of placenta prævia, when hæmorrhage has been profuse, death often follows the shock of artificial delivery. I very vividly remember two such cases which have come under my observation. Here, transfusion before delivery would relieve the extreme depression, and avert a fatal issue.

But, I take it, conditions do exist in which transfusion appears to be indicated where there has been no loss of vital fluid whatever. I refer to those where blood-poisoning exists. Take, for instance, puerperal convulsions. In convulsions with albuminuria, is not the blood unquestionably poisoned? Our ancestors, two generations ago, would have bled, had they recognised this condition; and may not we, from them, take this lesson, pregnant with truth: that venesection, abused and ridiculed as it is in the present day, is a most powerful agent in our hands for good, could we but cast aside that demon, fashion, which so detracts from the innumerable and inestimable benefits our noble profession is ever conferring on our race?

In puerperal convulsions, prostration threatens to be fatal. By bleeding, we necessarily abstract a portion of the poison; by transfusing new fluid, we dilute the poison still circulating. The effect, reasonably to be expected, is, that the system rallies from the prostration. And, carrying this thought further, I venture strongly to urge the expediency of venesection and subsequent injection in many other poisoned conditions of the blood; be the poison generated within the body, or received from without.

We know, and recognise, the signs of threatening dissolution; and we should be prepared, with clear and well defined ideas, vigorously to adopt a treatment which may not fall short of the urgent demands of the case, even when an operation, which has hitherto been looked upon as so formidable, is indicated.

I am convinced that the time is not far removed when, to permit a patient to die of hæmorrhage, will be considered little short of culpable homicide; when transfusion will take its proper place in medicine, in surgery, in obstetrics; when many valuable lives will be saved, which would inevitable be lost but for a weapon so potent, so effective, in defeating our common enemy, death.—*British Medical Journal*.

ON THE USE OF CONCENTRATED SOLUTIONS OF SALINE CATHARTICS IN DROPSY.

BY

MATTHEW HAY, M.D.,

Demonstrator of Practical Materia Medica in the University of Edinburgh.

In the course of an investigation of the physiological action of saline cathartics, now in course of publication in the *Journal of Anatomy and Physiology*, I examined the effect of the administration of a saline cathartic on the concentration of the blood, and I

succeeded in demonstrating from experiments on man and the dog that if the salt be given in the form of a concentrated solution when the alimentary canal of the animal contains little or no fluid, it produces an almost immediate and very decided concentration of the blood owing to the blood becoming deprived of a large amount of its water through the intestinal secretion which the salt excites: if, however, the salt be given dissolved in sufficient water, or if the alimentary canal contain sufficient fluid at the time of the administration of the salt, no such concentration of the blood occurs. In the former case the hæmatic concentration is very considerable, and is very quickly produced. It reaches its maximum within half an hour after the ingestion of the salt; and is so marked that after giving three-quarters of an ounce of sulphate of soda dissolved in three ounces of water to a man, whose alimentary canal must have been practically free from fluid, I found that the number of blood corpuscles in each cubic millimetre of his blood rose from about 5,000,000 to 6,790,000. An almost similar result was obtained with a dog. This excessive state of concentration does not last very long. In from one to one and a half hours after the administration of the salt it begins to decline and continues to do so until at the end of about four hours the concentration is reduced to the normal. This reduction is effected not by the absorption of fluid from the intestines, but by the abstraction of lymph and other fluids from the tissues, and the quantity thus abstracted must be very large. These alterations of the volume of the blood take place apparently without any corresponding change of the blood pressure. The blood, therefore, would appear to abstract the tissue fluids in virtue solely of its concentrated condition, and in the nature of its action to behave somewhat like a sponge. The presence of the salt in the blood may also influence the tissue fluids by acting on them endosmotically. Some hours after the administration either of a concentrated or of a dilute saline solution the blood undergoes another concentration, less in degree than the first, but continuing for the greater part of the day. This second concentration is evidently due to the diuretic effect of the absorbed salt. Doubtless, during this period also, as during the first concentration, the tissue fluids are being drawn upon.

I have made several trials of the concentrated salt in suitable cases of dropsy, and in most of them with very satisfactory results. It is sufficient for my present purpose to give details of one of these cases.

J. A—, a young lad, aged ten, had been an out-patient of the Edinburgh New Town Dispensary for over a year, when, as one of the physicians to the dispensary, I was asked to visit him. He had been suffering for several years from heart disease. I found him propped up in bed, being unable to lie down, and showing signs of great distress. His breathing was rapid and shallow, and he was suffering from great dyspnœa, with frequent coughing. There was a well-marked ascitic distension of the abdomen and general anasarca, observable especially in the lower limbs. A loud mitral regurgitant murmur could be distinctly heard over the whole of the front of the chest. The pulse was rapid, small, and weak. An abundance of soft râles, audible all over the chest, especially towards the base of the lungs, indicated a pronounced œdema of these organs. The dyspnœa was so great that he sat with his arms straight and almost perpendicular, and with the hands pressed on the bed, elevating and fixing the shoulders to bring the extraordinary muscles of respiration into play. He had been treated previous

to my seeing him with almost every variety of renal and cardiac stimulant, and at intervals with cathartics. At the time I visited him, besides some medicine to relieve the cough, he was having iron and digitalis several times a day. In spite of this active medicinal treatment, his condition was gradually becoming more serious, and the dropsy and breathlessness were increasing. The administration of a saline cathartic, dissolved and diluted in the usual way, had been tried, it so happened, two days before I saw him, but its action was attended with only slight relief. As I thought this a suitable case for the use of the concentrated saline, I ordered that he should have as little as possible of food and liquids during the night, in order to free the alimentary canal from digestive juices or other fluids, and permit of the full action of the salt, and I asked his mother, who was nursing him, to give him next morning three-quarters of an ounce of sulphate of magnesia dissolved in two tablespoonfuls of water, no water to be given afterwards. The result exceeded my expectation. When I called next evening, the patient was lying quietly sleeping in his bed. The anasarca was greatly diminished, and the dyspnoea had almost entirely gone, and his breathing was much slower. The pulse was also less rapid, and the pained, anxious expression of his face had vanished. His mother told me that she had given him the salt as I had directed, and that in less than an hour afterwards the purgative action of the salt manifested itself, and there were repeated evacuations in the course of the next few hours; on each occasion the water seemed to "gush" from him, and he passed an unusually large quantity of urine. There evidently had not been merely a removal of so much fluid from the blood and tissues as was necessary for the usual dilution of the salt within the intestines, but the sharp, sudden withdrawal of fluid from the tissues by the concentrated blood had initiated a movement of the fluid into the latter, which had continued for some hours after the direct action of the salt and the blood had ceased, and until the tissues were in great part rid of their superfluous liquid. Next day I was pleased, on entering, to find him on the floor amusing himself with the other children, and looking perfectly comfortable and happy, and, except for his wasted and pallid features, showing little evidence of having been quite recently so dangerously ill. I was told he had not felt so well for five months before. I continued to see him for a month afterwards, during which time he resumed taking the digitalis and iron, and throughout this period he had no return of the dyspnoea, and the dropsy was comparatively trifling. Owing to the removal of the family afterwards to England, I obtained no account of his further progress. The benefit of the concentrated purgative was in this case very striking, and, perhaps, more so than in any other case in which I used it. The conditions necessary for the successful administration of the salt are that the nature of the dropsy should be such as to permit of the full action of the salt. I have found it more useful in general dropsies than in local dropsies, and of general dropsies most beneficial in those dependent on a stasis of the circulation, as cardiac dropsy. The cases in which I have employed it are, however, as yet too few to warrant me in making definite generalisations. The other requisite conditions are that the alimentary canal, by the previous abstinence of the patient for some hours previously from food, and especially liquids, should be allowed to become as free from fluid as possible, and that the salt should be administered along with the smallest possible quantity of water. Sulphate of mag-

nesia, on account of its being soluble in less than its own weight of water, is one of the most suitable of the saline cathartics for this purpose. Sulphate of soda is, owing to its greater insolubility in water (1 in 4), less suitable. The alkaline tartrates and Rochelle salt do not, however, present this objection, and may therefore be found useful. The phosphate of soda and the sulphate of potash are too insoluble to be of any service.

VERATRUM VIRIDE IN TYPHOID FEVER. ITS LOWERING OF THE PULSE AND TEMPERATURE—TWENTY-EIGHT SUC- CESSIVE CASES IN PRIVATE PRACTICE, ALL RECOVERING. 1873-1882.

BY

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New London, Conn.

The treatment of every disease at first is tentative and theoretic,—fortunate if at last it becomes in a rational sense specific or uniform. It varies in its methods, even with a common theory, to say nothing of many theories. For a decade, excepting the excess of heat as the measure of chemical and destructive changes, and as the chief cause of death in a disease so prolonged as typhoid fever, how many remedies have been tested!—digitalis, quinine or calomel in heroic doses; veratria, described by Ziemssen, given to induce vomiting and sudden lowering almost to collapse, in the hope that the high fever may not return; and the cold-bath cure. Before the use of the thermometer, there were the anti-bilious treatment, the turpentine for the enteric symptoms, the empirical acid course; and, after all others, the expectant method.

We note the unsatisfactory character of these treatments by their indifferent interchange, by the liberty of experiment within certain limits, and by the result—a constant percentage of fatality.

It has long since come to this: We must take care of our cases, guard against injurious medicines, diets, excesses, and oversights, and await an unknown termination. The disease, self-limited—if its subjects live long enough!—must exhaust itself any way, unimpeded by human effort.

But a cure for this fever should be found, in the same sense specific as quinine in intermittents, salicin in rheumatism, mercury in syphilis, arsenic for the skin, the bromides in epilepsy, or digitalis in diseases of the heart.

Our art should not be thought entirely out of its infancy when a disorder so fatal, without antidote, ravages the whole world. And the prolonged course of the disease should be a reason and a means of cure, not a cause of despair and inaction.

There was an axiom accepted, but quite disgraceful,—the cure of rheumatism is six weeks. No longer excusing ourselves in such failure, in the better sense now we say, we cure rheumatism.

Veratrum viride, green hellebore, was first brought to the notice of physicians by Professor Wm. Tully, of Yale College, in his lectures to his classes about 1830, as a substitute for colchicum in rheumatism and gout. He claimed it would cure a majority of the cases of these diseases, being "separated medicinally" from veratrum album and much less cathartic, also less so than colchicum. Dr. Chas. Osgood, of Providence, who first published a full account of the drug, *Amer. Jour. of Med. Sciences*, vol. xvi, p. 296, old series

(1835), had his first knowledge from Prof. Tully. He advises its use in pneumonia, rheumatism, and gout.

Norwood, *Amer. Jour. of Med. Sciences*, vol. xxv, page 281, 1853, is the first to allude to typhoid fever. He says: "We have treated several cases of typhoid fever in council (with *verat. v.*), where all the usual remedies had failed." * * * "Medicine of every kind whatever was withdrawn, and she (the patient) was put on the use of the tinct. of *v. v.*, commencing with three drops, to be increased every three hours." The case improved [soon and recovered, though from the text it seems to have been desperate. Norwood continues: "If this were a single or isolated case, we would not have mentioned it, but we have treated a number of cases with a like effect and success." In this case, he had vomiting, and in the others also. He objects to the giving of quinine and stimulants with the medicine.

Ringer says, fourth edition, 1855: "Typhoid fever, it is said, may be beneficially treated by *veratrum*," and "in the treatment of the foregoing diseases"—scarlet fever, measles, typhoid fever, etc.—"it is better to give small doses, as one or two minims every hour, rather than larger ones at longer intervals,"—the true way.

Barker of New York, advises *veratrum viride* in quite large doses in puerperal fever. Agnew, of Philadelphia, in drop or two-drop doses in surgical fever; and Simpson, of Edinburgh, 1872, in the former disease, with some discourse on the helleborism of Hippocrates and the ancients, with which cure he classes this. Their hellebore was a cure for chronic diseases mostly, as insanity, epilepsy, neuralgia, dropsies,—a "separate" drug, yet near kin, botanically, to the *v. v.*

The Woods, of Philadelphia, and Stillé and Bartholow, latest, advise against it, the last two being very sure of injurious effects. Stillé is contemptuous as to its use in typhoid. Dunglison and J. K. Mitchell, scarcely mention it.

Flint, Aitken, Reynolds, Bennett, Graves, Chambers and Niemeyer, do not class it with remedies for fever.

Up to 1873, I had only used *veratrum viride* in three thoracic aneurisms, one with a supposed cure and a relapse. I have never used it in pneumonia. In 1874, in the cases herein reported, this line of thought occurred to me.

High temperature, prolonged two or three weeks, kills. Personal and recorded experience has only this lesson, spite of quinine, stimulants, effervescent, acids, cold baths. Now, if the pulse could safely, in this fever, be reduced from 110, or from 120, which, continued two or three weeks in adults, is usually fatal, to 90, and safely kept at 90 or 85—not at 70 or 60,—the friction of the heart and of the whole circulation one might expect would be lessened, in so considerable degree that the heat would naturally fall somewhat, at least. Just as in the dangerous friction of continuously running a steamship greatly beyond her normal rate of speed, every two or three additional miles per hour increases consumption of fuel geometrically, or by the square—not by simple addition,—and the friction of machinery and breakage are in the same proportion. Nor is the comparison untruthful. Consumption of material fuel, in each case, that of the living body and of the ship in motion by steam, are identical—the use of oxygen also. Breakage or exhaustion may be final in either.

Prevention of high heat is, however, very different from the abstraction of heat, by the cold bath.

Possibly this *veratrum*, considered depressing, as usually given, in a prolonged disease, otherwise given,

as already intimated, only lowering the pulse to eighty-five or ninety, might benefit; and, by keeping down the heat a degree or two continuously, mitigate some or all symptoms and save life.

Besides the poison or ferment of the fever, we contend against its prolonged effects after incubation—rapid circulation, high heat, and inflammatory processes. The poison without these might not interfere dangerously with the physiological functions. Even if we could not antidote the ferment or poison, we might antagonize the effects and delay death till *vis natura* could restore the normal economy or eliminate the faulty product. The excessive friction of the fever at least we might try to obviate. The attempt is to mollify, not to abort or strangle, the disease.

The records thus anticipated are somewhat brief, but the pulse and temperature and worst symptoms besides, are fully given.

What was found? The skin was frequently moist, in some cases constantly, so that a somewhat natural bath followed, with its tendency to coolness; the tongue moist, a possible result of the respiration being more nasal, without the sordes often so irksome and significant.

Sleep has usually been quite natural, to be expected with the improvement of the skin and tongue. No faintness, no increased weakness as was anticipated; the patient permitted to have his head on the usual pillows, not specially low, as Stillé says; no vomiting, except in two or three instances, not necessarily to be attributed to the drug; no dangerous symptoms whatever seem to follow these small and frequent doses. Instead, a mitigation of the fever, of the cerebral symptoms, and of the abdominal, the stomach retaining nourishment well. The pulse is slowed, the temperature lowered one or two degrees very often in the second week. Rose-spots have infrequently been observed or have been doubtful. What is of more consequence, the complication of hemorrhage of the bowels, or of perforation, has not occurred.

The opinion obtains with me that the ulceration of Peyer's glands is aggravated greatly by the rapid circulation and high heat as usually prolonged, and that this desirable result of lessened friction and lessened heat, together with the slight tympanitis, the prevented diarrhœa, and the improved tongue during the second week, gives us another type of fever, one non-typical.

The usual diarrhœa, under other treatments, must be thought a result of the prolonged high heat, a means of elimination of waste and of the poison generated—conservative in some degree, at least. So is the colliquative diarrhœa of phthisis. In that we have also sweating. In both cases there is great heat. Reduce the heat in either to nearer normal, and the diarrhœa is no longer troublesome. Again, ulceration in both instances brings on diarrhœa, and high heat increases ulceration.

In typhoid with slow pulse the high temperature is also reduced and the general symptoms improved by the *veratrum*, in these moderate doses, without reference to the pulse.

Convalescence has uniformly been rapid.

New London has a general incline eastward toward the Thames, a river having deep currents and ocean tides. The city is most abundantly flushed with pure water from a beautiful lake, a reservoir formed by nature, seven miles distant among hills. Till within three years, there have been no proper sewers, and since, in only a few streets. Vaults and cesspools are stone-walled, not cemented; and the soil or subsoil, too commonly infiltrated, in many places rests upon

granite ledge. Cellars, of course, are sometimes polluted. The great quantity of water increases the danger, and often the vaults overflow.

The city limits, the smallest in the State, if not in the nation, with four-fifths of the population in the northern fourth, 9,000 in one square mile, crowd the dwellings too close to these imperfect receptacles. It should be anticipated that here is a very nest of typhoid, diphtheria, and its congeners.

For the past three years only, the ventilation of vaults and the trapping of sinks have been required by law; and sulphate of iron has been freely used. Otherwise there has been little of sanitary precaution.

For the ten years during which my observations were made, there has been no epidemic of typhoid, but a severe one of scarlet fever in 1879, and of diphtheria, eighty-seven deaths in 1880, and many cases of the latter for several years previous, and high death-rates. Yearly, there have been reported two to five deaths from typhoid, thirty-four in all. Some recoveries by other treatments have been very tedious. The entire population is 11,000.

Brief reports convey impressions of a mild type, of continued, of "two weeks" or "bilious" (?), fever. But the common cause, as far as we know, the termination, even in the mild type, too often disastrous, prevalence in the autumn or near to the autumn, bring many varieties under one species. These are all typhoid, with all its occasional dangers and complications. And in my patients, the bodily weakness, absence of appetite, the deafness, coma-vigil, and facies were characteristic, as also the pulse and temperature. Warnings from medical men and expressions of doubt most frequently accompanied statements of cases during their progress to recovery. Surgeon M. C. Drennan, U. S. Navy, in 1880, saw several patients, however, with approval and great interest.

All treated from the first, with any degree of thoroughness according to the method, are given. The preparation used in the official tincture, and the doses are from one to two drops per hour, with little other medicine, if any, from the setting in of the disease to convalescence. Age and sex must be considered, but children require a dose proportionally large.

The elimination of *veratrum viride* is rather rapid, so that these patients were usually under the influence of from three to twelve drops continuously. It occurred sometimes that the medicine was given only every two hours at night. The entire quantity in twenty-four hours would be from twenty to forty-eight drops; and this would go on day after day for ten, twelve, or fourteen days. By no means is the dose unappreciable.

The experience recorded here is sufficient to guard from disaster any physician following these methods. He should, of course, watch carefully the pulse and temperature. In medicines we do not chiefly regard names, and the results of careless or excessive doses. This powerful drug, reasonably exhibited for our special purpose, is not then depressing or dangerous. It is admitted that arsenic and mercurials are sometimes tonic and restorative. Yet mere names alarm our patients, and we yield to their timid scruples to our common disadvantage. The ordinary classifications of drugs are often, in this way, a great damage in our practice—bugbears.

Three questions are pertinent. Does the *veratrum* in these doses reduce the temperature one or two degrees, morning and evening, during the second week?

Is convalescence at the twelfth or fourteenth day a frequent result of the treatment?

Does the cure render the fever non-typical and less malignant in a great degree?

My own conclusion may be thus stated.—A tendency of the typhoid ferment to exhaust itself at about fourteen days the *veratrum viride* emphasizes, so that very many cases determine at twelve days, some at fourteen or fifteen, a smaller number at three weeks. Very few determine indefinitely, as do a large proportion in other treatments.

The pulse and temperature and memoranda, all recorded at the time of visit, may be taken as accurate, the thermometers being proved. The application of this instrument was almost always in the axilla.

REGIMEN.

Stimulants.—Essentially none. A little brandy or whiskey in cases 8, 17, and 25 only.

Diet.—Milk porridge, oatmeal porridge strained, milk, beef tea, weak tea or coffee; orange juice in slight quantity; sometimes a little lemon juice.

Rest, etc.—Horizontal posture, upon back or side, both being advised at intervals. No visitors except the family and those needed. An airy room; a window frequently opened; temperature 65°. Occasional baths of vinegar and water, etc. Mouth, tongue and teeth to be kept as clean as possible. The excreta disinfected.—*Archives of Medicine*.

MEDICAL NOTES AND NEWS.

Volunteer Medical Corps.—A meeting was held recently at Charing Cross Hospital in furtherance of a scheme to raise an ambulance corps among medical students. It was decided that such a corps should be formed.

Trained Nurses Graduated.—The graduating exercises of the Mount Sinai Training School for Nurses were held at No. 852 Lexington avenue May 12th. Mrs. Sarah H. Florence made the opening address. Dr. Abraham Jacobi delivered an address upon the "History and Development of Training Schools for Nurses."

An Obstetrical Phenomenon—Crying of the Foetus in Utero.—Dr. Harlow, of Detroit, an accoucheur of forty-six years' practice, and whose position, honorable character and credibility are vouched for by the editor of *Michigan Medical News*, reports a case of the above extraordinary, and apparently incredible nature. He declares that there is no possibility of his being mistaken or deceived. The following is his report of the case:—"The lady was about forty years of age and in her fifth confinement, eleven years having intervened since giving birth to her fourth child. Upon digital examination, I found the waters just gathering, and after one or two additional pains the membrane broke and the amniotic fluid quite flooded the bed. It was a vertex presentation of the sixth variety, according to Baudelocque. Before the labor had further progressed, and while the head was yet engaged in the superior strait, the child made two distinct audible screams that could be plainly heard in any part of the room. Being greatly surprised at what I heard, I gently passed my hand up the vagina and found the head still in the superior strait. I made several ineffectual attempts to disengage it from its

fixed position, but did not succeed in getting any descent of the head, and during this time the child had several spells of crying, the same as was heard at first, the tone and voice being unmistakably that of a child. During a lull, the pains did not entirely cease; and generally following each one the child would cry as before. I subsequently applied the forceps, and delivered the woman of a large female child. I afterwards took occasion to fully investigate this remarkable phenomenon. The patient told me 'the child first commenced crying four weeks before it was born, and kept it up at intervals till its birth, since which time it has not cried at all.' This lady declared and persisted that she went four weeks over her regular time. At first, she said, she was greatly surprised and alarmed, but as this peculiar freak of nature continued without producing any particular alarming symptoms, she became so accustomed to its frequent repetition that her alarm vanished. To any doubting the facts stated, I can only say that I have reported my case accurately and truthfully in every particular, which I know to be so from personal knowledge."

The Trance Condition in Surgery.—Some experiments were made recently at the office of a physician up-town, with a view of testing the utility of the trance condition for surgical operations. Among those present were Professors Thwing of Brooklyn, Dr. Birdsall, Dr. William C. Jarvis, and Dr. Mittendorf. One of the subjects was a boy from Brooklyn, about sixteen years old, who was thoroughly well trained and able to take part in some very interesting experiments. If he was told to go into a sound sleep when a certain number was counted he would obey, and when the number was reached he would be in an unconscious condition. If his arms were raised they would drop like lead. If a sharp instrument was thrust into his skin he gave no sign whatever of being conscious, and being questioned afterward had no recollection of it. Another subject was a younger boy, with bright black eyes and a pleasant round face. He had never been thrown into a trance condition before. At first he refused to be subjected to the influence for fear that he would suffer some injury, but after seeing the experiments made with the other boy, he consented. Professor Thwing, who is very successful as a mesmerist, put him in a thoroughly unconscious condition in a few seconds. In one experiment the two boys were locked in each other's arms and passed into the trance condition at the same word. They remained in that position for some time, until they were aroused by the touch and voice of the mesmerist. Efforts were also made to mesmerize a young woman, but she was not a good subject as she did not reach a point beyond drowsiness. Her curiosity, as she remarked, prevented her from yielding herself up completely to the experiment. The boy with the black eyes was placed in a chair to be operated upon. His right nostril was entirely closed by the thickening of the septum, superinduced by chronic catarrh. He was mesmerized by Professor Thwing. Dr. Jarvis then ran a long sharp needle through the thickened membrane of the septum. The subject did not give the slightest movement, either voluntary or involuntary; he said afterward that he did not know that the needle had been introduced. A loop of thin wire was then inserted in the nostril and drawn around the base and point of the needle and made to cut through the membrane by the gradual reduction of the circumference of the loop. As the membrane of the nose is highly sensitive, this is under

the usual conditions an extremely painful operation. The great pain produced by the tension on the wire aroused the subject, but he did not fully regain consciousness. He talked and acted very much as if he had been under the influence of ether. When the pieces of membrane grasped by the loop had been entirely cut off, the boy was brought out of the trance condition.

Experiments in mind-reading were also made by Dr. Birdsall and others. Some, who had never before attempted muscle-reading, met with a remarkable degree of success. Dr. Birdsall made an experiment that was new to many of those present. He held a number of cards in his hand, with their faces turned toward a person in front of him, who was asked to select in his mind a card from the group, and in each case he was able to pick out the one chosen. This experiment was successfully performed by others. The explanation is simple. The success of the experiment depends on getting the direction of the eyes at the instant the selection is made, their being at that instant a peculiar muscular movement of the eyes.

Further experiments were made with a view to determine whether the object selected by one or more persons could be found by a person in a partial trance state, without muscular contact. All of these resulted in failure. Similar experiments of this nature were made a few days ago in Brooklyn, at which the reporter was present. They were on that occasion successful in a number of instances. Several objects of a miscellaneous character were placed side by side upon a table. The subject was then told to select the object chosen after his eyes had been blinded by mesmerism. He succeeded in selecting the right object more often than he failed; but the experiments were not numerous enough, or varied enough in their character, to be scientific. He also succeeded in two or three instances in finding objects that had been selected in remote parts of the room. The theory of one of the persons engaged in conducting the experiments was that a subtle influence was exerted by the mind of the operator upon that of the subject. A more tenable theory is that the subject is able to determine the right location by a movement on the part of the operator, whose attention is closely fixed upon the object, or by some aerial disturbance.—*N. Y. Tribune.*

Miss Howard, M. D., an American, has for some time engaged in the practice of her profession in China, where she was fortunate enough to be called to attend the mother of a highly important official, Li Hung Chang, and subsequently the wife also of the same distinguished personage. Her fame as a physician has, it appears, spread over all North China, and Miss Howard is now besieged with applications to attend the wives and female relations of wealthy natives, who are entirely averse to consulting a foreign male physician, but who are nevertheless sufficiently alive to the value of skill and experience gathered in the Western schools.

CREMATION.—The late Mr. Henry Seybert, of Philadelphia, was cremated at Washington, Pennsylvania, on March 7th. This is the seventeenth cremation at this place. Mr. Seybert left 60,000 dollars to the University of Pennsylvania, by which bequest it is stipulated that an impartial investigation of modern spiritualism be made.

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EDITORIAL.

FOURTH CONVERSATION BETWEEN DRs. WARREN AND PUTNAM.

Dr. Warren.—Just before we parted the other day, you began to answer my question, "why, if we stand so much in need of a code of ethics, is it not needed also in Europe?" Medical men in all other civilized countries seem to get along very well without any written code. You began to say something about the social and political peculiarities of this country, when, for some reason, our conversation was interrupted.

Dr. Putnam.—Yes, and I think this is the very point which those intelligent foreign physicians who have within the last few years settled among us—for I ought to say that the earlier importations were very bad—have found it most difficult to understand.

The answer is, in brief, that in this country medical men have to supplement the duties of the State. It is the plain duty of the State to regulate the standard of medical education, or to declare what qualifications are necessary to enable a man to practice medicine intelligently and safely. It is so understood in Europe; and their several governments have done their duty so well in this regard as to leave little or nothing to be desired.

It is very different here. Our government is less centralized, and the matter of education is one of those subjects which the general government has always thought it best to relegate to the State governments. We have at Washington a "Bureau of Education," but it has no duty to perform, except to gather statistics and other facts relating to matters of education, and to disseminate this information, accompanied, perhaps, with suggestions, among the people.

It is well that the power of regulating the amount and character of medical education is not assumed by the Federal Government, since it could not be exercised satisfactorily to the people, unless all classes of medical opinions were represented in the central board.

The States have always claimed and exercised this

power, and have, through their representatives in Congress, shown great jealousy whenever any attempt or proposition was made in Congress to take it from them. How the States have exercised this power you need not be told. Our present system (!) of medical education is the product of States legislation. In some States there were until recently no laws regulating the practice of medicine. In no two States are they probably exactly alike; and in all of the States they are subject to radical changes from year to year. The experience of the past, therefore, would seem to show that if the standard of qualifications to be demanded for graduation in medicine is ever materially raised in this country it must be done by the efforts of medical men and by the medical colleges, and not by State legislation.

Dr. Warren.—Excuse me, doctor, but I would like to interrupt you for a moment at this point, and to ask, if, as I assume, you are intending to attribute the necessity for a code wholly to the low standard required for graduation in medicine in this country, and that practically the only remedy for this lies in the hands of the medical profession itself, why, then, does not the medical profession labor to effect a change in this matter rather than occupy itself in establishing a code of ethics, the necessity for which this state of things has created. *Sublata causa tollitur effectus.*

Dr. Putnam. Certainly; I excuse the interruption. In the first place, I have not said that the necessity for a code was due to their cause solely; but this is one of the circumstances which render it necessary.

And in the second place, you seem to assume that the profession has not hitherto made any such efforts. This assumption will not be sustained by the facts.

One of the chief purposes of the organization of the American Medical Association was declared to be the elevation of the standard of medical education; and this subject has constituted the most prominent theme in the addresses of its various presidents and in the annual reports of its committees on the subject of medical education, from the time of its organization until now. For this purpose alone the American Academy of Medicine was instituted; and upon this subject an infinite number of commencement and alumni orators, and writers for medical journals have uttered their eloquent appeals. That no result has followed, it would not be proper to say; but certainly no result has followed adequate to the almost universal demand or desire.

Dr. Warren. But certainly the medical colleges have it in their power to demand any standard of qualifications they choose on the part of those upon whom they confer their degrees; and by uniting upon a standard, they can make it uniform throughout the United States.

Dr. Putnam. There has been in existence for several years an organization of medical colleges instituted for this purpose; but after several meetings they have failed utterly to agree, and many or most of the colleges have withdrawn. It is now apparent that unanimity or anything approaching unanimity is impossible.

Dr. Warren. What then is to hinder any one of the medical colleges from establishing its own standard, and from making it as high as it pleases? Do you not think the medical profession would at once throw its influence and patronage in favor of this college?

Dr. Putnam. The medical colleges in this country, are, with few exceptions, private enterprises, established and sustained by the professors themselves. They give to these colleges a large portion of their time and money, for which there is no pecuniary return except in the fees received from their students. To make

these colleges even pay their annual expenses, they must have large classes. The most prosperous never pay large dividends to their professors. The standard under which some of the more favorably situated colleges might continue to live, would be quickly and absolutely fatal to others.

If any one of these colleges, no matter how able were its corps of professors, nor how favorable were its surroundings and conditions for clinical teaching, were to announce that it would demand of each of its matriculants a thorough academic or collegiate education, such as is supposed to be represented in this country by the degree of A. B., but which supposition is unfortunately not always true—; that it would demand, also, a five year's course of medical study, with examinations for advancement at the close of each year; a course of clinical instruction in a hospital; a final examination for the degree of M. D.; and a subsequent examination by an independent State or National Board to decide upon his right to practice medicine and surgery; if any college in this country, I say, were to announce and enforce this curriculum, which is essentially the curriculum of most European schools, it would virtually close its own doors. In an experiment of this sort the best colleges, or those with the highest standard, would, where other things are equal, have to close their doors first.

Dr. Warren. You said our colleges were, with few exceptions, private enterprises, how is it with the exceptions?

Dr. Putnam. I mean by the "exceptions," those few colleges which are partially endowed; for none of them are fully endowed. Such colleges have made some little advancement in their requisitions; enough to indicate their sincere desire to do all they can in this direction; but they have stopped far short of their own wishes, for the reason that they are still in a great measure dependent for their support upon the numbers, not quality, of their pupils. When, as at Ann Arbor, Michigan, the state has attempted to partially endow the college, it has also insisted upon its right of adding moonshiners, or any other class of dogmatists it may select, to its corps of teachers.

Dr. Warren. Doctor, one question more in this connection, before we return to the subject of the code. How does it happen if our system is so bad, that we have furnished to the world in our brief existence as an independent nation, so many illustrious examples of men who have acquired a national and European reputation, as surgeons, physicians and writers in the various departments of medical science, as many perhaps as any other nation in the same period of time? and with very rare exceptions these men were American born, and were educated under that very system which you consider so defective.

Dr. Putnam. There is nothing in our system which prevents a man of genius, intelligence and industry from acquiring medical knowledge; indeed he has at home and at his command every facility for doing so. The fault of the system lies in the fact that while the mills grind well enough, they winnow badly. They do not properly separate the wheat from the chaff. With the really excellent men there have been admitted too many who are imperfectly educated, and sadly unqualified for the responsible duties they are called upon to assume.

Dr. Warren. But I do not see how the code of ethics is to remedy these acknowledged imperfections of our system.

Dr. Putnam. By drawing a line between regulars and irregulars, or more correctly speaking, between

doctors and charlatans. The state has failed to draw this line, and we must do it ourselves.

Dr. Warren. This state has drawn a line, and one which seems to me unobjectionable. It declares that a man who has not a diploma from a legally constituted medical college, shall not be authorized to practice. He is therefore practically declared to be a charlatan.

Dr. Putnam. True, but, in the first place, this line has only been established in a few states. In the second place, it may be changed at any time by an act of the Legislature, and made to include those who are now excluded from its protection; and third, the line is not drawn at the proper point. What we want is a "color line," which will separate the white from the black.

Dr. Warren. You have admitted that there are a great many men graduated from our regular medical colleges who are imperfectly educated. According to your own statement there does not seem to be any natural point of separation between our poorest scholars and their best.

Dr. Putman. I don't agree with you upon that point. Between our poorest men and their best there is, with rare exceptions, a very marked difference. I mean in point of scholarship. I am equally certain that there is a marked difference intellectually and morally; but, I am not required to consider this latter subject in the present discussion. If you entertain any serious doubt on the question of their relative scholarship, read their medical journals, and inform yourself in other ways, as you may have opportunity. Recite to me their contributions to medical science. The interval between the two classes—the Regulars and the Irregulars—is at every point of the line, even where they approach most closely, too wide, in the matter of scholarship alone, not to be easily recognized.

But if it were otherwise, this is not the line which medical men have to draw. We need, I repeat, a color line; drawn between the white and black, so as to prevent their mingling with each other. Experience has shown that, when inferior races become closely intermingled with superior races, neither one is improved, but that in the unnatural embrace both go down together.

The code draws the line at a point where there is not only a considerable intermediate space, due to differences in culture and education, but what is much more important, at a point where the whole nature and the aspirations begin to diverge. On the one side there is a hereditary tendency to improve, and on the other a hereditary tendency to depreciate. On the one side we are sustained by the high examples, traditions and lofty purposes and teachings of the fathers in medicine; while on the other side there is no incentive to conduct but present gain, and the ignoble examples of famous charlatans.

Dr. Warren. Then you propose to draw the line where it will include a good many very poorly qualified doctors. Are those men worth so much care and anxiety on your part? Can you afford to take them to your embrace?

Dr. Putman. Yes; and for the same reason that a wise shepherd saves and nurses the sickly lambs. He knows that if they are of good breed, and they are properly fed they may in time become healthy and useful. A great many of the young men who are born into the profession of medicine feeble and sickly, subsequently by dint of study and teaching become strong and prove to be an honor to their profession; but in order to do this their instincts must be right, and they

must be protected from social pitfalls into which their unsteady limbs are apt to precipitate them.

THE VIRTUAL REPEAL OF THE CONTAGIOUS DISEASES ACTS.

By the abolition of compulsory examination of women, and of its necessary sequel, compulsory detention, by the recent vote of the House of Commons, these acts have been practically repealed.

If restraint of personal liberty, for the suppression of venereal disease, is not tolerated in England, we have little to hope for in the way of legislative action, looking toward suppression, in our own country.

However impracticable it may be, in the present state of public opinion, to attempt to control the spread of venereal disease by enactments here, it is most interesting to note the results obtained by the practical operation of restrictive measures in other countries.

In exclaiming against the recent action of the House of Commons, from a sanitary point of view, the *London Lancet* summarizes the advantages obtained by the Contagious Diseases Acts, and comments on their practical repeal as follows:

"The advantages claimed by the supporters of the Acts are (1) the prevention of disease and the diminution of its severity in the Army and Navy, and among the prostitutes in the places to which the Acts apply, and (2) social improvement in the districts under the Acts dependent on their administration. These social improvements are a reduction in the number of brothels and prostitutes, and a large reclamation of prostitutes generally, and of juvenile prostitutes particularly. The deterring influence of the compulsory clauses on young girls tempted to pursue a vicious life must also be taken into consideration. The number of cases per 1000 of primary venereal sores admitted to hospital from the regiments stationed in the districts under the operation of the Acts has diminished from 91 in 1867 (the year in which the Acts were first applied), to 35 in 1877, and to 40 in 1878, when the Reserves were called out. Even if we exclude the years since 1873, when Lord CARDWELL's order stopping the pay of soldiers in hospital with primary venereal diseases came into force, we find that the proportion per 1000 had fallen to 50. If we compare with these results those obtained from all stations which have never been placed under the Acts, we find that, instead of a continuous and regular fall, we have a fluctuating and irregular decrease from 101 in 1867 to 81 in 1873, 68 in 1877, and 88 in 1878. The large increase in the last-mentioned year is especially suggestive and noteworthy; for whilst 5 per 1000 is the increase attributable to the Reserves in the protected districts, no less than 1 man in every 12—Reserves and regulars—must have contracted the disease in the unprotected districts. We would particularly call the attention of the advocates for repeal to this fact, as shown at page 5 of the Minority Report drawn up by Mr. Stansfeld.

"The daily saying in the efficient strength of the army attributed to the operation of the Acts is calculated by Inspector-General Lawson to amount to 258 men in fourteen places under the Acts only—viz., Davenport, Portsmouth, Chatham, Woolwich, Aldershot, Windsor, Shorncliffe, Colchester, Winchester, Dover, Canterbury, Maidstone, Cork, and the Curragh. From the Army Medical Department Report for 1878, we find that 40 per 1000 were admitted to hospital for primary venereal sores, whilst 131 per 1000 were ad-

mitted from fourteen stations not under the Acts, although the average strength in the former stations was 55,813, against 20,749 in the latter. The number of registered prostitutes has diminished from 2650 in 1879 to 1879 in 1880, and this decrease has been fairly uniform; and the amount of disease checked by compulsory periodical examination—the vital part of the legislation—may be estimated from the following statistics of the ratio of cases of disease per 100 examinations made by the visiting surgeons, copied from the Report of 1880 of the Assistant Commissioner of the Metropolitan Police:

1865—76'24	1869—13'90	1873—7'62	1877—7'40
1866—66'40	1870—8'19	1874—6'97	1878—7'65
1867—59'20	1871—7'55	1875—6'26	1879—8'05
1868—39'77	1872—8'40	1876—6'41	1880—8'75

A reduction from 76 per cent. in 1865 to 7 and 8 per cent. during the past ten years is thus shown. The consequences to the health of the community of such a diminution must be so evident to every one, that even though he may be prejudiced against the Acts on other grounds, he will be amazed at the recklessness of the Legislature in vetoing the compulsory clauses, and, by removing the one essential condition on which their benefit depends practically repealing the Acts. Their value in the prevention of disease is shown, not only by this reduction, but by checking much of the disease that is imported into the districts from places outside the Acts; for in 1877 61.3 and in 1880 66 per cent. of the women who were known to have come into the protected districts from outside places were found to be diseased on their first medical examination. It is in detecting these cases that the compulsory clauses are especially valuable, and we fail to see how any substitute for them can be found. In two years only, 786 disabled prostitutes have been stopped from pursuing their career by being compelled to undergo a medical examination, and surely anyone who is acquainted with the ravages of syphilis, and its remote effects upon, not the individuals only, but their descendants, must see herein an ample justification for restraining the civil liberty of the subject. We shall refer to the social improvements due to the administration of the Acts in another article."

VIVISECTION IN THE STATE OF NEW YORK.

Although medical men have, as a body, but one opinion upon vivisection, and universally accord its beneficence and necessity, nevertheless, in view of the recent agitation of the subject, and the appeal made to the Legislature to surpress it, it will be of interest to our readers to present the conclusions arrived at by Dr. Burt G. Wilder, who has published a careful analysis of the subject in the *Popular Science Monthly*, June, 1883.

Dr. Wilder defines the objects of his discussion of this question to be—1. To enlarge the slender store of published facts respecting vivisection in the United States. 2. To discuss briefly certain general aspects of the question. 3. To examine the existing and proposed laws concerning it. 4. To consider Mr. Henry Bergh's fitness to initiate such legislation. 5. To express what seems to be the sentiment of most well-informed, humane persons regarding experimentation upon animals.

He starts out with this sentiment of Darwin: "I know that physiology can not possibly progress except by means of experiments on living animals, and I feel

the deepest conviction that he who retards the progress of physiology commits a crime against mankind."

And this is the tenor of the article. He takes occasion to handle Mr. Bergh very severely, regarding him as "mentally incapacitated for accurate observation, correct quotation, logical argument, or legitimate conclusion; that, in short, so far as vivisection is concerned, he is of unsound mind."

In concluding, he summarizes the views presented and gives expression to what he believes to be the sentiment of unprejudiced, humane, well-informed persons respecting the legitimacy of experiments upon animals, and the desirability of legal interference therewith, as follows:

"1. The object of an experiment may be the advancement of knowledge by research, or its diffusion by teaching.

"2. In respect to the infliction of pain and death, experiments are of four kinds: (1.) The animal has been recently killed; (2.) The animal is rendered insensible by anæsthetics and killed before revival; (3.) Anæsthetics are used during the experiment, but the animal revives and endures the healing of wounds; (4.) Without anæsthetics, the animal is subjected to cutting operations, or to the effects of poisons or of insufficient food.

"3. Of all the experiments performed during the past year in the State of New York, whether for research or instruction, probably less than one-tenth would come under the fourth class, and not more than one-tenth under the third. In view of what is learned from these experiments, the total amount of pain and death inflicted is insignificant.

"4. It is desirable to make a verbal distinction between painful and painless experiments, and to adopt a single term in place of the phrase experimentation upon animals.*

"5. Over and above the utilitarian argument drawn from its subserviency to medical science, physiology should be pursued and illustrated experimentally like chemistry or physics, because it is a most interesting and suggestive branch of knowledge.

"6. In the State of New York are very few men whose natural and acquired powers of body and mind qualify them to determine when painful experiments are required, to perform them successfully, and to wisely interpret the results. Such men, deserving alike of the highest honor and the deepest pity, should exercise their solemn office not only unrestrained by law, but upheld by public sentiment.

"7. All teachers of physiology, from primary schools to universities, should illustrate their instruction by experiments upon animals, chiefly if not wholly painless.

"8. All experiments should indirectly inculcate humanity to animals. The victims should be treated with respect on account of what is learned from them, and with gentleness because "cruelty to animals is the beginning of cruelty to man." Even the administration of anæsthetics should cause the least possible discomfort.

"9. The abolition of vivisection in the State of New York is demanded by a single individual, who has not as yet displayed the necessary qualifications for dealing with so large a problem. The laws proposed by

*Such a term is *zoöpery*, from *zoön*, an animal, and, *peiras* I experiment. By induction we get *zoöperical*, relating to experimentation on animals, and *zoöperist*, one who performs such experiments. In this connection, it is to be noted that many experiments are upon dead animals, and some involve no cutting at all.

him are vaguely framed, and inconsistent with his own utterances upon the subject.

"10. A single physician has advocated legal restriction of painful experiments. Otherwise, so far as appears from published resolutions, legislative interference is opposed by the medical profession of this State.

"11. Judging from English experience, the interdiction of all vivisection would seriously impede the progress of physiology in this State.

"12. While physiologists justly resent attacks grounded in ignorance, and maudlin sentimentality, they should avoid and discountenance even the appearance of bravado, and indifference to the suffering of animals.

"13. So long as the people and the Legislature are satisfied that physiological investigators and teachers regard the infliction of pain as undesirable on every account, no legal restrictions are likely to be put upon vivisection in the State of New York."

THE PREVALENCE OF QUACKERY.

In the course of a recent entertaining article on "Medical Quacks and Quackeries," Dr. F. J. Shepherd remarks:—

"It is difficult to give the exact reason or reasons why quackery should be so prevalent. The causes are very various and obscure. Southey says: 'Man is a dupable animal; quacks in medicine, quacks in religion, and quacks in politics know this, and act upon that knowledge. There is scarcely any one who may not, like a trout, be taken by tickling.' It is extraordinary what a hold the mystic and marvelous still have on many people; there seems to be in almost every one a vein of credulity and superstition against which argument is useless. The disposition to be humbugged preponderates in human nature over reason and common sense. Education, at least the education of the day, apparently has no influence in depriving people of this quality. Men of education are the very ones who have been, and are now, duped by clever quacks. A man may be an able politician, distinguished in literature, of great shrewdness in the ordinary business of life, and yet believe in spiritualism, homœopathy, Perkinism, and tar-water. When he is ill he will probably, after taking in vain the various much vaunted and advertised panaceas, call in some quack who promises a cure in a certain time and in some uncommon manner.

"That this, the last quarter of our nineteenth century of progress and boasted enlightenment, is as rich in credulity and superstition as any of the preceding ones, is proved by the fact that thousands yearly visit shrines and sacred springs, if Catholics, and attend "faith conventions," if Protestants, to be cured of bodily ailments."

He answers the question Why is quackery so much more prevalent in medicine than in other science? as follows: Because the medical quack attributes to himself what is due to Nature. Nature cannot build a railway, but she can very often cure disease. A witty Frenchman has said that medicine amuses the patient while Nature cures the disease.

In reply to the question—Is there ever any chance of quackery becoming extinct? he says: I fear not as long as human nature exists in its present condition. Still, no doubt, there is a probability of the number of believers in quackery being diminished by a greater diffusion of philosophical habits of thought and a more general knowledge of physiology. A writer

many years ago, in one of the London medical papers, said: "The final though distant extinction of quackery is to be hoped for; it forms a fragment of that final triumph of reason and virtue which is the secret consolation of every philanthropist."

If Dr. Shepherd were aware of the successful efforts that have been made, and still continue to be made, by the New York Co. Medical Society to suppress quackery, he might have taken a rosier view of its ultimate abolition.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, MAY 9, 1883.

In the absence of the President, Dr. Shrady, Dr. Van Giesen presided.

The minutes of the preceding meeting were read and approved.

Dr. — presented three specimens for candidates. The first a case of

"OCCLUSION OF THE RECTUM."

Occurring in a male child, who lived six days after birth. The abdomen was distended and discolored. Three-eighths of an inch from the anal orifice the rectum was completely occluded. No operation was deemed advisable. The child died of peritonitis on the sixth day.

The second specimen was one of

"CARCINOMA OF THE STOMACH."

The patient had had prolonged gastric disturbance, and diarrhoea. He had also suffered from inflammation of the eye, which had resulted in a loss of that organ. Six months before death a hard tumor was made out in the abdomen and carcinoma of the stomach was diagnosed. He was unable to retain food for some time previous to death, one-half ounce a day being the maximum quantity borne. He had the waxy countenance that accompanies this cachexia. A singular feature of the case was that the patient never complained of pain in the epigastric region. The patient died of softening of the brain.

The third specimen showed the

"LESIONS OF PERITONITIS."

The patient had smoked excessively but was temperate. He was troubled with indigestion, severe pain in gastric region, and persistent constipation. Peritonitis supervened to which he succumbed.

Dr. Ferguson presented two specimens of

"PERICARDITIS,"

Accompanied by chronic diffuse nephritis. The first specimen was taken from a patient aged 54, female, native of Ireland, who gave the following history: She had been an inmate of the hospital for three years for kidney disease. At this time she began to suffer from cardiac palpitation, and feet began to swell. There were no visceral or cerebral symptoms.

She was stimulated by whiskey and digitalis. Examination revealed double hydronephrosis. The urine contained a large amount of albumen. The patient died comatose. The lungs were congested and oedematous. The left ventricle was greatly dilated. The kidneys were far advanced in chronic diffuse nephri-

tis. The liver was pigmented, its central vessels dilated and contained an excess of fat.

The next case was one of pericarditis, chronic diffuse nephritis and thrombus of the arch of the aorta. The patient was found insensible in the street, and was unconscious when brought to the hospital, and died six hours after admission.

On autopsy the lungs were oedematous. The pericardium contained a large amount of fluid. The left ventricular wall was hypertrophied and the cavity very small. A clot one inch in length and half an inch in diameter was found in the arch of the aorta. The left middle cerebral artery was occluded by a thrombus. The kidneys showed the lesions of chronic diffuse nephritis. There were also two strictures of the urethra, one in the penile portion and one at the bulbo-membranous junction.

BOOK NOTICES.

Observations on Lithotomy, Lithotripsy, and the Early Detection of Stone in the Bladder, with a Description of a New Method of Tapping the Bladder. By Reginald Harrison, F. R. C. S., Surgeon to the Liverpool Royal Infirmary; Consulting Surgeon to the Bootle Borough Hospital; Formerly Surgeon to the Northern Hospital. Published by J. & A. Churchill, London: 1883.

This monograph of a distinguished surgeon, the opinions expressed, in which are based chiefly upon his hospital experience in the operative treatment of stone in the bladder, is confined mainly to some clinical points in connection with the subject.

He very clearly describes the operations, their methods of performance, and that method preferred by himself, indicating the instruments to be used, and suggesting the practical points relative to managing the patient and performing the operation, which have been the offspring of his study of his own cases.

The new method of tapping the bladder described, is "from the perineum through the hypertrophied prostate." A point in the perineum is selected where no vessel of importance is endangered, and after incision with the trocar the canula is held in situ by tapes, and a rubber tube is attached to it which secures complete drainage and affords the patient a short, low, level urethra, adapted to the altered relations of the bladder to the prostate when the latter becomes enlarged. This tubing may be shortened during the day and closed by a bull-dog forceps, on unlocking which the urine escapes. In a case related by Mr. Harrison, in which this method of procedure was adopted, the results were most gratifying, not only as regards the improved condition of the bladder, the subsidence of cystitis, etc., but also in effecting atrophy of the prostate, which, from being greatly enlarged, was reduced to its normal size.

Of course it remains for further experiment to determine, whether or no this method of tapping the bladder will be found better adapted than those now in vogue for accomplishing the end in view. Certainly it seems very plausible, and secures what other methods lack—permanent drainage of the bladder. It is, however, after all, virtually making an artificial sinus which should be a last resort in urinary difficulty.

Mr. Harrison very gracefully dedicates his little book to Dr. Gross of Philadelphia.

ORIGINAL ARTICLES.

STONE IN THE BLADDER.

A CLINICAL CONTRIBUTION TO LITHOCLASTIC CYSTOTOMY, WITH ELEVEN ILLUSTRATIVE CASES.

BY

J. W. S. GOULEY, M. D.,

Surgeon to Bellevue Hospital, etc.

Why the ancient practice of lithoclasty was abandoned, has not been satisfactorily explained. The first stone-breaker or cutter on record was Ammonius of Alexandria, and he seems to be the only one prominently mentioned, most probably because he was the chief of a school. Doubtless he had many followers, but his process of breaking vesical calculi by introducing an instrument through a wound made in the perinæum for the purpose, died away before the time of Celsus, and was not resuscitated for many centuries thereafter. Franco, the Colots, Lecat, and others of their period occasionally resorted to lithoclasty in large vesical stones; nevertheless, the practice was feared, condemned and again discarded, and enormous stones were extracted entire through supra pubic or perineal incision, usually with a fatal result. At the close of the last century Deschamps alluded to, but made no serious effort to rehabilitate lithoclastic cystotomy. The procedure was revived in or about the middle of the present century by Malgaigne, under the name of lithotriptic lithotomy, but it gained very little ground as a systematic operation until formulated by Professor Dolbeau of Paris, who gave it the name of perineal lithotomy. Dolbeau's operation, when stripped of all its minute and unnecessary details and apparatus, resolves itself into a median lithotomy or the Marian operation modified and simplified by Allarton, with the addition of lithoclasty or the reduction of the stone to fragments which can be easily extracted without doing violence to the tissues already cut or dilated. But to take a broader view of the subject, and to fulfil the prime indication of avoiding the dangers of laceration during extraction, is it not wiser to follow the hint of Malgaigne and perform any kind of lithotomy, but at the same time reduce the volume of the stone by breaking it and then cautiously extracting the fragments? This operation being clearly indicated in cases of large stones, should have for its first step the cystotomy or cystectomy, as the case may be. As a rule the lithoclasty should follow and not precede the cystotomy. Some excellent authorities prefer to break the stone with a strong lithotrite introduced per urethram, and then to make an external urethrotomy in the membranous region through which to extract the fragments, but in the majority of cases this will not be found as safe and easy a method as lithoclasty made through the perineal wound.

Since the labors of Dolbeau have become known in this country, lithoclasty has made some progress, but there are still many surgeons who insist upon forcibly dragging large stones through the comparatively small tract made by the bilateral, the lateral or even the median operation. This explains the cases of urethro-rectal fistulæ which so frequently follow lithotomy performed under the circumstances just referred to, both in children and adults. In some cases rectal laceration followed by fistula is the immediate result of forcible extraction; in others the urethro-rectal or the urethro-recto-perineal fistula is caused by the sloughing of all the tissues consequent upon the violence in-

flicted in extraction. Hæmorrhage is also an occasional result of forcible extraction, particularly in old men, from laceration of the enlarged veins which are so numerous in the urethro-prostatic region. A still more disastrous, though rarer, outcome of these lacerations is pyæmia.

Indications.—It is proper to resort to lithoclasty whenever the stone exceeds an inch and a half in mean diameter, especially if its surface be rough. In cases of indurated prostates lithoclasty is indicated in stones whose diameter is only one inch, even after bi-lateral section of the urethro-vesical orifice.

In many cases of long continued calculous cystitis the advantage of free trachelocystotomy is unquestioned, and where the stone is large, it is, in the opinion of the best surgeons, far safer to reduce its volume than to attempt to extract it entire.

Simple lithotripsy per urethram is clearly indicated in cases of small and of medium sized stones where the kidneys are not greatly damaged, the bladder is in fair condition and the urethra ample or capable of being made so in a short time.

Lithotripsy with immediate aspiration of the detritus should be reserved for those patients who are unable, from whatever cause, to urinate spontaneously.

Ordinary perineal lithotomy is preferable for young children and for adults who have medium or even small sized calculi complicated with inordinate vesical irritability or troublesome and uncontrollable cystitis. In these latter cases the cystotomy is of incalculable value, giving rest and free drainage to the bladder.

All these methods are good, each in its place. The secret of success is the ability to ascertain what particular operation is indicated in a given case. This can only be the result of experience and of close study of the subject.

The results of lithotomy in cases of large stones have been extremely bad, death being directly or indirectly attributable, in many cases, to extraction. William Coulson long since called attention to this fact, without, however, indicating the remedy and insisting upon its being applied. One death in every three operations was, for a long time, considered a fair average in cases where more than ordinary difficulty was encountered in extraction. Now with lithoclasty the mortality can be reduced to one in eight operations.

The subjoined cases show even better results, only one having died in eleven.

CASE 1.—Bernard McN—, admitted to Bellevue Hospital, in August, 1859, a dwarfish boy, eight years of age, suffering from calculous cystitis with such inordinate irritability that the urine almost constantly dribbled away. The prepuce was sodden and elongated, and the scrotum and thighs excoriated. He complained of great pain in the hypogastric region, in the loins and perinæum, and while straining at stool of the rectum prolapsing. His first symptoms of stone dated back five years. Some urine, collected for examination, was found loaded with flaky pus, and contained numerous crystals of the ammoniaco-magnesian phosphates.

Chloroform having been administered, the presence of a large calculus, immovably fixed to the anterior vesical wall behind the pubes, was ascertained, and for its removal I advised the performance, with as little delay as possible, of lateral perineal cystotomy. After a few days' preparatory treatment, on August 23, 1859, he underwent the operation in question under the influence of chloroform. As soon as I could introduce a finger into the bladder, I recognized that the stone

was not only voluminous but encysted, and that, situated as it was behind and a little above the pubes, its dislodgement and extraction would be very difficult. I succeeded in seizing it with a curved forceps, but could not displace it. As it was soft, I fractured a portion with the forceps and brought it out, and went on reducing it so that after a time I had broken off the greater part which protruded in the bladder from the mouth of the cyst, and was able to feel the edge of the sac, which I endeavored to tear, but this had to be done for me by a longer fingered assistant, and the stone being free, I seized and extracted it by slow, gentle traction. Some fragments and detritus were removed and the bladder thoroughly syringed. In the evening, an eighth of a grain of morphia was administered and the patient passed a quiet night, and the anodyne was repeated several successive nights with the same happy effect.

On the second day the patient was seized with a violent pain in the hypogastric region, with urgent desire to urinate, which could not be gratified. This retention of urine was caused by occlusion of the track from swelling of the whole wound, for as soon as the urine came these symptoms ceased, and the flow was freely reestablished after he went to sleep from the effect of a dose of morphia, and of hot fomentations to the hypogastrium. He then rapidly progressed toward a good recovery, and on September 12th, the wound was entirely healed. He was last heard from fourteen years after the operation, and was perfectly well. The portion of stone extracted entire, measured one inch and a half in length, one inch and an eighth in breadth, and seven-eighths in thickness, and weighed, when dry, two hundred and eighty grains. The fragments and detritus weighed ninety grains, making in all three hundred and seventy grains. The composition was ammoniaco magnesian phosphates, and phosphates of lime with a little urate of soda.

CASE II.—John W.—, aged 17, was admitted to Bellevue Hospital June 8th 1872. His health had been good until 1864 when symptoms of stone in the bladder manifested themselves. In 1865 he was lithotomized by Mr. Crossley, of Leicester, England, who removed a small calculus. From that time he remained free from calculous trouble until June 1871 when he began to feel pain at the extremity of the penis, sudden stoppage of the urinary flow, vesical tenesmus, and occasional hemorrhages at the close of micturition, and sometimes passed small gravelly masses. When I first saw him he was anæmic, much emaciated and very feeble. He was distressed with pain in the hypogastric and perineal regions, with nephralgia, frequent attacks of very painful strangury, and constant dribbling of purulent alkaline urine. His incessant suffering deprived him of sleep and appetite. His bowels were constipated and his general condition very unpromising. A cathartic, diluent drinks, and quinine and iron were given. I sounded him on June 13th and found a large stone which sent an offshoot as far forward as the sinus of the bulb. The catheterism was very painful but was not followed by any ill effects. The bladder was daily irrigated with a chlorate of potash solution for two weeks with the result of improving its condition. The tonics had the desired effect and it was thought that the patient had gained sufficient strength to undergo the necessary operation. On account of the large size of the stone and the accompanying cystitis, lithotripsy was out of the question; and cystotomy with the necessary free incision, and inevitable laceration of the parts in attempting to extract the calculus entire would it was

thought in all probability, have a fatal issue. I accordingly proposed perineal lithotripsy as offering the best chance for a recovery, and my colleagues, who were summoned in consultation, concurred with me. On June 27th, I performed the operation, following Dolbeau's directions as closely as I could with the instruments in my possession. The central external incision was two inches long. The membranous portion of the urethra only was opened, but afterwards it became necessary to lay open the bulbous portion in order to remove the calculous offshoot which was therein impacted. Dilatation of the prostatic sinus and vesical neck was made partly with a two bladed dilator, partly with the finger. Fragmentation was effected with a fenestrated lithotrite introduced through the normal route, and with a strong lithotomy forceps passed through the artificial opening. The stone being soft could very readily be broken and the débris extracted, but a portion of it was encysted, and so inaccessible, that numerous cold water injections and patient manipulations were requisite to bring it within reach and reduce it to small fragments. The operation occupied an hour's time; when the bladder was declared free from calculous matter. The detritus removed weighed two ounces and a half, and was phosphatic. No fragment exceeded one-third of an inch in mean diameter.

Contrary to Dolbeau's injunctions, the finger was frequently introduced; had this been omitted, a considerable part of the stone would have been left in the bladder. Besides ordinary forceps, the scoop was freely used to remove a great deal of sabulous matter which closely adhered to the vesical walls.

The patient rallied well from the shock of the operation and from the anæsthesia, and slept soundly half of the night. There ensued no marked febrile reaction, and from the day of the operation all the bad symptoms ceased: his appetite improved and he gained flesh rapidly. He was able to pass urine by the natural outlet in two weeks. Though the cystitis subsided soon after the operation, it was not deemed expedient to encourage union of the wound, but on the contrary to endeavor to establish a permanent communication with the bladder in perinæo; and this succeeded by dint of frequently introducing the finger through the wound into the bladder for a month. There was, at the end of that time, a uretho-perineal orifice with smooth sides resembling the urinary meatus of the female. Had this source of drainage been obstructed, the old symptoms would, most likely, have soon reappeared. The patient had to wear a urinal as the urine trickled through the orifice the greater part of the time. He was occasionally able to retain a few ounces which he made at will partly through the normal route partly through the artificial opening. I saw him in 1875, he was in excellent physical condition and scarcely inconvenienced by the fistula which I feared to close on account of the possible recurrence of cystitis.

One feature of interest in this case is that the young man has become a great roué and has an inordinate sexual appetite which he takes frequent opportunities to gratify.

The patient was last seen in April 1883, his general health was excellent. The perineal opening though somewhat diminished in size, was sufficient for urination.

CASE III.—A. V. W.—aged 37, of Dutchess County, N. Y., had never had nephritic colic. In February 1871, he fell astride of a fence, without apparently sustaining any injury other than a bruise of the left testicle, but two weeks after this he noticed

little bubbles of air issuing from his urethra during urination, and this continued up to the date of the operation described below. He was not aware of any splinter penetrating the rectum when he sustained the injury above named. In September 1871, he had distinct symptoms of stone in the bladder. Early in August 1872, after severe catharsis some urine passed into the rectum, and in two weeks, during an attack of diarrhoea (probably produced by the irritating urine), nearly all his urine was voided per rectum. The urine passed by the normal route then became dark colored, muddy and very fetid, and on microscopical examination was found to contain fecal matter. I first saw the patient, with Dr. R. C. VanWyck, on August 29th 1872, and on sounding his bladder felt a stone. I saw him again October 4th 1872, and passed a lithotrite but could not seize the calculus owing to its situation behind the pubes and to its being firmly held in that position by the contracted bladder. A speculum was introduced, on October 6th, and the rectum found full of urine. There was a fistulous opening within the sphincter, but the course of the tract could not be ascertained. A second ineffectual attempt was made with a lithotrite to seize the stone, it was still firmly held behind the pubes. In a couple of days, however, it was partially dislodged, and found to measure one inch and a half in its smallest diameter. Owing to its size and to the difficulty in dislodging it, the operation of perineal-lithotrity was decided upon and performed on October 14th 1872. The perineal incision was small, as recommended by Dolbeau. Dilatation of the prostate and vesical neck was done with Dolbeau's six-branched instrument. A small lithotomy forceps was then introduced and the stone seized, but it was too hard to be crushed by this instrument. Wishing to substitute a more powerful forceps, I endeavored to disengage the stone from the jaws of the instrument but found it impossible to do so, and had to push it back from the forceps with a stout director, after a number of other expedients had failed, and twenty minutes were lost in accomplishing this. After having thus freed the stone I was able to crush it with a strong forceps and to extract all the debris, making frequent injections of cold water. The operation lasted forty minutes, including the delay above mentioned. A free dose of quinine was given and a belladonna and opium rectal suppository inserted. Not an untoward symptom ensued. The urine was passed at will from the first, none escaping into the rectum. In two weeks the wound was healed and the urinary rectal fistula seemed to have completely closed, as no urine had flowed into the rectum since the operation. The patient was urinating at normal intervals, and had gained sufficient strength to travel homeward.

The debris extracted weighed four hundred and eighty grains.

The patient was last heard from in the latter part of 1882. His physician and relative reporting him as in excellent health and the father of a family.

CASE IV.—Henry D—, aged 60, had usually led an active life until 1869, when he became sedentary, and suffered from rheumatism and from nephritic colic. He then, on numerous occasions, passed in his urine many small calculi, ranging from the size of a pin's head to that of a pea. He was soon attacked with cystitis and other symptoms of stone, for which he was several times sounded, but nothing was found. In October, 1872, these symptoms became very urgent, and he consulted Doctor Leonard Weber, who explored the bladder and felt a stone. Early in December I saw the patient with Dr. Weber, and though

I could easily introduce a lithotrite and touch a stone, the bladder would not tolerate the instrument more than a few seconds, and its blades could not be opened. There was some prostatic hypertrophy, but not enough to impede catheterism. In spite of daily irrigations of the bladder for two weeks, the organ remained inordinately irritable, and the moment a lithotrite was passed, all the urine would escape at its sides, consequently the idea of performing lithotripsy had to be abandoned, and I proposed perineal-lithotrity, to which Dr. Weber gave assent. On December 24, 1872, the patient having been etherized, a lithotrite was introduced into the bladder, and the presence of two stones, measuring respectively one inch and a quarter, and three-quarters of an inch, was ascertained. An incision was made in the median line of the perineum, about an inch long, involving the skin and superficial fascia, and extending to the anal margin. The narrow-bladed knife was then plunged into the membranous portion of the urethra until it struck the deeply-grooved staff, which had been held firmly in position, and the incision of the urethral wall made from behind forward with the edge of the knife looking into the groove of the staff. This incision only involved the membranous portion of the urethra; the bulb was uninjured. Dilatation of the prostate and vesical neck was accomplished in accordance with the directions given by Mr. Dolbeau, and with his six-branched dilator. Fragmentation of the smaller stone was made with an ordinary lithotrite passed through the wound, and the larger calculus was broken up with my lithoclast into numerous fragments, which were all extracted with small lithotomy forceps and with the scoop. Cold water irrigations were made from time to time.

The same annoyance occurred in this case as in case III., and caused a delay of half an hour. I grasped the larger stone with the small forceps, which Dolbeau recommends as an explorer, and could not drop it, although I used all the expedients that had occurred to me in case III.; but at last opening the blades more widely than I had done before, and suddenly rotating the instrument, the stone dropped out. Had I attempted to crush it with the slender forceps the blades would surely have become deformed, and in withdrawing the instrument the vesical neck would have suffered seriously. I have since come to the conclusion that after dilatation of the parts it would be much wiser to use a very strong forceps suitable alike for crushing and for exploration.

The operation, inclusive of the half hour lost in disengaging the stone from the forceps, lasted one hour, and was well borne by the patient, whose condition improved rapidly. In two weeks the wound was healed, and he was up and about. Within twenty-four hours after the operation he passed his urine at will.

The detritus weighed two hundred and seventy grains.

CASE V.—Alanson N—, aged 74, had suffered from prostatic hypertrophy and from cystitis, with other symptoms of vesical calculus for five years, and had treated himself. In July, 1874, he slightly injured one of the fingers of his left hand, and there followed a sub-fascial phlegmon, which soon involved the whole hand and forearm. In this condition he sent for Dr. L. A. Sayre, who, while treating him, ascertained that he had some urinary trouble, and made an examination of the bladder with the result of finding a large stone. The great distress caused by the stone, together with the serious outcome of the slight injury of his finger

had made great inroads upon his general health and strength.

On August 1, 1874, I saw the patient with Doctor Sayre, and found him in a very unpromising condition for any operation. Though the chances were greatly against him, there was still a faint hope of recovery, and, partly on the latter account, partly for the purpose of giving him relief, even if it were only for a few days, from his agonizing pain, I proposed perineal lithotomy as, under the circumstances, the most expeditious and least dangerous means of accomplishing the objects in view. Dr. Sayre agreed with me as to the expediency of the operation, which I performed on August 4, 1874.

Ether having been administered, a deeply grooved staff was introduced and held in position. The left index was introduced into the rectum so as to rest against the apex of the prostate. The bistoury, with its cutting edge looking upwards, was at once plunged into the median line of the perineum, close to the anal margin, until its point entered the groove of the staff, and nearly the whole membranous urethra cut longitudinally from behind forward. The cutaneous wound was enlarged by the same sweep of the knife to one inch and a half. A broad grooved director was substituted for the staff and Moldsworth's dilator slid upon this into the bladder. One syringeful of water was sufficient to distend the rubber tube so as to dilate the prostatic sinus and vesical neck to the extent of easily admitting the left index. This mode of dilatation proved to be very efficient, and was accomplished within three minutes. Fragmentation was made with Dolbeau's and my own lithoclasts, and the detritus extracted by ordinary forceps. The operation was completed in half an hour, and the loss of blood did not exceed three ounces. The patient rallied well, and when he awoke was free from pain, and was in good condition for the first four days, when he had a slight chill, and another on the fifth day. It was then evident that he had pyæmia. He died on the seventh day. No autopsy was permitted. From the date of the operation to the last, he was wholly free from pain, and the urine flowed freely partly through the wound and partly through the normal route.

The detritus removed weighed nine hundred and sixty grains.

CASE VI.—Ezra B—, aged 52, well nourished and in good general health, never had renal colic.

Three years before he noticed that there was something, which felt like a small stone, in his bladder. This, he says was sometimes forced against the urethrovessical orifice so as to impede urination. Previously he had had no difficulty in urinating. The amount of urine was increased; but not frequency of urination. During the time that the passage of urine was in a measure arrested there was considerable pain at neck of the bladder, which disappeared when he assumed the sitting or recumbent posture.

The checking of the flow of urine would occur about once a month and continued up to about fifteen months before the patient felt the stone in his urethra. He attempted to push it back into the bladder with a thin glass tube as he had successfully done four times previously. In pushing it back the end of the tube was broken off, leaving two or three inches of the tube in the urethra. For this accident urethrotomy was performed on the same day, all was removed as he thought except one fragment of the tube which subsequently ulcerated its way through. The lips of the wound were brought firmly together and held in apposition by a clamp. Three days after the operation,

the clamp was forced off and a considerable amount of urine and blood, but no pus, escaped. The whole under side of the scrotum sloughed away exposing the testicles. He was confined to his bed for some time, and the parts finally healed. After the operation the stone came down more and more frequently and now comes down every time he attempts to urinate when in a standing position. About three months since he suffered from a slight attack of hæmaturia lasting one week. He suffered from incontinence, about one week ago, which lasted four days, and he can now retain his urine thirty minutes if sitting still; but for fifteen minutes only if walking or standing. He complains of an itching sensation at the meatus, and sharp lancinating pain along the whole course of the urethra, while urinating.

Ten grains of quinine and one-fourth of a grain of extract of belladonna.

June 13th.—For the past three days he has suffered from incontinence, to-day can hold his water fifteen minutes only, and for a few days past has been unable to urinate when in the standing position.

June 13th, 1876.—Perineal lithotomy was performed. The incision was one inch and a half in length. Dolbeau's mode of operating was followed except in these four particulars:

1st.—The scalpel was plunged in as for median lithotomy.

2d.—A broad grooved director was introduced over which a six branch Dolbeau dilator was passed part-way into the opening, slightly opened, then withdrawn, reintroduced, the director withdrawn and the opening fully dilated.

3d.—Finger passed into the bladder and roughened exterior of stone easily felt,

4th.—Fragmentation made with Dolbeau's and Gouley's Lithoclasts.

The fragments were extracted in the usual way with forceps and scoop. The bladder was then thoroughly irrigated. The detritus contained numerous blackened fragments of the glass tube, was wholly phosphatic, and weighed when dry 409 grains. Quinine and ext. belladonna pills continued.

The body temperature since the operation has not risen above 100 $\frac{3}{4}$.

June 15th.—He is able to retain his urine, and has passed by his urethra about half a pint. The patient made an excellent recovery, the wound healing in about three weeks. He has been heard from within a year and is still well.

CASE VII.—G. M., æt. 14, gives the following history: Has always had more or less difficult micturition. Had retention once about a year ago, when water was drawn by catheter. Has had paroxysmal attacks of pain at the head of the penis, accompanied by severe pain in the lumbar region. Has not passed gravel with his urine consciously. He used to pass water in bed involuntarily. At the present time he passes water about every hour through the day, and once or twice during the night. Urination is accompanied by pain in the head of the penis, which is most marked at the close of the act.

Urine alkaline—1012—and purulent.

Dec. 10th.—*Examination.*—The patient was etherized, a small searcher introduced into the bladder, and a calculus discovered, apparently soft.

On subsequent examination the click of the searcher against the stone was distinctly heard.

March 29th.—*Operation.*—Median lithotomy and perineal lithotomy, performed by Dr. Gouley. The patient was placed in the usual position, a staff in-

troduced, and incision made in median line of perineum till staff was reached. A grooved director was then passed into the bladder through the wound and the staff withdrawn. The wound being dilated with Dolbeau's dilator, the forceps were inserted, a stone seized, crushed, and withdrawn in fragments. After removal of the debris by forceps and irrigation, the finger was introduced into the bladder and a second stone discovered, firmly lodged behind the symphysis pubis. This stone was brought away entire. It was the size of a pigeon's egg, and with the debris of the first was estimated to weigh between 3 iii and 3 iv. The boy made a speedy recovery, and was discharged April 22d.

CASE VIII.—W. F., aet. 4½, admitted to hospital February 18, 1879. His father gave the following history:—

About two years ago the boy had trouble in passing water and suffered severe paroxysms of pain. This condition of things lasted for two or three months and then disappeared. He was circumcised at this time. About two months before admission he again began to suffer from frequent and painful micturition. During urination the stream would suddenly stop, and this stoppage would be accompanied by intense pain. He has been frequently observed pulling at the end of the penis and scratching the anus, and often complaining of burning of the glans.

Examination.—Child pale and waxy-looking. The searcher discovered no stone, but on examination with a small elastic bougie a foreign body was distinctly felt.

Urinary examination negative.

Feb. 21st—Operation.—Child etherized and perineal lithotripsy performed. The stone was readily found, but repeated efforts were unsuccessful in removing it entire on account of its size. A lithoclast was then introduced, the stone crushed, and the detritus removed by irrigation. Before drying the detritus weighed 146 grains, after being carefully cleansed and dried, 126 grains. The child had occasional vesical spasms after operation, but these gradually disappeared, and the patient made a good recovery.

CASE IX.—A. B., aet. 29 years, occupation, farmer.

General good health until about eight years ago when he had a severe nephritic colic, which was followed by the passing of bloody urine. Six months following another, and one every six months for the next two years when they became more frequent. The colics for the last two years have been preceded by frequent micturition and hæmorrhage.

At that time which was about six years ago and after a very severe colic, he thought he felt something drop into the bladder, then he felt better and did not have any for two or three years; but occasionally had pains about the bladder and a constant desire to pass water which was sometimes quite bloody.

For the last two years has had attacks of cystitis once a month with more hæmorrhage than formerly, and for the last year these attacks have been accompanied by a severe localized pain over the pubes that would last for two weeks. During these attacks he would pass a few drops of blood followed by bloody urine.

Exploration revealed a stone of large size, perineal lithotripsy was advised.

May 24, 1881, 2:30 P. M., Patient etherized and perineal lithotripsy performed. Time, including the etherization to the extraction of the detritus, about 25 minutes. Hæmorrhage about twelve ounces. Short catheter introduced through perineal wound and

retained. The patient made a rapid recovery, the wound having healed completely in three weeks.

Returned to New York on September 6, 1882. One month after his arrival at home he began his duties of farmer. Several times he noticed that his urine was cloudy and had an unpleasant odor, but no other trouble until October, 1881, when he had a nephritic colic, (left side) that lasted about twelve hours. From this time a mild nephritic colic (left side) on an average of once a week followed by frequent micturition for a day or two until February, 1882, then he had a very severe nephritic colic, (left side) that lasted twenty-four hours. Following this colic he passed blood and six calculi, no colic or calculi since.

States he does not have any pain in or about the bladder at present, yet sometimes when he attempts to urinate he cannot until by pressure upon the perineum or by change of his position remove the obstruction, then again the flow of urine will be suddenly interrupted. He passes his water on an average of every four hours, no blood, gets up once or twice at night. Can retain six ounces of urine without pain, states that at times he can feel something roll in the bladder, as after a jar or turning in bed.

September 6th, 1882, examined his bladder and detected a stone five-eighths of an inch in diameter, crushed it and obtained 32 grains of detritus, after which there were no further symptoms of calculous trouble.

CASE X.—E. H. D., aet. 69 general health good, until about seven years ago, then he was troubled with indigestion.

About one year ago his micturition became gradually more frequent and painful, his urine passing on an average of every hour, day and night, and at times it would suddenly stop. As the bladder was emptied he had a painful sensation that extended to the heels. The left heel the more painful. This sensation he has had for the last year, also pain in the bladder from any jar.

For the last four months has suffered very much, but does not remember of any blood or colic. At present is emaciated, has lost his appetite, passes his water every hour during the day, and every two hours at night. Has been treated for catarrh of the bladder by internal medicines without relief.

March 8, 1882, examined the bladder with a searcher, and detected either a very large stone or multiple stones.

Bi-lateral cystotomy with lithoclasty was done.

March 18, 1882.—A staff introduced, a transverse incision made in the perineum, a double Cystotome (Dr. Hutchison's) passed through the incision the blades then unsheathed and withdrawn, the forceps introduced and a stone seized, but, too large to be extracted whole. It was broken with a large lithoclast, and extracted with the forceps.

Four stones were extracted in this way; it was then discovered there was another encysted. It was removed from its cyst, broken with the lithoclast, and extracted with the forceps; making in all five stones, each too large to be extracted without being broken, in all weighing six ounces, two drachms. The anaesthesia and the operation lasted three-quarters of an hour. Patient placed in bed half an hour later, he was given 3i brandy and this was continued every hour for five hours, he also had ten grains of quinine.

March 20th, visited the patient and found him without pain, and with every chance for a speedy recovery.

This patient again presented himself Oct. 1882

After two weeks preparatory treatment lithotripsy was performed Oct., 26, 1882. One or possibly two small stones were really crushed, in two sittings, giving thirty nine grains of debris in all. He has since been entirely well.

CASE XI.—*Bilateral Cystotomy, Lithoclasty Impossible*.—February 24, 1883. M. D., æt 60 years, German, merchant. General health good until about fifteen years ago, when he had a nephritic colic. Following this colic he passed fifteen or twenty calculi the size of a pea and smaller, with bloody urine, etc.

For this he applied to a physician who injected the bladder with a solution that caused him great pain, then no trouble for four years. He then had another attack of nephritic colic followed by bloody urine but no calculi. About five years ago he had a very severe colic and passed a number of small calculi about the size of a pin head, from this time until the present has had frequent attacks of colic and retention of urine so that at times he was obliged to send for a physician to withdraw his urine.

Four weeks ago a severe attack of nephritic colic, cystitis, blood, etc., but no calculi, he sent for a physician who stated there was nothing in the bladder, but irrigated his bladder daily for eighteen days with what he thought was a ten per cent. solution of Carbolic acid, which was so painful that he requested his physician not to use it again. Examined his bladder with a searcher, and detected a stone. His present condition is fair, weight about 230 pounds, appetite not very good, does not sleep well. Dr. Gouley has irrigated his bladder daily with the bichlorate of soda solution. He can now hold his water for one hour, gets up on an average of once an hour.

February 27.—To-day his bladder was irrigated; he was able to retain eight ounces of the bichlorate solution; this was the third irrigation of the bladder.

This patient was again examined with a searcher and a stone detected, the size of which could not be determined.

Lithotripsy found to be impracticable.

March 27.—Bilateral lithotomy performed with the assistance of Drs. Conover, Kainard, Loengood, and Webb. A good sized stone was with difficulty extracted entire because the stronger lithoclastic forceps failed to break it. The stone weighed 810 grains, measured one inch in thickness, one inch and a half in breadth, and two inches and one-eighth in length. The patient made a good recovery.

324 MADISON AVENUE NEW YORK, MAY 24, 1883.

MEDICAL NOTES AND NEWS.

At the annual Commencement of the College of Physicians and Surgeons New York, the first prize of \$500, for the best examination, and the first Harsen prize of \$150, were carried off by Dr. C. H. May, of New York.

American pork has a bad reputation on the Continent. The Greek Government has now forbidden its importation into Greece. It is already forbidden (from fear of trichinosis) in Germany, France, and, we believe, Spain.

Celluloid catheters are being used by some surgeons. Already accidents resulting from their frangibility are reported.

The Right to Rest.—The London *Spectator* calls for the establishment of a new rule of etiquette, that a man who announces that he is seeking rest shall be let alone. In the hurry and strain of modern intellectual life, a necessity has arisen for periodic rest. "Overwork" is now recognized by physicians as a specific cause of disease, and a few of them are making the effects of over-cerebration, under a hundred names, a distinct specialty. The incomes of several first-class doctors in London are derived almost entirely from men whose brains are overworn, and whose nerves are so "overstrung," or "understrung," or "gone to pieces," or are "so excited," that they can neither sleep, nor work, nor remain quiet. These specialists have become abnormally discerning, and "can tell almost at a glance where anxiety has been the cause of disease, and where, as sometimes, though seldom, happens, it must be sought in actual overwork, where alcohol or drugs have assisted the decay of nervous force, and where asceticism, tried as a remedy, has seriously injured the resisting power, diminishing the fuel, till every day threatens to empty the store. They differ considerably, we are told, in their practice, some having a lingering faith in the milder narcotics, which others have lost; and some in sleep by itself, which others think is only perfectly recuperative when it comes unsought, . . . but they all agree in recommending perfect 'rest.' Their patients, who have instinct to guide them, and some memories of quick recovery during accidental or incidental lulls in life, always agree with them, but always start the question, how the rest is to be obtained." The distinguished patient cannot find it anywhere in the land, for he is pursued wherever he goes by telegrams and letters, and callers, and newspaper gossip; and the only remedy, which some have heroically tried, is to go out to sea, where one cannot be followed up; but this is often decidedly inconvenient. So, let the profession, and society, and the newspapers establish the rule that, when a distinguished man seeks rest for a period, he shall not be interrupted in it.

M. Pasteur's recommendation of vaccination as a safe preventive of anthrax in sheep is contradicted by the professors in the veterinary school at Turin, who aver that, in their own experiments, they have found the vaccinated animals to be as liable as any others to be fatally attacked by the disease on inoculation. M. Pasteur has taken notice of their criticisms, and expresses the opinion that the animals they experimented with did not contract and die of anthrax, but of septicæmia, which is infallibly developed twenty-four hours after death in all animals dying of anthrax. He has offered to subject his views to a practical test, by going to Turin and experimenting with the professors, to show that vaccination, while it may not protect against septicæmia, is proof against real anthrax.

A painting of a blind lion at the Grosvenor Gallery, London, is attracting much attention. The *Lancet* remarks that the picture is not without interest from a medical point of view. There is no doubt about the sightlessness of the animal, which is represented as facing the observer. And, if we look into its eyes to ascertain the form of blindness with which it is afflicted, we see that the condition is one of cataract. The poor beast (for which it is impossible not to feel compassion) has wandered, in its helplessness, to the verge of a precipice, where it stands, irresolute and distraught, a prey to the hyenas that are surrounding it, whilst the

distant sky is still black with the storm which has disabled it. There is scientific authority for the special kind of blindness resulting from lightning stroke, which Mr. Nettleship, the painter of the picture, has chosen. In a recent publication, Leber, the well-known ophthalmologist, has discussed the point, and refers the effect of the electric discharge upon the lens to a "physico-chemical" influence by which its albumen is coagulated, and thereby rendered opaque.

Human Resemblances to Lower Life. The current number of *Lancet's Magazine* contains an article on this subject, by Andrew Wilson, F.R.S.E. Attention is directed by the author to the attrahens, retrahens, and attolens aurem, which, rudimentary in man, exists in the lower animals for the purpose of moving the ear; to the skin-muscles of the horse, hedgehog, etc., which are partially represented in man by the occipitofrontalis, the platysma, and the palmaris brevis; and to the "third eyelid" of animal life, the nictitating membrane of comparative anatomists, which is represented by the small plate of cartilaginous gristle developed between the layers of the plica semilunaris. Man, when he sneers, sneers, after the fashion of an enraged dog, his upper canine tooth of one side, and the author supports Mr. Darwin in saying that a sneer reveals the animal descent of man. The caudal appendage and its rudiments are also mentioned, and the presence in man of the extensors or muscle of the tail is cited as linking us to the lower stages in which tail movements are a characteristic feature of life.

The Duchess de Galliera, in consequence of the breach made in her fortune by her agent in Italy, will be shortly compelled to suspend the works on the three hospitals she is building in Genoa. The funds are said to amount to at least 10,000,000 francs.

A Protestant institution for the supply of trained English-speaking nurses has been organized and put in successful operation in Rome. Miss Martin, who has shown good sense and considerable directing power as superintendent, took out with her several nurses from the Bellevue Training School in this city, and added two to her force in England. All the nurses have given satisfaction to their employers in Italy, and as the superintendent has received seventeen applications which she could not fill, the committee in charge of the work has decided to increase the number of nurses to eight and to appeal to American and English residents and travelers in Italy for funds to establish permanent premises for the institution, including hospital rooms to which persons may be taken when they cannot be properly cared for at the hotels.

A Bill has been introduced into the Pennsylvania Legislature to prevent the cremation of human bodies after death. It is alleged that the bodies are generally exported from other States for cremation, and the practice is contrary to the instincts of humanity and to the Christian civilization of the age, and affronts to the masses of the people of the State. The penalty prescribed is a fine of from \$50 to three dollars, or six months imprisonment at hard labor, for a period of from one to three years, or both.

The Secretary of the Connecticut State Board of Health reports the existence last winter, in New England, of a peculiar form of disease called "winter cholera." It occurs in man, pediculi form, and its symptoms are not unlike the bowel malady commonly prevalent in summer, but is easily controlled by treatment.

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SPASMODIC STRICTURE OF THE URETHRA AS A CAUSE OF IMPOTENCE.*

BY

WILLIAM A. HAMMOND, M. D.

Although there probably is no such thing as a permanent spasmodic stricture of the urethra I am quite sure that there is such an affection, lasting from a few minutes to an hour or more, and which, while it lasts, effectually prevents the emission of semen or the passage of the urine. In speaking of this subject MM. Grimaud de Caux and Martin Saint-Ange say:

"Finally we must admit the existence of another form of stricture of the urethra: it is that which is caused by a nervous state of the canal which becomes so much contracted as to entirely obliterate its calibre, the sides being brought in contact with each other. Such an obstacle to the passage of the urine is never more than temporary, lasting at most only an hour or two, although by its frequent repetition causing much suffering to those who are its subjects. It was an affection of the kind in question which rendered J. J. Rousseau so unhappy, and so unsupportable to himself and others. He was supposed to suffer from stone in the bladder. Morand, however, could never detect such a body by sounding, so Rousseau had recourse to 'Frère Côme,' who, having penetrated, though with difficulty, to the bladder, found it to be free from a calculus. This examination rendered him for the time a little more quiet, but the spasms of the urethra having reappeared, hypochondria supervened to darken the mental horizon of the philosopher and to disgust him, as every one knows, with all the objects of his love and friendship. If the author of 'Emile' had lived in our day, under the influence of the progress of science in the treatment of diseases of the urinary passages, it is more than probable that the greater part of his life, especially its end, would have felt the full power of his character and genius, which being of late

development, would have illuminated his existence in his old age."

I have seen several cases in the course of my experience in which the condition of the author of the "Confessions" was almost exactly repeated, leading to great unhappiness, both as regarded its effect upon the marriage relation and the mind generally. The description of one or two of these instances will tend more distinctly to the elucidation of the main points of the affection than any merely didactic account.

A gentleman who had never been addicted to women before marriage, but who since that event had been excessive in marital indulgence, had suffered for many years with a degree of nervous irritability which put him out of humor with himself and all the rest of humanity with which he had anything to do. He was apt to be attacked periodically with neuralgia of the fifth pair of nerves, sometimes on one side and again on the other, and at these periods he was particularly liable to the occurrence of morbid feelings, which affected him acutely and which plunged him into the lowest depths of despair. Frequently at such times he had thought seriously of suicide, and upon one occasion had made elaborate preparations for its perpetration. Fortunately the paroxysm disappeared as suddenly as it had supervened, and his thoughts underwent an immediate change. At these periods there was often an incongruous desire for sexual intercourse and of the most irresistible character, and, strange to say, he never had desire at other times. But though he made frequent attempts at sexual intercourse, and though there were strong erection and orgasm attended with a certain amount of pleasure, there was no emission; but the convulsive movements of the muscles concerned were almost immediately followed by a sharp pain deep in the urethra, and which extended apparently to the rectum, though in this situation being a dull dragging sensation, as though the organ were greatly distended. This did not happen once only, but every time that he had connection the like series of phenomena took place, and as he could not explain the circumstance, it caused him a great deal of additional distress. He would have abstained from intercourse, but his sexual appetite at these times was very active, and although he controlled it to a great extent, he could not altogether obtain the mastery of his desire. He was rapidly getting to be hypochondriacal on the subject, as the belief was being entertained that he was becoming sterile owing to a non-secretion of semen. He was very much averse to attempting sexual intercourse at other times than when his paroxysms of mental depression and neuralgia attacked him, as he had no desire during these intervals; in fact, the idea was extremely repugnant to him. But at my earnest suggestion he consented to make an effort in that direction, and the result was his entire satisfaction; that he was in every respect capable of the physiological performance of the act of sexual intercourse.

Repeated examinations with sounds had previously convinced me that there was no organic obstruction of the urethra, and the fact that there had never been any difficulty in voiding urine was of itself sufficient evidence on this point; but to make it absolutely certain that there was an ejaculation of semen, which, however, failed to reach the meatus, I desired him to bring me the urine which he passed immediately after the act of intercourse while under the influence of one of his attacks. This he did, and on examining the sediment with the microscope it was found to consist almost entirely of semen, with the normal proportion of spermatozoa, dead, however, from the influence of the urine.

* An extract from a work on "Sexual Impotence in the Male," published by Birmingham & Co., New York.

It was very certain therefore that my patient was suffering from a spasmodic contraction of the urethra, which closed the canal and caused the seminal fluid to be thrown back into the bladder.

I treated this patient by galvanism. A urethral electrode was passed down to the *veru montanum* every day while he was exposed to the affection, and a current from ten of Hill's gravity cells was passed through it to another electrode introduced into the rectum. This was done for about five minutes at each seance. At the same time and during the intervals of health the bromide of sodium was administered in doses of fifteen grains a day.

I began this treatment at the very beginning of one of his paroxysms, and continued the galvanism for the ten days that it lasted. During this period there was no improvement, but during the whole of the next paroxysm, intercourse was performed in a perfectly satisfactory manner, and moreover there was a notable diminution in his desire, which had become more like that of a man in a normal condition.

In the other case the patient, a young man twenty-five years of age, had been guilty of gross excesses, though thus far there had been no notable diminution of sexual power. One night, however, while in the act of sexual intercourse, he was surprised by an intense pain in the rectum, and by the non-emission of semen. The pain was of such an agonizing character that he almost fainted. It lasted, however, only for a few seconds, but it was more than an hour before he had entirely recovered from the nervous shock of the occurrence. For several days thereafter he was afraid to make a further attempt at sexual intercourse, but finally his desires overcame his discretion, and again there was the intense pain in the rectum and the non-emission of semen, with all the subsequent phenomena which characterized the former attack. The following morning he came under my notice.

In answer to my inquiries he informed me that he had passed a full stream of urine ever since the first attack and that he had never suffered from gonorrhœa or any other venereal disease. On examination with sounds I found that there was no evidence of a stricture; I therefore came to the conclusion that his case, like the other, was one of spasmodic contraction of the urethra and of the muscles of the perineum. I treated him with electricity as in the foregoing instance, giving him the current from ten cells daily for about five minutes. This was continued for two weeks. At the end of that period he made another attempt at sexual intercourse, but owing to the condition of his mind and his apprehension that the pain would return he was unable to obtain an erection. The next day, however, he met with better success and this time without pain, and with a free ejaculation of semen.

This condition appears to present some analogy with the spasm of the urethra sometimes observed in nervous individuals and which prevents them passing urine while they are particularly desirous of so doing. They will stand sometimes for an hour with the bladder nearly full, making every effort to evacuate it and yet unable to cause a single drop to flow.

Again it presents some features similar to the state called by Sir James Paget: "Stammering with the urinary organs," but the cases that he adduces and the remarks he makes upon them are intended to refer entirely to the bladder, as the following remarks show:

"Stammering urinary organs are not rare, and they may be known by observing sometimes in the same person the exact parallelism between the difficulty of ex-

peiling urine and that of expelling the air in ordinary speech-stammering. The patient can often pass his urine without any trouble, especially at customary times and places, and when he does so the stream is full and strong. But at other times he suffers all the distress that he might have with a very bad urethral stricture. He cannot pass a drop of urine: or after a few drops there comes a painful check, and the more he strains the less he passes, and then complete retention may ensue, and overfilling of the bladder. In their characters the cases may closely resemble one of the ordinary instances of so-called congestive stricture, in which rapid swelling of some part of the mucous membrane narrows or closes the part of the canal which is least capable of distention. But the circumstances with which the difficulty arises are in the two patients very different. The stammering with the bladder occurs with just the same condition as the stammering speech. There are few stammerers in speech so bad but that they can talk or read fluently when they are alone or with those with whom they are most familiar, or when they are entirely thoughtless as to their manner of speaking. Their worst times are when with strangers or with persons or in places that are associated in their minds with stammering. It is just so with the bladder and urethra. One patient told me that although he could usually pass urine well, yet there was one person with whom nothing could induce him to walk, because once when he was with her he wanted to pass urine, retired and failed. His experience of the effects of associations of thoughts made him sure that if he were again in the same circumstances the same distress would come on him more intensely. Another, a clergyman, always passed a catheter before going into his pulpit. He had often had nervous trouble with his bladder; and once or more having felt a horrid need of passing urine while he was preaching, he found himself at the end of his sermon unable to pass any. He said he felt sure that if he were to go to his pulpit without assurance of an empty bladder, which his catheter (a No. 12; passed easily) gave him, he should be possessed with a desire to pass urine and then should have retention. As a speech-stammerer might be unable to utter a word, so would he be unable to pass a drop of urine again. Another patient has described himself as driven to all kinds of devices to bring about an association of ideas or of actions with which to best succeed in emptying his bladder. He must walk up and down his room and stand or sit in some customary singular position, and then be very careful not to direct his mind either too much or too little to what he has to do, and then to let the urine run as inconsiderately as he can."

Sir James is, I think, mistaken in locating this trouble in the bladder. It is undoubtedly due to a spasm of the organic muscular fibres of the urethra and of the compressor urethræ muscle. It is exactly similar to the condition sometimes excited in nervous individuals by attempts to pass a bougie. The canal closes tightly against the point of the instrument, but a steady gentle pressure continued for a few minutes usually overcomes the obstruction. The remarkable fact, one which all physicians and surgeons have observed, is that the condition should be excited by mental influences and certain associations of ideas. I have known men who could not urinate when asked to do so, unless the water above the urinal were allowed to run at the same time, so that the idea of a flowing stream should be excited in their minds. The fact is common enough, and it is one well known to people generally. I recollect when a college boy being witness

to a wager between two men that one of them could not urinate in the other's hat. A ring of curious spectators was formed around the individual desirous of exhibiting his powers of urination; he had a full bladder, he said; he prepared himself, held the hat of his adversary in his hand, but not a drop would come, and the more the lookers-on laughed and cheered, and the more he strained the less real ability he seemed to exhibit. At last the referee announced that the time, a half an hour, was up, and he lost his bet without having passed a single drop. Five minutes afterward, in the solitude of a woody lane, he evacuated over a pint.

Such conditions remind us forcibly of those states of impotence considered in the preceding chapter in which certain associations of ideas are necessary to the physiological performance of the sexual act.

Relative to the non-ejaculation of the semen, to which the foregoing remarks apply, the state has been confounded with another, aspermatism, to which attention will presently be directed, but which is quite a different condition.

HOW TO EXAMINE THE INSANE.*

BY

EDWARD C. SPITZKA, M. D.

We will suppose that the physician is called to see a person whom, from the previous history or the expressed suspicion of the relatives, he considers it necessary to investigate the mental state of. In such a case he should bear the following prominently in mind: The majority of the insane are either communicative, or, if not communicative, readily betray their insanity by their physical appearance, and it is best in the interests of such patients for the physician to visit them in his actual capacity as a medical adviser. On the other hand, there are certain of the insane who are skilful dissimulators, whom the most expert alienist might fail to unravel the real mental state of at any single examination, and who would be put on their guard or led to the commission of dangerous acts by the announcement that a physician was approaching. It may be necessary in such exceptional cases for the physician to visit the patient as if casually, or even to conceal his real character.†

The first step in the examination of an alleged lunatic is the study of his features, manner, and attitude. In some of the insane these will not betray the mental

state; in the majority, however, they afford such significant indications of the insanity, that the expert alienist may arrive at the provisional and approximate opinion of the form of insanity with which he has to deal, and thus be able to adopt a special line of examination by the inspection of the patient alone.

It is very unwise, however, for the physician, on entering a room filled with people, to walk directly up to the person whom, from his appearance, he suspects to be the patient, and to proceed brusquely with the examination. He may be right in his selection, and accomplish his possible object of impressing the laity with his diagnostic skill. But if the patient should happen to be suffering from a form of insanity of a hypochondriacal or depressive character, the procedure would have a bad effect on him. The patient might, if hypochondriacal, argue that there must be some truth in his hypochondriacal belief, inasmuch as a stranger, on first sight, picked him out as the patient; while he who is suffering from delusions of persecution might discover new building material for the delusion that there was a conspiracy against him in his recognition by a person who had never seen him before. On the other hand, there is—even with an extensive experience—a chance of committing an error. An experienced alienist, who, in almost every case, had been able to pick out the insane member of the family he was called upon to visit—wherever he saw fit to make the attempt—picked out the imbecile brother of the patient as the lunatic. It is true that there was a far more serious congenital mental defect in that brother than in the patient whom it was proposed to have him examine; but, as the latter suffered from an acute psychosis, which had led to a suicidal attempt, this was not appreciated, and the alienist might have been supposed to have blundered. A source of many possible mistakes is the fact that, in cases of insanity dependent upon a transmitted taint, other members of the family than the one concerning whom the physician is consulted may present peculiarities in behavior and appearance suggesting the existing of insanity, or of the insane disposition. This has frequently been the writer's experience.

In proceeding to examine a patient the physician will be guided in great part by the expression of his countenance, his manner, and the first words spoken if he talks spontaneously. It is obvious that his own demeanor must be very different with various forms of insanity. Indeed it would be absurd to attempt to follow any fixed rule of conduct; though, as a general thing, it is well not to appear searching or anxious in the examination of any alleged lunatic, nor to give the impression that the examiner is particularly interested in the mental features of a suspicious one.

If the patient's countenance expresses distrust or suspicion, it is well to delay the examination until he becomes somewhat accustomed to the physician's presence. Sometimes on arriving at the patient's residence the physician will find him held by others or tied down. In the majority of cases, the physician can risk sending the restraining apparatus and the holding persons (whom the patient often confounds with his supposed enemies) out of the room; a step which if feasible, will facilitate the further examination by gaining the patient's confidence. In case the insanity is of a violent and dangerous type this procedure will not be necessary, for the actions and words of the patient will then establish the diagnosis sufficiently well for all immediate purposes, and as well as any single examination is calculated to do.

A large number of patients whom the alienist is call-

* An Extract from a work on "Insanity. Its Classification, Diagnosis and Treatment." Published by Bermingham & Co., New York.

† He who has been in that emergency to which asylum physicians, with attendants and other conveniences at their disposal, are rarely liable, of single-handed encounters with homicidal, treacherous, and cunning lunatics, fully aware, as some of them are, of their legal irresponsibility, can have but a smile for the injunction never to resort to "deception"—as it is called—with the insane. Nor is it easy to draw the distinction between the ordering an attendant to watching a suspected simulator through a window, or a crevice, a procedure resorted to time and again by the best French and German alienists, and the visiting of such persons by the more competent alienist himself in a character calculated to throw the simulator as well as the dissimulator off his guard, and to reveal that truth which it may be desirable to establish in the interests of justice, or at least of the individual. It so happens that the recent demonstrative sneering at the procedure here advocated has been by members of a circle composed of men who could readily afford to disregard the most legitimate methods of investigation, because their testimony is rarely regulated by the demands of medical truth, but who have themselves unfortunately resorted to unworthy subterfuges, such as taking part in carousals with a paretic dement in order to accomplish his commitment to an asylum.

ed upon to examine are not apt to be communicative to a stranger at first. And nothing would defeat the purposes of the examination so certainly as an immediate cross-questioning with regard to mental symptoms. Frequently the patient apprehends that he is considered insane, occasionally even is himself convinced of his insanity; but he is as little desirous of being pronounced insane as an ordinary patient in private practice would be to have the existence of a gonorrhœa or a chancre revealed in the presence of his family. In all such cases one fact comes to the physician's aid, namely, that the insane as a rule are deficient in concentration power and in self-control, and that however firmly they may have resolved not to reveal their thoughts, yet a prolonged examination will evoke involuntary admissions, which, once secured, enable him to reach the very centre of the mental citadel.* He must consequently approach him by a circuitous line, and there is one which, in his character as a physician, he may follow without arousing the suspicions of the patient, or resorting to a subterfuge, namely, that of an examination of his physical state. Indeed this is itself sometimes calculated to reveal important facts; few patients will suspect that an examination of the tongue can refer to their mentality, although a fibrillary tremor or deviation of that muscle may prove of great signification to the physician. The existence of visceral disturbance, of disordered sensations and pains, and of imaginary complaints in some of the insane renders them very willing to be examined on these points. The transition from questions relating to visceral trouble to inquiries about the patient's sleep is an easy and natural one, and appears legitimate even to the most suspicious lunatic. If the sleep is admitted to be disturbed the patient may make avowals which suggest the existence of hallucinations, and the character of these symptoms will often alone suffice to reveal the nature of the insanity. In other cases a few judicious inquiries as to business or family troubles, made on the assumption (on the patient's part) that these may bear a causal relation to his physical disorder, will sometimes lead to "confidential" communications as to alleged conspiracies, antipathies, attempts by others to poison his food, marital infidelity, the ruin of his fortune, the commission of some crime, or of the fact that he is unable to feel for his family as of yore. As soon as a patient has reached this point the ice is broken, and the mental symptoms may be elicited in abundance, and as soon as he begins to reveal his mental state it is well to let the patient speak without interruption, and particularly to avoid asking leading questions.

There are patients whose affections for their relatives are changed, and others in whom the affections for some one or other or all the members of their

family are unchanged. In the former case the patient will be more communicative if examined by himself; in the latter case it is best to have some relative, in whom the patient has confidence, present. Frequently the presence and aid of the family physician is of great service in case the examination is made by a stranger. But even where it is found advisable to conduct the examination of a patient alone, it is well, at some time in its course, to introduce the family, and study his demeanor, and mark his sayings when confronted with those whom he may regard as his foes, his assassins, or his victims, as the case may be.

There are some patients who are really anxious to be examined—not for the mental trouble, which they ignore,—but for imaginary visceral disease. This is particularly the case with hypochondriacal monomaniacs and paretic demented with hypochondriacal delusions. With such patients the examination is child's play; for in every sentence they reveal their mental state, and spread out their delusions unasked before the physician.

The use of physical appliances, the ophthalmoscope, sphygmograph, æsthesiometer, thermometer, etc., must be considered from two points of view: first, their actual diagnostic value; second, the possible effect of their employment on the patient's mind. In paretic dementia and hypochondriacal monomania, for example, the use of these instruments paves the way for the subsequent mental examination. The paretic dement shows that exaggerated appreciation of these appliances already referred to (p. 194), while the hypochondriacal patient becomes reassured by the thoroughness of the examination he so morbidly craves. The melancholiac and sufferer from persecutory delusions may have his fears redoubled by the mere sight of these to him unfamiliar and mysterious objects, and it is therefore best, if the instruments of precision are employed at all here, to use them at the close of the examination.

It is a rule, which goes without saying, that no deception, direct or indirect, is ever justified, unless it is necessary for the good of the patient, the interests of his property, and the safety of his family and of society at large. But only a pretender or one unfamiliar with insanity will demand that no deception should ever be practiced. If a patient asks point blank whether the physician proposes to take him to an asylum, and who it is that has requested him to do so, while it is possible that, in the event of a direct answer, the lunatic may take steps to revenge himself on a member of his family, it would be tantamount to criminal negligence to give a so-called "truthful" answer. Let him who gives it bear the consequences! It is best, in case the patient presses the question of what the physician proposes to do, to claim time for reflection, and, when all necessary steps are arranged, to tell him the entire truth. In some cases even this would be grossly inhumane; as, for example, in the case of a paretic dement, whose property, being already, it is to be presumed, under proper guardianship, and he being about to be placed where he can harm neither himself nor his family, may be permitted to linger out his days in dreamy and sometimes comparatively felicitous unconsciousness of his dread malady and impending death by it.

With patients who are hilarious, such as exalted paretic demented and maniacs, it is well for the physician, although he may not go so far as to assume the character of a "hail fellow well met," to pocket for the time being the stiffer variety of professional dignity if among his "accomplishments." These patients are as

* This the following conclusion of a dialogue illustrates:

Q. What is it that kept you awake last night?

A. I heard voices telling me that I was a bad woman for suspecting my husband.

Q. What did you suspect your husband of?

A. (Obstinate mutism.)

Q. What made you say that your husband was a bad man, and went with other women, as well as the other things you said about God?

A. I am compelled to say those things against my will. I do not believe that he is a bad man.

Q. Oh I see! You do not think these things are true—

A. Do I [getting excited]. Why they are revelations! God speaks through me. [Here the patient burst out in delusional vituperation against her husband, and although quiet and reserved up to that time, developed a delirious flight of ideas of a combined expansive and persecutory kind.]

quick to form dislikes and antipathies as friendships and exaggerated admiration. They are very apt to entertain as exaggerated a contempt for anything that smacks of what they may regard to be conceit, overbearing pride, and æstheticism; and from contempt to a demonstration with the fists the transition is sometimes very rapid with them.

There is an idea current that patients can be stirred up to reveal their suspicions and beliefs by threats and promises. There are very few lunatics whom the physician is likely to be called upon to examine outside of the asylum who, if not in a stuporous or apathetic state, would not resent the former and despise the latter. It is a mistake to believe that a lunatic can be treated altogether like a child; his perceptions may be as acute, his feelings as sensitive, and his pride as great as those of the examiner. It is with hysterical pubescent, and masturbatory lunatics only that harsh measures are sometimes indicated and efficacious.

Although, under exceptional circumstances, the physician may, of his own choice, consider it desirable to examine an alleged lunatic without previous communication with other parties, he will in ordinary practice find it of the highest importance to obtain a history of the patient before examining him. It is well to collate all, even the most trivial, observations made by the laity, before seeing the patient; for among them may be discovered facts which in the subsequent examination can be utilized in a more accurate analysis of the case than the best examination without them could furnish. But it stands to reason that the statements of others should never constitute the basis for an opinion unless the physician becomes convinced that they are consistent with the results of his own observations of the patient.

In the examination of the patient's facial expression and attitude the physician should include that of his dress and surroundings. Peculiarities of costume when found may often serve as a basis of comment and inquiry, revealing the existence of morbid projects or of absurd reasoning. On one occasion the writer, on entering the residence of a patient, saw little square patches of wall-paper pasted over different parts of the plastering on the side of the staircase. The patient was very taciturn, but the inquiry as to the unusual appearance of his house led to the revelation of the fact that the patient believed himself ruined, unable to meet the expenses of plastering, and had himself taken scraps of paper at random to cover up cracks and defects in the ceiling and walls.

Some patients, as soon as the ice is broken, exhibit documents relating to their morbid ideas, which often serve to portray the nature of their illness better than any verbal inquiry. To study these is hence of the highest importance. With the chronic insane it is well to induce the patient to reveal the contents of his pockets. In some cases the physician will find that scraps of string, tin foil, and rubbish are accumulated without any special idea; this usually indicates deterioration. In a few, alleged preservatives against the assaults of demons and imaginary foes are found, and questioning reveals the delusion which has caused the patient to provide himself with them. A large number of patients carry their insane documents about them, and these are hence obtainable by a personal search, which, as a rule, the patient assists in, or submits to willingly.

In tracing out a morbid idea the physician must not content himself with "drawing out delusions," as a superficial writer advises, under the erroneous idea that the existence of a delusion is satisfactory and suf-

ficient proof of insanity. Any asylum attendant of experience would be an expert on insanity if this were so. The true alienist will always remember that he has an intricate mental mechanism to analyze, and that however much that mechanism may be disturbed, no examination from any one-sided point of view will suffice to reveal the character of the disturbance. It is not the patient's ideas so much that he is concerned with as the manner in which they have arisen and are nursed by the patient. Let him therefore carefully watch his method of reasoning, and bear in mind that those patients who consent to communicate any of their thoughts are usually so preoccupied with the morbid ones that they are only too glad to get a listener, and when they have one, prefer a patient listener to one who gossips. There is no surer means of making patients conceal their delusions than the ridicule to which some examiners resort with the object of "drawing them out." No delusion was ever cured or discovered by ridicule; but, on the contrary, delusions are sometimes thereafter fortified and obstinately concealed. It may, however, be very well to express surprise at, or to affect not to understand certain minor features of the patient's statements, and thus to induce a fuller explanation, and to test his reasoning and recollecting power. It is particularly desirable to have him go over the ground twice, to note inconsistencies in the two stories, to bring these to his attention, with the purpose of testing his memory as well as the systematization of his ideas. In case any one present at the examination ridicules the patient it will materially facilitate the inquiry and gain the patient's confidence to reprove such a person, or to send him out of the room.

In the case of patients who are reluctant to be examined it will often be found of service to turn the conversation on recent events of importance to the patient, his family, or to such of a sensational and political character. It will be not unfrequently found that the morbid ideation or morbid emotional condition of the mind is connected with some important event in the patient's career, such as marriage, divorce, financial gains and losses, and new business undertakings. In other cases, prominent political events, religious revivals, and temperance movements will be found to furnish the keynote to the patient's mental state.

Much has been said about the necessity of verifying delusions: a popular writer, as well as his plagiarists, have laid great stress on the necessity of finding out whether there may not be, after all, a substantial basis for the patient's ideas. While it is well to always do this for other reasons, particularly in cases where an examination is necessarily hurried,* or where the physician anticipates the possibility of having to defend his opinion before a non-expert jury, it may be stated right here that he who, after a *careful* examination of

* An instance of the risks assumed in making a "snap diagnosis" is the following: The writer, being belated at his clinic, and having about half a minute to look over the patients to be introduced to the class and examined by the students, had a slightly intoxicated man brought to him, who complained of poisoned wounds, and spoke of lions and tigers. His speech was thick as a result of continued libations. The writer suspected that it was a case of alcoholism with hallucinations and delusions, and anticipated having a good opportunity for illustrating some important points. Before the class, when a more careful examination was made, it was found that the patient, while addicted to spirituous liquors, was the trainer of the lions and tigers of one of the large circuses, and had actually been seized and mangled by a tiger, showing the severe wounds made by the animal, which, as is frequently the case with the tiger's bite, had been of a poisonous character.

the patient, requires such an examination of his circumstances to find out whether he is insane or not is simply not an alienist. Repeatedly does it occur in the alienist's experience that the facts of a case and the delusion happen to correspond. Thus a salacious woman may be actually unfaithful to an impotent and inebriated husband, who entertains the suspicion of marital infidelity. But that suspicion is nevertheless a delusion, because the patient cannot give the reasons for his belief as a sound person would, nor reason logically on, and react normally to it. He also exhibits a tendency, common to the insane, of attributing to everything, whether trivial or of magnitude, some relation to himself. This selfish tendency, using the adjective in its widest sense, is one of the distinguishing features of insane ideas. An acute maniac claimed that people had put a rope under her bed; this was true. She added that it was for the purpose of hanging her that night; which was insane. A person of sound mind, if annoyed by the idea of a rope being under his bed, accounting to himself satisfactorily as to its presence, as this patient might have done if she had not been insane, would have removed it or have had it removed, and neither thought nor said anything momentous about it afterwards. A parietic dement came to the writer's clinic, whose occupation was that of an artist's and anatomist's model. He asserted that he was the best built man in the United States. Having to undress him before the class, as he offered his services in his professional capacity, the fact was revealed that he had a magnificent figure and a wonderful muscular development. But his announcement was, notwithstanding, that of a parietic dement, for further inquiry revealed the fact that the "girls looked at him because he had a peculiar expression in his eyes which they fancied." The sanity or insanity of an idea can be gleaned from its inherent construction, and psychiatry would be no science if the physician were compelled to rely on his ability as a detective of family secrets to exclude fraud and to make a diagnosis.

It may be laid down as a general rule that, in examining a suspected insane patient, the physician should proceed as if he were examining the mental calibre of a sane person, except where the injunctions laid down above require a deviation from this rule. Though disordered the insane mental mechanism is not always grossly different from the mechanism of the sane mind; and it is particularly the tyro who should hold prominently in view the fact that, in venturing to examine an alleged lunatic; he may encounter as much and sometimes more wit, cunning, and knowledge of mankind in such a lunatic than he is himself possessed of. And while, as a rule, the mind of the insane is diffusely pervaded and weakened by morbid ideas or by impending deterioration, yet here and there the physician may have the tables completely turned on him by a ready patient, if he ventures outside of his province as a physician.

In his demeanor toward all patients the examiner should be gentle, yet firm. He will find the *skill* of a cross-examining lawyer or of a detective very useful, particularly in his inquiries of members of the family in whose statements the truth is sometimes difficult to winnow from the fancies of the laity; but his *behavior* should never approach that of the members of either of these professions. There is a popular delusion that the human eye has an influence over the insane similar to that claimed for the same organ over wild animals; a delusion that the writer has known the insane themselves to ridicule, and which he who attempts

to utilize will learn to recognize the absurdity of at the first attempt. An overbearing, haughty demeanor, a patronizing, condescending air and fidgetiness, are all equally to be deprecated because they will all equally tend to defeat the purposes of an inquiry. He who has the characteristics necessary to constitute a member of a learned profession will require no stage effects to aid in the accomplishment of a serious inquiry; he needs but to act perfectly naturally, that is, with earnestness and scientific purpose.

PERIOSTITIS OF THE OUTER SURFACE OF THE MASTOID.*

BY

OREN D. POMEROY M. D.

This is the simplest and most frequent form of mastoid disease ordinarily met with in practice.

Its usual mode of invasion is to travel outward from the tympanum, along the periosteal lining of the osseous meatus, until the covering of the mastoid is reached. Then there will be redness and tenderness, swelling which pits on pressure, with possibly a greater degree of redness and swelling in the neighborhood of the insertion of the sterno-cleido-mastoid muscle. The canal must needs have exhibited some previous swelling, or redness or tenderness on pressure. There may be some stiffness about the jaws, and the sub- and posterior auricular glands may be considerably swollen. The patient may have had pain in the ear and mastoid region which may often radiate, more or less, over the whole side of the head.

If the attack is severe, some fever and elevation of temperature may be observed. The tongue may be coated and the patient feel quite ill. The rule is that pus forms sooner or later. If left to itself it becomes a formidable disease; the scalp may be undermined with pus, so that half of the side of the head may be involved in the abscess, as in the case of John Scrypes, published in the *N. Y. Journal of Med.* for Feb., 1873. The abscess had been allowed to remain some weeks without opening, and had dissected up the scalp above the level of the lower portion of the mastoid process. The diameter of the abscess was at least three inches. The neck was not involved.

It also follows the sterno-cleido-mastoid muscle, forming an abscess that extends far down the neck. In an ordinarily robust adult the external table of the mastoid is not likely to be destroyed, the disease not going beyond that of periostitis. It is true, however, that the sub-cutaneous connective tissue frequently becomes involved, when a cellulitis is added to the other symptoms. The pain is likely to be severe, like all inflammations of the periosteum, especially if there be confined pus. Occasionally the external table of the mastoid process gives way, and we have true mastoid cell disease. This is much more likely to occur in weakly subjects or those having any constitutional disease favoring destructive processes. In children it very frequently occurs, but this phase of the subject will be treated of under the head of mastoid cell disease.

I do not conclude that there is much danger to the patient's life in this form of the affection, it being a surface matter mostly.

In the treatment it is admissible to begin with mild measures. If a poultice or leeches to the part

* An extract from a work on "The Diagnosis and Treatment of Diseases of the Ear," published by Birmingham & Co., New York.

promptly relieves the trouble, nothing more may be needed. I have seen Tr. of Iodine painted on the part until it became nearly black, dismiss the inflammation. A saturated solution of Arg. Nit. will be still more effective, but it makes a hideous black crust, difficult to remove. I am compelled to admit that there is less indication for severe measures in this affection than I at one time thought. If these means fail, then the Wilde's incision must be done. A stout scalpel is introduced near the lower border of the mastoid, provided the swelling and redness extend so far; penetrate to the bone at once, extend the incision upward, parallel to the auricle and about half an inch behind, for the distance of one or two inches. Carefully note whether the knife glides smoothly over the bone. If there is any roughness, there is denuded, dead or carious bone. By pressing firmly on the part with the edge of the scalpel, a carious spot may often be broken through into the cells beneath, and a sufficient opening made for the evacuation of pus. It will be always desirable, even when no suspicion of bone involvement exists, to search the incision with a probe to see whether any rough or softened bone or fistulous opening exists.

If the abscess extends downward in the direction of the sterno-cleido-mastoideus muscle, or any of the muscles inserted into the mastoid process, a grooved director and bistoury may be used to freely lay open any burrowing sinus leading to an abscess lower down, or the abscess may simply be punctured at this lower point. Larger blood-vessels must be carefully avoided; but if an abscess is pointing, it is likely that no important blood-vessels are in the way of an incision (the abscess having a tendency to separate blood-vessels as it comes to the surface).

It will always be gratifying, in incising a mastoid swelling, to find pus, but often the surgeon will be disappointed. Where there is considerable cellulitis, the sense of fluctuation may be present without a particle of pus being subsequently found. The relief from the bleeding and division of swollen and tense tissue, will often be very great. Again, the incision, after a day, or two, may have permitted an abscess to open into it, which otherwise would have remained to inflict mischief upon the patient. Again, I have by pressing firmly upon a swollen mastoid, caused the abscess to rupture into the meatus on its posterior wall, usually near the junction of the osseous and cartilaginous portions. After making the incision, I am in the habit, if no pus is found, and the general appearance of the part induces one to suspect that there is pus somewhere, to pass in a probe and push it beyond and push it beneath the tissues near the bone in the direction of the focus of inflammation, to determine whether a pus cavity may not be opened into, and I have often succeeded in so doing.

In a recent case, where a Wilde's incision failed to reach pus, and a day after, the abscess had ruptured into the meatus by a very small opening, I passed a probe through the incision in this direction, and easily succeeded in reaching the abscess cavity and diverting the discharge in the direction of the mastoid incision. A probe ruptures no large blood-vessels, and is not likely to do harm to nerves, and after the skin and connective tissue are divided, readily penetrates the parts. Occasionally a mastoid abscess may point towards the posterior and outer portion of the meatus. When this is the case, the incision may be made at that point. Occasionally I have seen an abscess from above the auricle, somewhat trenching upon the meatus. This may be opened above the auricle, or in the upper and outer portion of the meatus, that is, where

it evidently points. In this region it may involve the temporal bone and open into mastoid cells but this is very infrequent indeed. Sometimes the inflammation extending from the tympanum, may involve the parts in front of the meatus, when cellulitis with considerable swelling may result. This is a somewhat annoying location for an abscess. In making an incision there is great danger of dividing some of the larger branches of the temporal artery or even that vessel itself. The incision should be commenced above the swelling and quite near to the auricle, and not extend too far downward, or it may be made in the anterior portion of the meatus. With a stout probe or grooved director endeavor to open into an abscess cavity, if the incision has failed to do so. The director will exhibit a small amount of pus in its groove if it has penetrated an abscess. After the incision has been made it will be well to use a poultice for a few days; not long enough, however, to macerate the parts, for granulations are prone to spring from these incisions, and the poultice facilitates their growth. It is my own practice to daily open the incision with a probe, moving it from side to side in the lips of the wound to prevent adhesion, and maintain a perfect opening into the abscess cavity. The method practiced by many, however, is to insert a tent, and thus keep the wound open. My objection to that method is, that while the tent is in position a confined pus cavity is formed for the time, which cannot but diminish the promptness of recovery. Any good disinfectant wash may be used, at least once a day, to cleanse the wound. This may, if necessary, be introduced by means of a syringe. If, after the first relief from an incision, the patient again has pain, with possibly fever and elevation of temperature, it is well to search the wound for some concealed pus cavity, which indeed may result from closure of the wound already made in some unobserved portion, and finding it, the patient will experience a relief from its evacuation, as in the first instance. The wound should be kept open until nothing remains of the disease. Pain in the mastoid or side of the head should have completely disappeared. All proper care should be taken to prevent relapses. The matter of carious or softened bone will be considered under the head of Mastoid Cell Disease. Granulations at the edge of the incision will sometimes be very embarrassing: these may be clipped off with scissors or a scalpel, or removed by forceps, and the point of attachment thoroughly cauterized with Arg. Nit. in saturated solution or stick, or nitric acid. In making these incisions, arteries are sometimes divided, but torsion will usually arrest the hæmorrhage; if not, apply a ligature. Sometimes an aneurism of the posterior auricular artery may result from the wounding of the vessel in making the incision. Dr. Buck, in the Tr. Amer. Otol. Soc., 1873, p. 61, reports a case of aneurism of the posterior auricular artery. An incision of the mastoid was done somewhat nearer the auricle than usual, which was followed by a small jet of arterial blood. It was arrested by compression, as it seemed impossible to apply a ligature. Five days later distinct pulsation was noticed over the wound; on the next day a circumscribed pulsating tumor, the size of a hickory nut, made its appearance; on the day after, pulsation ceased and the tumor diminished in size, an incision in the line of the former wound was made, and a blood clot was removed from a distinct cavity. Hæmorrhage recurred, and the part was stuffed with lint. Two days after, on removing the lint, a jet from an artery was observed, when the cavity was again stuffed, and a compressive bandage was applied.

The lint was allowed to remain until it ulcerated its way out. There was no further trouble. Other cases of aneurism from a similar cause have been reported, but this one presents all the characteristics of such an accident.

BOOK NOTICES.

Sexual Impotence in the Male.—By Wm. A. Hammond, M. D., Surgeon-General U. S. Army (Retired List); Professor of Diseases of the Mind and Nerves, System in the New York Post Graduate Medical School; President of the American Neurological Association, etc., etc. *Birmingham & Co., New York, 1883. 8vo., 274 pp., cloth, beveled.—Price \$2.50.*

If there be a philosopher's stone that turns to gold the conception of an author's brain, surely the writer of this work must be its happy possessor. Few have been more prolific writers, and perhaps no medical writer has succeeded in the same degree in so varied a field in giving happy expression to the facts and theories relevant to the subject treated of.

In the book before us it must be said that the subject is one about which so little has been written from a scientific standpoint, and is invested with so much interest that the careful analysis of causes and treatment, together with the narration of many typical cases presented by Dr. Hammond, constitute a book almost unique in medical literature.

The author has confined his consideration solely to sexual impotence as it exists in the male, proposing at some future time to enlarge the scope of the book and include the subject of sterility, and to consider both these affections as they occur in men and women.

He divides his discussion of the subject into four chapters, devoting one to the consideration of "Absence of Sexual Desire," a second to "Absence of the Power of Erection and of Consequent Intromission," a third to "Absence of the Power of Ejaculating the Seminal Fluid into the Vagina," and the fourth to "Absence of the Ability to Experience Pleasure during the Act of Copulation and During the Emission of the Semen."

There is no more curious phase of mental disease, no more phenomenal exhibition of the abnormalities of perverted function, in the whole realm of scientific inquiry, than is furnished by the study of the perversions of the sexual sense. It is only a master hand that can unravel the tangled threads of health and proper function that the manifestations of this form of disease so inextricably intermingle.

Dr. Hammond has succeeded in conveying many most important lessons in the recognition and treatment of the many forms of impotence, through the careful and elaborate citation of cases, which have been gathered from his own experience and carefully collated from the scanty literature. Many of these cases, especially those illustrating mental impotence, are most striking and rich in their suggestiveness as regards the pre-eminent operation of mental influence in the production of diseased states, and the importance of their early recognition and systematic treatment.

To the analyst of human action, to the alienist, to the many unfortunates who are the victims of impotence in any form, but most of all to the general practitioner, who is so often called upon to treat these cases in more or less aggravated form, and who turns

to his text books in vain for help, this work will be welcome, since it illumines a hitherto dark subject. Certainly it is most original and interesting, and few readers will turn to its pages but will read it from cover to cover.

The Pathology, Diagnosis, and Treatment of the Diseases of Women—By Graily Hewitt, M. D., Lond., F. R. C. P. Professor of Midwifery and Diseases of Women, University College, and Obstetric Physician to the Hospital, etc.—A New American from the Fourth Revised and Enlarged London Edition, with 236 Illustrations—Edited with Notes and Additions by Harry Marion-Sims, Attending Surgeon to St. Elizabeth's Hospital, New York, etc.—*Birmingham & Co., New York, 1883—2 vols. 8vo., pp. 469 and 571—Cloth, beveled—Price per vol., \$2.25.*

In its unrevised form, as presented in the third edition, published more than ten years ago, the work of Graily Hewitt is well known to American readers, who have esteemed it, as it has been esteemed in the country of its origin, as a classic of rare worth.

The fourth edition has been made the subject of very extensive and painstaking revision, the author having developed and elaborated the views presented ten years ago, but which a ripper and richer experience has matured.

One of the more important features of the book is the development of that conception of uterine pathology which maintains that alterations in the shape and position of the uterus are rarely witnessed except in individuals whose general strength has become seriously impaired by a systematic and often a lengthened practice of taking little food. The author designates this condition as "chronic starvation," and believes it to be a most important factor in the production of the class of diseases above alluded to. In a word he emphasizes the importance of the constant recognition of the principle that local ailments depend on general ones. He insists, as a primary condition of the successful treatment of this class of cases, on better nutrition. He advocates the mechanical pathology of some forms of uterine disease, viz., that pathological changes are produced by mechanical causes.

Although these views are not now entirely novel, perhaps no writer has been equally clear and minutely explicit regarding their application.

It is very logically maintained that hysteria is a uterine reflex symptom (not ovarian as has been generally supposed), dependent always on flexion or malposition, and that to remedy the latter is to cure the former.

Many cases are enumerated in support of the view that the nausea of pregnancy is a neurosis dependent upon distortion of the uterus, and that this distressing reflex symptom may be relieved by appropriate treatment directed to remedying the malposition.

The book is profusely illustrated, most of the illustrations being life-size, which enables the author to convey his meaning most accurately without fear of misinterpretation.

It has been carefully revised by Dr. Sims, so as to conform to the wants of the practitioner in this country, and, wherever deemed advisable, notes have been added.

It is published in two volumes containing over a thousand pages, and more than two hundred illustrations, it has a very complete index, and constitutes a most comprehensive, reliable, and practical treatise

upon a class of diseases about which much nonsense has been written.

To the general practitioner who has taken refuge from the conflicting asseverations of specialists regarding the treatment of uterine disease, in a "let alone" treatment, the book will form a common-sense guide as to what should be done and what left undone.

The proper application of the author's views regarding nutrition will alone be sufficient to restore tone to organs and functions of many a patient now groaning under the woes of chronic invalidism. If not a new gospel that is here taught, it is nevertheless a forcible presentation of what should be a universally accepted one.

Practical Clinical Lessons on Syphilis and the Genito-Urinary diseases. By Fessenden N. Otis, M.D., Clinical Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons, New York; Surgeon to Charity Hospital, etc. Bermingham & Co., New York, 1883, 8vo, 600 pages, cloth, beveled, price \$4.50.

What may be termed the new school in the pathology and treatment of Syphilis and the Genito-Urinary Diseases, notably new in the pathology of syphilis and the treatment of stricture of the urethra, has had its primary and chief exponent in the author of these lessons.

The author states that "no attempt has been made to make the work a systematic general exposition of genito-urinary diseases. The aim has been, chiefly, to present clinical cases, selected as typical and practical, which have been subjects of observation and study in his private practice, and clinics, and such additional material illustrative of important practical points and experience in the treatment of such cases as could be readily commanded."

Under this unpretentious guise, however, is embodied the gist of that embraced in his former treatises on syphilis and stricture of the urethra. Moreover, the views there presented have been here carefully elaborated and perfected and corroborated by the citation of additional cases and quotations from the recorded experience of various modern authorities, home and foreign.

It is not our purpose here to critically analyze these views, already pretty generally known, but rather to present to our readers an outline of the nature of the book, to be filled in by their subsequent perusal and study.

It may be stated, however, that the author's views regarding the nature of syphilis are based on deductions drawn from irrefutable pathological, histological, and physiological facts, and that they are sufficiently novel and convincing to claim the attention of the syphilographer.

The question of the radical cure of stricture by internal urethrotomy, which has been before presented by the author, is here comprehensively discussed.

Beyond these two questions the views maintained approach more nearly those of other authorities. We must remark, however, in the consideration of genito-urinary diseases, that the general motive of the book, its apparent chief purpose, to confine discussion to the practical aspects of the various subjects treated of, has tended to render the work far more valuable from a practical point of view for a book of reference.

It is perhaps in the domain of treatment that the

majority of practitioners will be most interested, and in this portion of the work the author has followed up the statement of general principles of treatment by minute, detailed directions, inserting formulary, and suggesting appropriate treatment for each stage of disease.

In the consideration of gonorrhœa a departure is made from some accepted authorities in maintaining the mild nature of the disease and advocating the less severe and simple methods of treatment.

Though it does not aspire to take rank as a standard text book, the work seems so replete with the elements of instruction, that constitute the chief worth of a text book, and is moreover so comprehensive as regards its general scope as to answer admirably for this purpose.

To the large number who have listened to Dr. Otis as a teacher or who have become converts to his views on genito-urinary diseases, his exposition of them in book form will be gladly welcomed.

Insanity.—Its Classification, Diagnosis, and Treatment.—A Manual for Students and Practitioners of Medicine. By E. C. Spitzka, M. D., Professor of Medical Jurisprudence, and of the Anatomy and Physiology of the Nervous System, at the New York Post Graduate School of Medicine, President of the New York Neurological Society, etc. Bermingham & Co., New York, 1883. 8vo, pp. 415. Cloth, Beveled, Price \$3.00.

The present treatise is modestly designed "to direct the attention of the general practitioner to such of the salient points of psychiatry as he may be reasonably expected to familiarize himself with."

Certainly no one who studies it, but will consider this end more than achieved.

In a little more than four hundred pages the author has condensed an exceedingly careful and valuable review of insanity in its protean aspects.

The book gives evidence of painstaking analysis, thorough familiarity with the literature of the subject, German and French, and as well, an intimate appreciation of its practical bearings, and the importance it has assumed from the increased study devoted to it at the present day.

The consideration of the subject is divided by the author into three parts—Part I discussing the general characters and the classification of Insanity; Part II, the special forms of Insanity; and Part III, Insanity in its practical relations.

Among the divisions of the subject treated of, the following chapters will no doubt be of special interest to the general practitioner:—

How to examine the Insane.—The Differential Diagnosis of the Forms of Insanity.—The Recognition of Simulation.—The Physical Causes of Insanity.—The Psychical Causes of Insanity.—The Medicinal and Dietetic Treatment of Insanity.—The Psychical Treatment, and Management of the Insane. All subjects pregnant with practical interest.

The views maintained are illustrated by the citation of typical cases, the morbid anatomy by microscopic sections.

The book is written in a style terse, yet pleasing, and in its thoroughness and general clearness of presentation and arrangement does credit to the writer. It has a comprehensive index and will form to the student and practitioner a ready means of reference such as is furnished by no work on this subject that we have met with.

The Diagnosis and Treatment of Diseases of the Ear.
By Oren D. Pomeroy, M. D., Surgeon to Manhattan
Eye and Ear Hospital, etc. Birmingham & Co.,
New York, 1883—870—400 pages Cloth, Beveled.
Price \$3.00.

The great principle of the division of labor, which has been so actively manifested in the medical profession during the last quarter of a century, by which the several departments of medicine have been divided into specialties, each of which receives the attention and devotion which formerly it was only possible to give to all, has created a mass of newly acquired knowledge which finds expression in the special literature of the day.

Not the least important of the specialties is that which embraces the study of the diseases of the ear.

To the diagnosis and treatment of this class of diseases this book is devoted. It embodies the experience of an aural surgeon of large experience, who has taken an active interest in the advancement of his branch of medical science, and who therefore speaks with authority on the questions relating to it.

The book is written essentially from a practical standpoint, questions of theory being omitted and the primary definitions and general considerations being laid down; the discussion is chiefly confined to those points in diagnosis and treatment which are essential to the understanding of diseases of the ear.

No attempt is made to pad the book with lengthy quotations from other authors, as is so often the case in books covering a subject about which so much has been recently written, but the results of the author's clinical experiences and the rules deduced from this source are clearly presented.

There is perhaps a positiveness of statement about certain facts in the treatment of aural disease and in aural surgery, which are still regarded as *sub judice* by other authors, which may offend the tender susceptibilities of other writers, but which must characterize statements, which are presented as firm convictions and opinions confirmed by clinical research. This method of writing is a relief from the dilletantism which is the spirit in which many books are written, which dallies with the theories of past and contemporary writers but hesitates to proclaim with clearness and certainty the author's own opinions.

To the general practitioner who has had no special education in the diagnosis and treatment of diseases of the ear, this class of cases is often most puzzling, and to him a book that defines, describes, and directs to intelligent treatment has been a desideratum.

The book is illustrated wherever illustration aids in impressing the verbal picture attempted to be conveyed.

It is conveniently arranged, and completely indexed and deserves acceptance and appreciation from those who desire to inform themselves on this subject.

FORMULARY.

REMEDIES AND REMEDIAL AGENTS FOR USE IN THE TREATMENT OF SYPHILIS AND CHANCROID.*

FOR LOCAL APPLICATION TO THE INITIAL LESION OF SYPHILIS.

In the non-ulcerative forms, the indurated papule, and the dry scaling patch.

No. 1. White precipitate ointment, vaseline, equal parts; or,

No. 2. The mild mercurial ointment; or,

No. 3. The oleate of mercury, 6 per cent. solution, with vaseline; equal parts.

Apply by gently rubbing in a small quantity morning and night.

IN ALL UNCOMPLICATED OPEN INITIAL LESIONS.

No. 4. Calomel pure, dusted on and protected by a thin film of borated cotton; or soaking the cotton with the following solution, and apply; or,

No. 5. Calomel 20 grs.; lime water 4 ounces; mix; or,

No. 6. Corrosive sublimate, 10 grs.; lime water 6 ounces; mix.

FOR THE INFLAMED LESION.

Diluted solution of sub-acetate of lead, 4 ounces.

No. 7. Aqueous ext. opium, 10 grs.; or,

No. 8. Iodoform 30 grs., glycerine, 1 ounce; oil of roses 1 drop, mix; apply on lint.

FOR THE PHAGEDENIC OR GANGRENOUS FORM.

No. 9. Iodoform, a sufficient quantity, 1 drop of the oil of roses to 30 grs.; applied freely.

INTERNAL REMEDIES FOR TREATMENT OF SYPHILIS FROM DATE OF INITIATION, FOR AT LEAST TWELVE MONTHS.

No. 10. Blue mass 60 grs.; exsiccated sulphate of iron 30 grs.; make 30 pills (pil. duplex) one three times a day; or,

No. 11. Protoiodide of mercury, exsiccated sulphate of iron 40 grs.; aqueous extract of opium, 4 grs.; mix, make 40 pills, one three times a day.

EXTERNAL APPLICATIONS FOR INUNCTION.

No. 12. The mild mercurial ointment; a piece as large as a filbert rubbed in thoroughly, morning and night; or,

No. 13. Oleate of mercury, 10 per cent. solution; vaseline an equal quantity; a teaspoonful rubbed in, morning and night, always in a fresh and protected place.

FOR MERCURIAL FUMIGATION OR THE MERCURIAL BATH.

No. 14 calomel (resublimed) 15 to 30 grs.; nightly, or every two or three nights, until its specific effect is obtained. Further directions on page.

AFTER THE TWELFTH MONTH, THE MIXTURE OF THE BINIODIDE OF MERCURY AND THE IODIDE OF POTASSIUM.

No. 15. Biniodide of mercury, 3 grs.; iodide of potassium, 120 grs.; tincture of orange peel 1½ ounces;

* Extracted from "Practical Clinical Lessons on Syphilis and the Genito-Urinary Diseases." By F. N. Otis, M.D. Published by Birmingham & Co., New York.

syrup of orange peel $1\frac{1}{2}$ ounces ; distilled water, up to 8 ounces ; mix ; a teaspoonful three times a day, or if gastric or intestinal irritation ensues—

No. 16, Biniodide of mercury, 3 grs. ; iodide of potassium, 120 grs. ; fluid extract of thuja, 8 ounces ; mix ; a teaspoonful three times a day.

In addition to the foregoing,

DURING THE SEQUELÆ OF SYPHILIS.

No. 17, Iodide of potassium, 1 ounce ; distilled water, 6 drams ; mix.

● Beginning with 5 drops in a small glass of water, or preferably of milk, increasing by a drop for each dose, gradually increasing the diluent to a tumblerful, until sixty drops are taken, equivalent to 60 grains of the iodide of potassium, three times daily, after meals, unless iodism occurs. In this case begin again with the minimum dose, and increase as before up to 40 drops, and then increase by 1 drop, until 60 grains is again reached. If decided benefit does not take place, the quantity may be even farther increased up to twice that amount, in grave cases, and continued, if well borne, until all signs of the disease have disappeared.

If the iodide of potassium is not tolerated, the following may be administered.

No. 18, Iodine 24 grs. ; distilled water, 2 ounces ; iodide of potassium, 48 grains ; dissolve and add common molasses, or Stuart's syrup, 8 ounces ; let it stand 12 hours. Administer from a dessert spoonful gradually increased to a tablespoonful, thrice daily after meals.

IN THE ALOPECIA OF SYPHILIS.

The following lotions will be found serviceable :

No. 19, Bi-chloride of mercury, 3 grains ; hydrochloric acid, 30 minims ; distilled water, 8 ounces ; then add, spirits of cologne, 1 ounce ; rose water, 1 ounce ; glycerine, $\frac{1}{2}$ ounce ; mix or,

No. 20, Castor oil, $1\frac{1}{2}$ ounces ; rectified spirit, $1\frac{1}{2}$ ounces ; spirit of cologne, 1 ounce ; tincture of cantharides, 2 drams ; mix, apply nightly, washing the hair every morning with castile soap.

FOR LOCAL APPLICATIONS IN THE TREATMENT OF CHANCROID IN THE SLOWLY DESTRUCTIVE FORMS.

No. 21, Sulphate of iron 10 grains ; aqueous extract of opium, 10 grs. ; distilled water to 1 ounce.

No. 22, Carbolic acid, 5 to 10 grains ; solution of morphia (U. S. P., containing one grain of morphia), one ounce, if the secretion is profuse.

No. 23, Iodoform and tannic acid equal parts, dusted on ; mix, in the more acute forms.

No. 24, Iodoform, 60 grains ; vaseline, 60 grains ; oil of roses, 1 drop ; or,

No. 25, Iodoform, 60 grains ; oil of roses, 1 drop ; apply in powder ; or,

No. 26, Iodoform, 1 dram ; carbolic acid, 1 minim ; oil of peppermint, 6 minims ; mix.

FOR DESTRUCTION OF THE CHANCROID, OR PHAGEDENIC CONDITIONS.

Nitric acid, pure ; galvano-cautery, or the thermo-cautery.

FOR SLUGGISH CONDITIONS.

No. 27, Permanganate of potassa, 2 grains ; distilled water, 1 ounce.

No. 28, Carbolic acid, pure, applied daily ; or,

No. 29, Carbolic acid, 10 grs. ; glycerine, 2 drams ; mix ; apply on a thin film of cotton.

FOR APPLICATION TO BUBONIC ULCERS, AND SINUSES.

No. 30, Tincture of iodine, pure ; and, for arrest of suppuration in any case.

No. 31, Sulphate of calcium, 1 grain ; distilled water, 2 ounces ; a teaspoonful every hour, solution to be freshly made every day ; or,

Parvules, $\frac{1}{10}$ grs. each.

FOR APPLICATION OF THE PHAGEDENIC CHANCROID.

No. 32, Hot water immersion, temperature, 100° F. ; actual cautery ; charcoal poultices. Internally (Ricord's formula).

No. 33, Potassio tartrate of iron, $\frac{1}{2}$ ounce ; distilled water, 3 ounces ; syrup, 3 ounces ; mix ; a dessert-spoonful to a tablespoonful every six hours, preferably after meals.

SELECTIONS FROM JOURNALS.

ABSENCE OF VAGINA, UTERUS, OVARIES. ENORMOUS DISTENSION OF URETHRA, WITHOUT INCONTINENCE. By JAMES F. FERGUSON, M.D., Visiting Surgeon to the Charity Hospital, N. Y.

History.—C. M., a prostitute admitted October 25, 1881. Father is consumptive ; mother died of pulmonary hæmorrhage. The patient was the tenth child. The youngest sister, the thirteenth, menstruated when 9 years of age.

Previous History.—Denies all previous venereal trouble : although 18, has never menstruated, nor does she give any history of vicarious phenomena.

Present History.—Noticed a pimple on the posterior commissure at the time of admission, followed by a discharge, with scalding on micturition. There were three small chancroids in the posterior commissure. The chancroids were touched with carbolic acid and dressed with iodoform. On the 29th of November, the parts having healed, a further examination was made, when no vagina was found ; the meatus urinarius and urethra were very much enlarged. The sores above mentioned prevented an earlier examination.

The labia are well developed.

At my request an examination was made by my friends Dr. Walter R. Gillette and Dr. E. S. Peck. We failed to find a uterus or ovaries. Investigation was made by the finger in the urethra ; also bimanual touch through the rectum, and by sounds.

The outer portion of the urethra was greatly dilated ; she did not have incontinence of urine.

She was well developed—breasts well formed, also the nipples. The mons of normal size. The labia nymphæ and clitoris presented the usual appearance.

In this very remarkable case the unusual feature is exhibited of a urethra largely distended, with no incontinence of urine.—*The Planet.*

APOMORPHIA, A SAFE, CERTAIN, AND QUICK EMETIC.

Mr. Brown, L.R.C.P., of Bacup, writes :

It has occurred to me, in several cases, to have patients who have been obnoxious to ordinary emetics. The emetic has caused nausea and depression, but no emesis. A few weeks ago, two cases of this kind occurred in my practice. One was a man who had been drinking and eating indigestible food. Domestic

emetics had been given, which had produced nausea and ineffectual attempts at vomiting. It occurred to me that apomorphia, used hypodermically, might succeed. I prepared a solution containing a grain of chloride of apomorphia, twenty minims of rectified spirit, and water to two drachms, of which I administered ten minims hypodermically, which equals one-twelfth of a grain. In seven minutes it produced free and copious vomiting. There was no nausea, nor depression, nor intolerance of food. The other case was a man who was a total abstainer. Patient had loaded his stomach with a mass of indigestible food, which had caused acute pain in the stomach. He had tried domestic remedies without success. Pain was so severe, that I was called up at night. The other case having been so successful, I at once administered ten minims of the solution. In two minutes, without any previous nausea or warning, the contents of the stomach were violently ejected on the floor, the patient not having time to get a vessel to vomit into. This was repeated two or three times at short intervals, and the patient had speedy relief. In this case, there was no nausea or bad after-effect.

From inquiries which I have made, I am convinced that the value of apomorphia as a safe, certain, and quick emetic, is not appreciated, because not known. In cases of alcoholic and narcotic poisoning, it is a most valuable remedy, and, judging from my experience in one case, the emesis is delayed a few minutes. In cases of acute gastralgia, and convulsions in children due to overloaded stomach, apomorphia will prove a speedy cure. I have given one-sixth of a grain of the drug to children by the mouth without producing any effect whatever.—*British Medical Journal*.

A CASE OF CYSTOCELE COMPLICATING LABOR.

Mr. John H. Whitham, L.R.C.P.Ed., of Haworth, writes:

On January 10th, a patient of mine, who was pregnant, complained to me that she had had "bearing-down pains" in the lower part of her body, and that she thought something had given way. I made a digital examination, and found a tumor protruding through the vulva. I could pass my finger behind it, and could recognise the os uteri high up and looking backwards; but anteriorly the tumor was attached. I concluded that it was a case of cystocele, and ordered my patient to preserve the recumbent posture, making frequent use of the catheter myself, to prevent accumulation and decomposition of urine. The case went on without any inflammatory symptoms until labor set in on the 29th ultimo. Early in the labor, the bladder and rectum were emptied. As the patient had

a very roomy pelvis, I found that at first I could replace the tumor, and hold it up above the pubes by means of two fingers; but, as the pains became more intense, I was obliged to withdraw my fingers, and, in doing so, the bladder followed them. I then consulted Dr. Dobie, of Keighley, and the result was that I gave the patient a full dose of ergot, placed her in the knee-elbow position, replaced the tumor and held it in position until the next pain brought down the head well into the pelvis. After this, there was no further trouble; the case was quickly and easily terminated without further complication.

I have reported this case, not because any extraordinary treatment was adopted, but because I had to deal with a complication which is apparently rare, since I have fruitlessly consulted on this point several well known midwifery books.—*British Medical Journal*.

IMPERFORATE HYMEN PERSISTENT IN LABOR.

Mr. H. Grey Edwards, B. A., M. B., B. Ch., of Bangor, writes:

At 11 P. M., April 25th, 1883, I was called to see S. O., primipara, aged 32, said to have been in labor since Monday morning, the 23d ultimo. I found the patient suffering from severe "pains." On digital examination, I was somewhat surprised to find that the orifice of the vagina was completely closed by a tough membrane. Anteriorly, it was comparatively thin, and attached to the edge of the vaginal orifice, whence it sloped gradually backwards until, at the posterior wall, it was attached an inch and an half from the orifice. Here it was very thick, and gave the same sensation to the finger as the walls of the vagina itself. The foetal heat could be easily felt through the tissue, which was perfectly lax, resisting all efforts at rupture with my finger.

Having decided to give the uterus time to do its best, I left, calling again at 4 A. M.; but, though the pains had been strong and frequent, things were much in the same condition. By sawing with my nail at the thinnest part, I eventually got the end of my finger in, and tore the hymen by drawing the finger backwards, until about halfway across, but I could not manage it further. I then waited an hour, in the hope that the remaining half would not be sufficient obstruction to delivery; but, "pains" becoming short and slight, I put on a forceps, and delivered without difficulty. The patient is going on satisfactorily.

I have reported this case under the belief that such a tough condition of hymen is most unusual.

It is medico-legally interesting, that one single act of copulation, in spite of the seeming difficulties of the case, sufficed for impregnation.

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FIFTH CONVERSATION BETWEEN DRS. WARREN AND PUTNAM.

Dr. Warren.—You seem to think, Doctor, that one of the great duties of the code is, to take in its gentle but strong arms the weakly lambs and to coddle them: to build around them a high fence, to prevent them from tumbling into pitfalls; and to dry nurse them when they are taken from the breast of their Alma Mater.

Dr. Putnam.—I do, Doctor.

Dr. Warren.—If this is one of our duties as medical men, I think we ought to publicly advertise ourselves as professional nurses for sickly and badly disciplined babes, under the sign of the nursing bottle and sipper.

Dr. Putnam.—I am glad to see that you have that nice sense of humor which enables you to see the funny side of a serious proposition. Have you ever read Hahnemann's *Organon de Medicini*?

Dr. Warren.—No, Doctor.

Dr. Putnam.—Then I will ask you to read at your leisure, a few paragraphs which I have copied somewhat at random, from this famous work, written by the originator and founder of the school of moonshiners. You will find in them much which your love of humor will enable you to appreciate.

It was this funny side of the Hahnemannic doctrines—and indeed there seems to be no other side to his doctrines—which eventually, under the continued assaults of the satirists, drove his disciples, one after another, to renounce moonshine; so that to-day it is quite exceptional to find among them a man who will openly confess that he has any faith in that fundamental portion of the Hahnemannic teaching, or any other portion of his doctrines, except the doctrine of *Similia Similibus Curantur*.

They could successfully withstand the assaults of argument, inasmuch as there was nothing in Hahnemann's doctrines to argue about. It was safely anchored

beyond the natural limits of argument; but they could not hold out when they saw the finger of ridicule pointed at them from every direction.

The doctrine of "Similia," etc., they saw, also, could not be applied practically when they renounced the infinitesimal doses, without again subjecting themselves to ridicule; nor indeed, in many cases without hazarding the lives of their patients. So they retained their three Latin words as their trade-mark, and for no other purpose. In its application to their practice, it has no more meaning than the famous talismanic word of the ancient Roman quacks ABRACADABRA.

Dr. Warren.—You intimated, Dr. Putnam, that there were other reasons why, in this country a code of ethics is more needed than in Europe.

Dr. Putnam.—Yes. Our peculiar institutions have created a peculiar people. In very many respects we differ from any other people in the world. Every observing foreigner recognizes the fact; and what is true of our manners and customs and habits of thinking in general, is true in matters pertaining to the cure of disease. In this matter, also, the people have their own peculiar way of thinking and reasoning. It is not necessary for my present purposes that I should explain to you satisfactorily the causes of these peculiarities, but I am only required to convince you that they exist; and to this end I need only refer you to the well known fact—well known to medical men, and often referred to by them—that quackery has always found here a genial soil for growth and propagation.

Dr. Warren.—There is more intelligence among our people than is usually found among the people of other civilized States, and there ought to be less inclination to run into quackery.

Dr. Putnam.—Intelligence, or a knowledge of matters in general, is much more widely diffused here than elsewhere; but you will excuse me, doctor, for saying that I am not attempting to show you what ought to be, but what is the fact; and the fact is that medical charlatanism has always prospered in this country.

Dr. Warren.—There is no country in Europe or in either of the four quarters of the globe, where charlatanism has not flourished, and does not continue to flourish. Throughout most Catholic countries the people resort to shrines and churches and saints—to pictures and bones of saints—to holy relics, to amulets, to holy water and consecrated beads to cure their maladies. Protestant countries also have always had and still have their peculiar forms of medical charlatanism—as for example the "Royal touch" of the English Sovereigns, whether Catholic or Protestant, from the time of Edward the confessor down to Queen Anne.

I will send you to-morrow a memorandum of a few of the European varieties of medical charlatanism, and I think you will see that the soil of Europe and of most other countries is quite as well suited to the propagation of medical delusion as ours.

* "Diseases are *dynamic* (spiritual) aberrations, which our *spiritual* existence undergoes in its mode of feeling and acting—that is to say, *immaterial* changes in the state of health." p. 19.

(As diseases are all considered dynamic, so the medicine must be rendered dynamic.)

"A homœopathic dose, however, can scarcely ever be made so small as not to amend and indeed perfectly cure, etc." p. 157." "It will stand good as a homœopathic rule of cure, refutable by no experience what-

* Quotations from the *Organon de Medicini*, First Am. ed. Philadelphia, 1836.

ever, that the *best dose* of the rightly selected medicine is ever the *smallest*." p. 187. The medicines cannot be prepared in two minute a dose. p. 192. The appropriation of a medicine depends "also upon the *minute* quantity of the dose which is administered." p. 202.

Medicines are prepared thus:—two drops of the medicine are diluted with 98 of alcohol, which, when *twice* shaken, is exalted in power to 1st *potence*. The same process is to be continued through 29 other phials—taking 2 drops from each preceding phial, and adding to the 98 of each succeeding phial—giving each just two shakes.—"These manipulations are to be conducted thus through all the phials, from the first up to the 30th, or decillionth development of power, which is the one in most general use." p. 200.

The effect of shaking, on homeopathic medicines, "is so energetic, that latterly I have been forced by experience to reduce the number of shakes to two, of which I formerly prescribed 10 to each dilution." p. 205.

"The best mode of administration, is to make use of small globules of sugar, the size of a mustard seed:—one of these globules having imbibed the medicine, and being introduced into the vehicle, forms a dose containing about the three-hundredth part of a drop; for three hundred of such globules will imbibe one drop of alcohol." (It is to be understood that this drop of alcohol contains but an infinitesimal quantity of medicine, or the *decillionth* dilution.) "By placing one of these on the tongue, and not drinking anything after it, the dose is considerably diminished. But if the patient is very sensitive, and it is necessary to employ the smallest dose possible, and attain at the same time the most speedy results, it will be sufficient to let him *smell* once." p. 207.

"Hep. Sulph. (flower sulphur) 'can rarely be given in substance'" (thus diluted,) "or by smelling, at shorter intervals than every fourteen or fifteen days." p. 190.

The directions for *using* are as follows: "The patient should hold the phial containing the globule under one nostril, when one momentary inhalation of the air in the phial is to be made; and if the dose is intended to be stronger, the same operation may be repeated with the other nostril." p. 191.

Mesmerism is considered a homeopathic remedy by Hahnemann. "This curative power, of whose efficacy none but madmen can entertain a doubt—which through the powerful will of a well intentioned individual, influences the body of the patient by the touch, acts *homeopathically*, by exciting symptoms analagous to those of the malady." p. 210.

42 INDEPENDENCE SQUARE, July 4, 1883.

DOCTOR PUTNAM:

My Dear Doctor—I do not think I have a grain of superstition in my composition, but I cannot help remarking the circumstance that I am writing this letter, relating incidentally to the subject of freedom of opinion and action, on the day consecrated to freedom and sacred in the hearts of all true American citizens, and in full view also of the Liberty Pole erected by our patriot fathers in what was at that time the only public square in our city.

In fulfilment of my promise that I would give you a few facts of history in order to convince you that medical charlatanism is not peculiar to our country. I beg leave to call your attention to the following statements and historical notes, authenticated by my own personal observation and my casual reading:

When I was in Sicily some years since, I visited the

catacombs of the Capuchins near Monreale. In one niche I was shown the skeletons of a grandfather, son and grandson. The Capuchin who served as my guide assured me that whoever touched three times one of these skeletons was speedily cured of any fever with which he might chance to be afflicted. The testimony upon this point, he said, was abundant and conclusive.

Near Palermo, also, are buried the remains of Santn Rosalia, the patron saint of the city, and "more thaa once has this saint, when her bones were carried three times in solemn procession about the city, rescued its inhabitants from the ravages of the plague."

This will stand as an example of what you will find all over Europe, wherever the Roman Church is established, in which countries it would be difficult to find a hamlet so small or remote that it did not have its shrine or relic, famous for the cures it had wrought. Some of these, such as our Lady of Lourdes in France and Knock in Ireland, have recently acquired world-wide reputation.

A few of the churches are very rich in saintly and other holy relics, which are capable of healing the sick, such as the Dom Kirke in Aix La Chapelle, where Carlo Magno was originally buried, this church having no less than fourteen sacred relics. Santa Paulo, in Naples, is the depository of two saints and fifty-two martyrs. Santa Gennaw, in the same city, less endowed so far as the number of its healing relics is concerned, has however the head and blood of the patron saint, the latter of which liquifies miraculously once a year, and at such a time marvelous cures are often wrought.

But let me call your especial attention to the famous church of St. Medard, in Paris, where St. Paris, the Jansenist, is buried. Jansen was the real originator of the science of animal magnetism, having preceded Mesmer by a century or more. In this church the "convulsionists" for more than twelve years; and here were enacted miracles which rival in marvellousness anything which Mesmer ever achieved. The subjects were uniformly females, and they came to the sepulchre of the sainted Paris for a cure for their various maladies. When under the Influence of the mysterious and supernatural agency they declared themselves insensible, and falling upon their backs they would call upon the "Freres" to throw large paving stones upon them and to jump upon them; and when the blows were suspended they would cry out "encore, mon chere Frere, encore." At last, in 1732, at the instance of the King, the public authorities interfered, and the persecuted Convulsionists placed the following placard over the church door:—

"De par la Roi, defense a Dieu
De faire miracle en ce lieu."

In the Catholic Calendar of Saints, it is more or less understood that St. Apollonia is especially skilled in the cure of tooth-ache, St. Martin in the treatment of scabies, that St. Hyacynth ensures against sterility, and that St. Fiage is particularly skilled in a speciality, which I will not name.

But it is not alone in, the Catholic Church that such medical superstitions prevail. They will be found existing to a certain extent—greater or less—in different sections of the country, and among different nations. In the Greek Church and the Protestant, although in the latter, as for example in Scotland, while they retain usually their supernatural character, they are in general not so intimately connected with their religion.

Mahomedans and Pagans of every variety and shade of religious beliefs, have their national and hereditary superstitions in reference to the cure of disease.

I am, however, extending my letters to a greater length than I had intended; and not to weary your patience, I will call your attention to only one more signal example, in a country partly Catholic and partly Protestant, and among a people highly refined and intellectual.

It is well known, by most medical men, and I presume it is to you, that the kings of England, from the time of Edward the Confessor (1041) down to the time of George 1st (1714) professed to cure scrofula by the touch—"tactus regalis"—and also that many of the kings and queens of France claimed the same power.

In England the belief was almost universal, even among the most learned—indeed, to doubt was considered infidel and disloyal—in testimony of which, I quote the following from an old work on Surgery, published during the reign of Charles the 2d, in 1676, by Richard Wiseman, "serjeant-chirurgeon to the king." It was, I believe, the second work upon surgery published in England; and Wiseman was justly esteemed the most eminent surgeon of his day.

I will copy so much of the chapter as may be necessary to show how general was the belief, and how firm was the author's conviction, and also the mode of argument employed by the skeptics; omitting, however, his discussion as to whether the king of France also possessed the power, which he seems to doubt:

By others we are told that King Charles the second cured by his touch in 5 years 23,621 cases of scrofula! But in George the first the power was lost—or rather, we should say, in his reign it was transferred from the king to the finger of an executed felon! and even to this day, many of the lower classes in England, afflicted with this malady, resort to the gallows for the purpose of being cured!

"Chap. I.—Of the cure of the Evil by the Kings' touch.

What great difficulty we meet with in the Cure of the King's-Evil, the daily experience both of Physicians and Chirurgeons doth show. I thought it therefore worth my while to spend a whole Treatise upon the subject, and very particularly to go through the description of it, informing thereby the young Chirurgeon whatever is requisite to the Cure, at least as far as it cometh within the compass of our Art. But when upon trial he shall find the contumaciousness of the Disease, which frequently deludeth his best care and industry, he will find reason of acknowledging the goodness of God; who hath dealt so bountifully with this Nation, in giving the Kings of it, at least from the Confessor downwards, (if not for a longer time) an extraordinary power in the miraculous Cure thereof. This our Chronicles have all along testified, and the personal experience of many thousands now living can witness for His Majesty that now reigneth, and his Royal Father and Grandfather: His Majesty that now is, having exercised that faculty with wonderful success, not only here, but beyond the Seas in Flanders, Holland and France itself.

"But it is not my business to enter into Divinity-Controversies: all that I pretend to, is, first the attestation of the Miracles; and secondly, a direction for such as have not opportunity of receiving the benefit of that stupendious Power. The former of these, one would think, should need no other proof than the

great concourse of Strumous Persons to White-hall, and the success they find in it. I myself have been a frequent Eye-witness of many hundreds of Cures performed by His Majesty's Touch alone, without any assistance of Chirurgery; and those, many of them, such as had tired out the endeavors of able Chirurgeons before they came thither. It were endless to recite what I myself have seen, and what I have received acknowledgments of by letter, not only from the several parts of his Nation, but also from Ireland, Scotland, Jersey, and Guernsey. It is needless also to remember what Miracles of this nature were performed by the very Blood of his late Majesty of Blessed Memory, after whose decollation by the inhumane Barbarity of the Regicides, the Reliques of that were gathered on Chips, and in Handkerchiefs, by the pious Devotees, who could not but think so great a suffering in so honourable and pious a Cause would be attended by an extraordinary assistance of God, and some more than ordinary Miracle; nor did their Faith deceive them in this point, there being so many Hundred that found the benefit of it. If his dead Blood were accompanied with so much of Virtue, what shall we say of his living Image, the Inheritei of his Cause and Kingdom? whom though it hath pleased God to deliver out of those dangers that overwhelmed his Royal Father; yet it was with so long an exercise of afflictions, that though (God be thanked)."

Yours truly,

WARREN.

DR. HOLMES ON HOMŒOPATHY, AND ITS KINDRED DELUSIONS.

Houghton, Mifflin & Co., of Boston, have just published a series of medical essays written between the years 1842 and 1882, by Oliver Wendell Holmes. The first of these essays is entitled "Homœopathy and its Kindred Delusions." The kindred delusions to which he refers are, Tactus Regalis, or the Royal Touch, practised so successfully by all the Kings and Queens of England, from the time of Edward the Confessor down to Queen Ann; the Unguentum Armarium and Sympathetic Powder, which healed wounds by being rubbed upon the weapons which inflicted the wounds; Bishop Berkley's tar-water panacea and Perkins' Metallic Tractors; which latter won for themselves a widespread reputation in this country and England, notwithstanding the fact that Perkins was not a distinguished foreigner (nearly all foreigners are distinguished) but only a shrewd Yankee doctor. In support of these absurd delusions were presented in their day, the testimony of learned men, statesmen, lawyers and especially of clergymen. The pharmacopœia of Homœopathy—the King of Delusions,—Dr. Holmes describes in his usual pithy style, as "Sugar pellets and a nomenclature."

Our esteemed cotemporary, the *New York Times*, commenting upon the various popular delusions described in Dr. Holmes' book says:—"All of which, in their respective days, were supported by numerous certificates of wondrous cures from the nobility and clergy, and under each of which—*post ergo propter*—many persons undoubtedly recovered from their ailments; just as to-day there are people, otherwise sensible and educated, who attribute the negative fact of a baby's freedom from fits to the supreme efficacy of an amber necklace, or their own immunity from rheumatism to the pocketing of a horse-chestnut. This sparkling yet earnest lucubration was long out of print,

and its present revival seems apt in view of the wrangling in our medical societies between the "old code" and "new code" partisans, to the refreshment of whose memories it may be respectfully commended."

"Wrangling," forsooth which gentle admonition is intended, we suppose, in part, for those medical men who have recently entered their protest against admitting to fellowship men who have altogether lost their senses, and thus converting our guild into an asylum for the insane; and which admonition comes with special grace from a member of the "fourth estate." When was the editor of a newspaper ever known to engage in that form of excited and undignified controversy called "Wrangling?" Never. Nor can we doubt, that if the very much respected editor of the *Times* had been asked by his medical adviser to admit into his sick chamber, as associate counsel, a doctor belonging to the Chestnut-in-the-Pocket School or Sect, he would consent cheerfully; and that he would not "wrangle" over the consultation fee, inasmuch as between him and the "new-school" man the pleasure and profit would be mutual. Each would have in his pocket something which he had not there before.

LORD BYRON'S FEET.

Mr. John Cordy Jeaffreson has written a book entitled "The Real Lord Byron. New Views of the Poet's Life," which has just been published by Osgood & Co. We have not seen the book, but according to the *New York Herald*, which is usually accurate in its literary notices, Lord Byron has been greatly maligned as to the nature of his pedal deformity. He writes as follows:—

"As to the fiction which attributed to Byron that most distressing deformity, a club-foot. Mr. Jeaffreson chronicles the fact that his lameness was due not to such a cause at all, but to the contraction of the tendon Achilles of each foot, which prevented him from putting his heels to the ground and forced him to walk on the balls and toes of his feet. 'Both feet may have been equally well formed, save in this sinew till one of them was subjected to injudicious surgery. . . . The right tendon, however, was so much contracted that the poet was never able to put the foot flat upon the ground; always using for it a boot made with a high heel and fitted with a padding inside under the heel of the foot. This foot was also considerably distorted, so as to turn inwards, a malformation that may have been caused altogether by the violence with which the foot was treated by the less intelligent of the boy's surgical operators.'"

It is scarcely necessary to say to medical men, what Mr. Jeaffreson and the *Herald* may be excused for not knowing, that in the description of Lord Byron's feet given in the passage quoted, we recognize by far the most common variety of club-foot, namely, equino-varus.

The declaration made by Mr. Jeaffreson that what deformity he had might have been overcome but for the injudicious management of his surgeon, Mr. Hansen, probably also rests upon no trustworthy evidence. Until Stromeyer demonstrated in 1831 the practicability of relieving, and sometimes of curing this deformity by cutting the tendon Achilles subcutaneously, equino-varus was seldom much improved by surgical interference. At that time Byron had been dead several years.

LORD BYRON'S POETICAL GENIUS.

The same writer offers the following explanation of Lord Byron's remarkable poetic genius:—

While he was still at Cambridge, already a successful author, and approaching his twentieth year, he resolved to rid himself of his "burdensome and disfiguring grossness." He began the regimen of starvation, Epsom salts and hot baths which he maintained for the rest of his life, and which, while it brought him to striking and unusual physical beauty and elegance, brought him also to such spiritual and intellectual straits as outrages against nature always entail. He systematically sustained life on biscuits and soda-water, and when hunger grew too intense to be bearable he indulged in feasts of potatoes, fish, rice, and vinegar, which gave him agonies of indigestion. He was nearly always suffering from actual pangs of hunger, and drank laudanum and sometimes chewed tobacco to still these pains. The effect on his system was as apparent at first in his sensations as in his appearance. "Relieved of the burden of his superfluous flesh, he could walk with comparative ease and security. And what is even more noteworthy than all the other results of the regimen taken together, is that this discipline of starvation and drastic depletives quickened his brain to such a degree that the man of intellect for the first time knew himself to be something far higher than a man of mere intellect. The goads and whips of the regimen had affected the nervous system, so that he had become a man of genius."

These very explicit, and, we presume, authoritative statements of Mr. Jeaffreson, will open a new field of study to the psychologist. In the case of Lord Byron, Epsom salts and soda water gave him indigestion, to assuage the pangs of which he resorted to opium. Hence his genius for poetry. In corroboration of this view of the case it may be said that other men of genius have suffered from the pangs of indigestion: notably Carlyle and Herbert Spencer. It will be remembered, however, that in the case of the former, Mrs. Carlyle did not attribute his genius to indigestion, but that on the contrary, she regarded it as an impediment. "There is no telling," she said, "what he would have done had he not had indigestion."

There is also at least one famous example of genius for composition associated with the habit of opium eating; but since DeQuincy's day all the young men who have sought to develop genius by eating opium, have made miserable failures.

In case psychologists enter into a study of this matter we beg to suggest that experiments be instituted to determine whether Epsom salts only develop poetical genius, as this was the only genius Byron was known to possess. Possibly it may be found, also, after experimentation, that jalap produces a genius for sculpture, and scammony for painting.

Seriously, however, we are inclined to think that Mr. Jeaffreson has been indulging in what he speaks of as a favorite amusement of Lord Byron when talking with his companions over his cups, namely, "bam," a term which he defines as saying things "which no one but a simpleton would believe." We think Mr. Jeaffreson has been talking "bam."

OLD FOGYISM.

"The Vienna correspondent" of the *Quinologist* thinks that the progress of medical science is greatly retarded in America by "old fogyism." For example, he says that in Vienna females are exposed naked before large classes of medical students, in order to ena-

ble young men to study eruptive diseases; a thing which he does not think medical men in this country would tolerate, to say nothing of the opinion of the public in this matter.

Viewed in the light of modern civilization, perhaps it would be better to say of us that we are too progressive rather than that we are suffering from old fogyism. The females of most of the savage races expose themselves to the observation of men with little or no clothing upon their bodies. Female modesty, and its associate virtue, chastity, have generally been observed to be one of the natural outgrowths of progressive civilization. But whether the American sense of decency is old or new, it is quite true, as the writer intimates, that it is not always in harmony with European sentiment. It may be said that, in relation to the question of the decency or indecency of exposing either males or females publicly, in a state of absolute nudity, to assemblages of persons of the opposite sex, the so-called old fogyism of Americans is in harmony with the public sentiment of all English-speaking races. If, therefore, it stands in the way of scientific progress in America, it does to the same degree in Great Britain and in many other equally civilized countries. In none of which would the public exposure of women, in the manner described by the correspondent, be tolerated. We feel no regret that our training and education have led to these results.

The famous Mannekin-Pis (a term which no one would venture to translate in the presence of a respectable American woman) has stood for centuries in one of the most public streets of Brussels, and from which countless maidens have drawn water without the aid of a catheter; but the American-born citizens of New York would probably never consent to its being placed in Madison Square as a public fountain.

There are a good many foreign social customs and practices, also, which we do not wish to see transferred to this country.

Returning to the question of progress in medical science: we think there are some things to which it may be temporarily and in a certain degree subordinated. A small scientific achievement may be properly subordinated to a great moral principle. This has long been accepted in law, and it is equally true in medicine; but, to speak the truth, we do not think that the interests of Medical Science are in any degree advanced by exposures such as the writer referred to has described, or by exposing women in the act of childbirth, naked, to the eyes of medical students. The cutaneous diseases, and the parts exposed, are seen at too great a distance to render the observations accurate or instructive. In other words, the exigencies of medical science make no such demands upon female modesty. The exhibitions are only sensational, and never useful. Medical men cannot be too solicitous to prevent the taint of vulgarity, indecency, or of total disregard of refined social sentiment, from attaching to their calling.

ORIGINAL ARTICLES.

SOME POINTS ON THE MORBIFIC EFFECTS OF MECHANICS, PHYSICS, AND BACTERIA.

BY

J. S. WIGHT, M.D.,

Prof. of Operative and Clinical Surgery at the Long Island College Hospital.

I once had a patient, who had fallen from the mast of a vessel, about sixty feet, on the deck, and the effect was only moderate shock. He was up and going around in a few days. The reason that this patient, who was a young man, had suffered so slight an injury was because he had been caught and eased down in his fall by a rope so attached that it yielded somewhat slowly to the impact and pressure of his body, which was in a measure gently deposited on the deck. Had this patient fallen without interruption, he would no doubt have been fatally injured, and perhaps killed outright.

At another time I had a patient, sixty-two years of age, who fell about fifteen feet and dislocated his spine betwixt the eleventh and twelfth dorsal vertebræ, and died in a few days. This was the only injury he received. Reduction of the dislocated bones was made, but the cord had been damaged beyond remedy, by the patient falling a moderate distance.

Again I had a patient, who had ankylosis of an angular curved spine and the results of a moderate double morbus coxæ. He fell some fifty feet, receiving a severe shock, but broke no bones. In a short time this patient could go about as well as ever, showing that there had been no serious injury.

Now, I could add a great number of cases to the ones just noted, proving that an apparently slight fall may turn out to be most serious, and that an apparently serious fall may turn out to be quite slight. But I may say that there is no difficulty in understanding why a person who falls from a considerable height is fatally injured, no matter how long he may linger in distress after the accident. When a man falls from the top of a house on the pavement and breaks the bones of his limbs, chest, or skull, and miserably dies in a few days, we take it as a matter of course, and consider the sequence a natural one of cause and effect. So much for the facility with which we comprehend mechanical causes, relations, sequences, and results.

But if the body falls in another way, goes suddenly over a molecular precipice, has its molecular elements thrown down on a molecular pavement as it were, being at one moment in a temperature of 100 degrees, and at the next moment being in a temperature of 50 degrees, nobody seems to understand and comprehend the cause and effect, nobody seems to appreciate the magnitude and gravity of the disturbed molecular relations, sequences, and results. And yet a few examples will illustrate this point:

In the first place, take the case of an infant who has in its ignorance pulled a pitcher of hot water over, so that the water runs down its chest and abdomen; well there can be no difficulty in comprehending that this little patient will perish in a few days, because of the sudden molecular change that has occurred. In fact, other things being equal, it appears to be more dangerous for an infant to fall from a molecular precipice

than it is to fall from a precipitous height. Surely the effect of the mechanical injury does not leave so continuous and painful impressions on the ends of the nerves of sensation as the effect of the molecular injury. The molecular disintegration of heat is at times especially detrimental to the life of the cells and the individual.

In the second place, take the case of a laborer who has been exposed to the direct rays of the sun, when the temperature in the shade is 95 degrees, and when the temperature in the open, where the sun shines, is 135 degrees. While he is working he is generating fresh quantities of heat which, on account of the elevation of the surrounding temperature, is obstructed in its radiation and accumulates in the body, and at the same time the direct rays of the sun are pouring in more heat, and then no wonder that the molecular activity of the somatic cells augments, and then we can see how it is that the temperature of the body goes up, and that the effect will be fatal; and so we can readily understand why the *sunstroke* throws the physical molecules out of their organic relations.

In the third place, take the case of a man whose body has been exposed to a freezing temperature, when he has scanty clothing, and while he performs insufficient muscular exertion, till the fibres of the tissues are benumbed, so that sense, sensation, and voluntary motion are impaired, and so that the most agreeable insensibility and sleep begin to supervene, and we have a striking example of the strange effect on our organization of the gradual abstraction, or radiation, of molecular motion. But if this radiation, this abstraction, of motion from the somatic elements, when it is gradual, produces such profound effects, what must the effect be when the change is sudden? Indeed, no one can successfully contradict the conclusion, that sudden and considerable changes in atmospheric temperature will have marked morbid tendencies.

And as the body will sustain a moderate degree of mechanical shock from time to time, and as it never becomes adjusted to the environment of severe and continuous impressions of mechanical force, so it will sustain with apparent immunity a certain degree of molecular disturbance, and so it never can become adjusted to the excessive and repeated effects of molecular energy:—In one instance, the cause is apparent and is easily connected with the effect. In the other instance, the cause may not be apparent, and it may not be easily determined from the effect. Any one can see a man fall from a building; but the somatic cells cannot be seen as they are falling from a molecular height. The effects in either case may be notable.

The conclusions to which we are coming may be elucidated and emphasized by the following general considerations:—Other things being equal, when the temperature of the atmosphere is for some time either warm or cold, that is when there are no sudden changes of temperature, the death rate in a community will be in the direction of a minimum; but when there are great and sudden changes in the temperature of the atmosphere, the death rate in a community will be in the direction of a maximum. And in this place, we may note the difficulty of selecting any individual, and affirming that death was caused by the sudden changes of atmospheric temperature. It is extremely difficult to measure and weigh the relations of cause and effect in any one instance. But let us take the aggregate results in a community, and we can arrive at the conclusion, that the molecular disturbances affecting the individual have a marked influence.

In fact we may go further in our analysis of the conditions under considerations: We may suppose that the body is sending out its normal seventeen per cent. of waste products by the skin, and that by a sudden depression of temperature this amount is greatly diminished: The waste products are retained in the community of somatic cells, which are thereby irritated and disturbed in their organic relations: There is not only augmentation of molecular activity in the body, but there is also a diminution of radiation from the body: The result of this is that the temperature of the body is raised—and the patient will have a fever.

Suppose a man verging toward the close of a long life, whose various bodily organs have never been seriously disturbed in their coordinate relations, but whose life processes are enfeebled,—is exposed to the cold, the damp, and the blast of a December storm: The seventeen per cent excretion from the skin is greatly diminished, and the thirty-two per cent excretion from the lungs becomes less and less, and the degenerating kidneys of old age are put under a sudden strain of excreting work: The waste products go through the somatic circulation—and as they go through the pulmonary circulation, they irritate the delicate structures in which the exchanges of oxygen and carbon dioxide take place, and the result is inflammation of the lung, and perhaps the end is death. A young and vigorous man would go through this molecular storm with impunity: But a man, young or old, who, by excesses of any kind, has disturbed the coordinate relations of his various organs, and who has strained the links that bind his organic molecular into one harmonious whole, would be in constant peril from the mutations of the elements of his environment.

It is no doubt easy to see how the lightning stroke can rive the organic molecules of the body, how the galvanic battery can shock the life out of the imprudent operator, and how fear can rob the brains of its intelligence and the heart of its pulsations; But after all it may not be so easy to see, that the silent and ever acting molecular forces, in the midst of which we live, have the power in many ways, to disintegrate the organic molecules, and that large surfaces cast off waste products in abundance, and that the bacteria, swarming in these waste products, are concomitants rather than antecedents: And yet this may be so: And there is every reason for us to suppose that a molecular injury just as a mechanical injury may be followed by bacteria. No one would be so absurd as to suppose that a mechanical injury was caused by bacteria: And let no one be inclined to suppose that all molecular injuries are caused by bacteria. In fine, while there is much that is true and beautiful in the germ theory of disease, germs have their province and limitations. In their way, they have their good and bad offices:—they serve or harm, as they work for or against. It is more than likely, that germs do more good than harm in the long run. They seem at times to have the prince of mischief at their backs. But their immense capacity for the destruction of dead matter is no doubt salutary. Finally, the great problem at present consists in differentiating the molecular work of the somatic molecules and the destructive work of the germs and the bacteria.

LECTURES.

NECROSIS OF THE UPPER JAW.—AMPUTATION AT THE KNEE-JOINT.—INTERNAL URETHROTOMY.

CLINICAL REMARKS.

BY

T. M. MARKOE, M.D.,

Professor of Principles of Surgery, College of Physicians and Surgeons, New York, etc., etc.

CASE I.—*Necrosis of the Upper Jaw*.—Male aet. 35, was operated upon three years ago for fatty tumor on the anterior surface of the superior maxillary bone. On removing the tumor it was observed that the anterior wall of the antrum of Highmore was wide open and had been eroded by the presence of the tumor. The surgeon thought he could feel, and put his finger into the nasal cavity. He said the tumor contained a great deal of fibrinous material, besides fat. The case went on well, and the wound healed up. After a little time, however, the antrum being open, the physician extracted the first molar tooth and passed an instrument up into the antrum, in which matter had collected. Drainage has been kept up more or less ever since. On one occasion the end of a catheter was passed into the antrum, and this was supposed to have remained there.

At present there is a little necrosis of the edge of the superior maxilla. I propose to perforate the front wall of the jaw and enter into the antrum merely to secure drainage. If the piece of catheter has not behaved like a foreign body, there is still a source of pus in the region where the original tumor was removed.

The opening now is behind the tooth and through the alveolar process.

A new opening was made above the first bicuspid tooth, and a drainage tube inserted. The cavity of the antrum was then washed out with a weak solution of carbolic acid.

CASE II.—*Amputation of Knee-Joint*.—History.—Male, aged 37, gives a history of traumatic aneurism in the popliteal space for which he was operated upon some time ago. The femoral artery was tied with a carbolized ligature; patient did exceptionally well. The wound healed by first intention; the aneurism ceased to pulsate and diminished in size considerably. He was moved about, and passive motion was instituted when the limb became atrophied. Passive motion was continued, and he began to improve up to a certain time, when the limb began to pain him, and all exercise had to be abandoned. The knee-joint then became the seat of inflammation. An abscess formed in the popliteal space, which, after its discharge, was followed by an abscess involving the seat of the aneurism itself. The leg below did not seem properly nourished. This has been still further illustrated by the fact that of late, whenever he has lain upon that leg, bed sores have formed.

There is at present so much sloughing at the upper part of the leg, and so threatening a condition of ulceration that we have proposed, or rather the man has proposed to us, to amputate the leg. The question as to where I may take it off interests me very much. I am a strong advocate of knee-joint amputations. I believe they are a great deal safer than thigh amputations. The place where I shall remove the leg will be decided by the condition in which I find the abscess in the

popliteal space. If it runs far up the thigh, and if there is a great disintegration or involvement of bone on the posterior aspect of the knee-joint, I should amputate high up. If, on the contrary, I find the bone tolerably safe, and the abscess not very large in the popliteal space, I should be inclined to amputate at the knee-joint.

Now, you may ask, How do you venture to operate upon an inflamed joint? The operation of knee-joint amputation where there is disease of the joint itself was first performed by Syme. I have since performed the operation three times according to his suggestion, and with success.

The first case operated on was that of a young woman who had disease of the knee-joint. I found the condyles of the femur somewhat eroded, the synovial membrane destroyed and the whole joint disorganized so far as the surfaces were concerned. It was evidently a disorganization which had come from the synovial membrane and not from bone-action. Under these conditions I left it entirely and did not even scrape off the diseased surface of cartilage. Of course the synovial reflexion which passed up was a subordinate one. I left this and the patella. The patient got perfectly well. There was no symptom of arthritic inflammation and the wound healed perfectly.

Operation.—The patient was etherized and amputation at the knee joint performed. Cutaneous lateral flaps were made, according to the method suggested by Dr. Stephen Smith. The patella was slightly disturbed. A drainage tube was then carried through the stump and Lister dressing applied.

CASE III.—*Internal Urethrotomy*.—The patient has had numerous attacks of gonorrhœa. Eight years ago he first had retention and again a second time six years ago. Treatment would sometimes bring the calibre of the urethra up to No. 12 English. He has been operated upon twice by internal urethrotomy.

I propose to cut the stricture if I can get the guide of a Maisonneuve in. Where the stricture does not involve too much thickening or condensation in the periurethral tissues, we expect a permanent cure as long as the patient takes care of himself. The stricture here is one and one-half inches anterior to the triangular ligament or four and one-half from the meatus. After its division a No. 22 bulb was introduced and passed into the bladder without difficulty.

MULTIPLE SARCOMA OF THE NECK AND AXILLA.—NECROSIS OF PHALANX OF THE FINGER.—GLANDULAR ABSCESS OF THE NECK.—HYDROCELE.

CLINICAL REMARKS

BY

ROBERT F. WEIR, M. D.,

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CASE I.—*Multiple Sarcoma of the Neck and Axilla*. Patient, a male, has been troubled for the past ten months with enlarged lymphatic glands. This condition resembles that of Hodgkins' disease, which tends to involve the lymphatic glands throughout the whole system. Where tumors in the neck are growing with considerable rapidity they exert pressure in all directions as upon the veins giving rise to congestion of the head and back. They may rest upon the vessels of the lung or trachea giving rise to œdema of the

lung and dyspnœa. They may press toward the median line, the tumor growing more rapidly on one side than the other, pressing upon the trachea and larynx so as to give rise to very uncomfortable sensations, and very often impending suffocation. In such cases you may be compelled to resort to the knife. You can then cut down and remove the tumors. The growth however will be quite rapid. These tumors may have been developed lower down in the mediastinum. They may be pressing upon the vessels of the trachea at that point and you might expect a recurrence of pressure effects there. You may relieve the symptoms by tracheotomy.

Treatment.—The medicinal treatment found most reliable is the administration of arsenic in large doses. Iodoform has also been administered.

This disease of Multiple Sarcoma of the neck is not unfrequently met with in the bovine species, and is also found in dogs.

CASE II.—Necrosis of Phalanx of Finger.—This boy has had an acute inflammation of the distal portion of the finger after an injury, which eventuated in suppuration. The patient had inflammation of the tissues of the finger—probably from a bruise underneath the deep fascia of the finger which binds down the tendon producing an accumulation of fluids there, or the swelling of the parts pressing backwards upon the bone—the inflammation extending to the bone may have cut off the blood supply to the bones. It is thus possibly that the inflammation spreading to the bone itself and in the channels of the bone the inflammatory products come pressing the vessels, has resulted in death of the bone.

When such a condition as this is recognized, do not wait to determine whether you can detect fluctuation or not. If it has lasted four or five days, and the patient is suffering, it is wiser that you should cut down to the bone in the median line, on the palmar aspect than to wait. It is probable that the bone is entirely necrosed and will have to be removed. He may, however, have only a portion of the phalanx destroyed. And if we take out this bone now, the probabilities are that the finger will collapse. It will be better in this case to delay operation for a time.

CASE III.—Glandular Abscess of the Neck.—Here is a tumor that appears in the neck, apparently quite superficial. You observe that it is movable throughout its whole extent. In removing tumors of the neck, you can never tell how deep you may have to go. There is a certain amount of fluctuation indicating fluid contents at the apex of this tumor, and we may have to deal only with a superficial gland that has become inflamed, and formed adhesions to deeper portions of the neck. The patient gives no history of syphilis, though he admits having had a sore throat. He has bad teeth, which alone is often sufficient to start up a glandular difficulty, especially in young children. On opening the tumor it was found to contain pus, which was evacuated.

CASE IV.—Hydrocele.—This is a case of hydrocele in which the iodine treatment has been tried. This treatment, while perfectly safe, does have repeated failures. Mr. Osborn of London, has shown that out of fifty-four cases of hydrocele, subjected to iodine treatment, he had eighteen failures. Failure is due to the fact that there is not enough inflammation set up. We should endeavor to aid induction of the inflammation by rubbing the scrotum. Volkmann and Hall split open the tunica vaginalis from top to bottom, and sewed the tunica vaginalis to the skin on either side, leaving a slit. They then put a drainage tube above

and below the testicle which had been exposed. This is all closed over by an antiseptic bandage. This comparatively violent operation, would be followed by healing throughout the whole extent, within a week or ten days, to a degree that allows the patient to go about without any further dressings. A cure was accomplished in nearly every instance. The inflammation got up a plastic exudation which obliterated the cavity, and caused the two serous surfaces of testicle and scrotum to adhere.

After having performed Volkmann's operation twenty-eight times with good result, I modified it recently by taking a large trocar and plunging it into the tunica vaginalis. I injected the cavity, after evacuating the fluid, with a carbolic acid solution—one to ten. This gave rise to very little pain. I left in the drainage tube and put on a bandage; all being done under Lister. Then I read of Leverier's method of treatment. He stated that he cured hydroceles by withdrawing the fluid by the trocar, and then injecting through the trocar into the cavity of the tunica vaginalis, a small quantity of pure carbolic acid. I verified his statement, and I have found now in seven instances, that this operation is almost painless and requires no antiseptic precautions and no antiseptic dressing afterwards. It is safe and is effectual as far as my few cases go. The amount of carbolic acid to be injected should be from one-half a drachm to a drachm.

HOSPITAL REPORTS.

NEW YORK HOSPITAL, NEW YORK.

CNEMOSTEOSIS.

SERVICE OF

ROBERT F. WEIR, M. D.

R. S., æt. 4, N. Y., admitted April 19, 1881. Child walked first at twelve months of age, and in a very short time was able to run. At two years of age deformity of legs was first noticed by the parents, and was at first most marked in vicinity of ankles, where epiphyseal thickening is present. Bowing of the legs increased gradually. The child has always been healthy, and general condition has been unimpaired by progress of the deformity.

Condition on admission.—General condition good. Child well nourished. Both legs show marked deformity, the axes of the femora being normal, but those of the tibiæ and fibulæ presenting a marked bowing outward, and an antero-posterior deformity in the lower $\frac{1}{4}$. When the legs are brought together they cross at junction of lower and middle third, and there is a distance of two inches between the outer malleoli. When the ankles are brought together the internal condyles of the femora are separated by $2\frac{1}{2}$ inches, and the middle points of the legs by 4 inches. Both tibiæ are curved equally. There is marked thickening of the lower epiphyses of the tibiæ and fibulæ, and the feet are adducted. The child walks with much difficulty, and is obliged to balance herself by throwing out her arms. There is epiphyseal thickening at the wrists, but not to so marked a degree as at the ankles. The submaxillary glands are enlarged and hard.

April 23d.—**Operation.**—Ether; Esmarch's bandage; a longitudinal incision, one inch in length, made over

the right fibula at the junction of the lower and middle third; chisel introduced and rotated until at right angles with the long axis of the fibula, and this bone then chiseled through; a second incision of same length over right tibia in the same region on its outer surface, and this bone chiseled nearly through, and then twisted until fracture was complete; left leg treated similarly. Lister dressing applied on each limb, and good position in each being obtained, plaster of Paris splints were applied; full Lister precautions were observed.

April 26th.—No rise of temperature or general disturbance since operation. Except occasional pains in the heel or over the wound nothing has occurred.

May 9th.—Splints and Lister removed; wounds closed and union in both legs good. Lister discontinued and simple dressing and splints applied, and knees brought together.

May 18th.—Splints removed; position good; wounds entirely healed; splints again bandaged on. In the afternoon a purple discrete macular eruption appeared on face and neck and the patient became fretful. There was no rise of temperature or other symptoms.

May 20th.—Eruption has disappeared; new splints applied.

June 9th.—Union in now firm; patient able to go.

June 20th.—Patient can walk fairly well.

June 28th.—Gaining daily; walks about all day.

July 9th.—Discharged cured.

CASE II.—*Spontaneous Amputation of Finger.*—C. K.; native of N. S.; aged 26; single; machinist; admitted June 5th, 1881. Four days ago patient's left hand came in contact with a circular saw and the fourth finger was cut off at the first phalangeal joint, and lacerated wounds of middle and forefinger caused. Two days ago well marked fever was developed and the pain and redness began to extend to the wrist and forearm.

Condition on Admission.—Patient well nourished. Has small superficial lacerated wounds across thumb and forefinger and amputation of ring finger at first phalangeal joint. Tissue swollen and greatly reduced; inflammatory signs extend a few inches above the wrist; sloughs forming about the wound; flexor tendon of forefinger cut.

Treatment.—Rest and poultices.

June 7th.—No fever; sloughs separating from wounds.

June 10th.—Some pus expressed from palm of hand down to and out of wounds on the fingers.

June 12th.—No further burrowing of pus; patient doing well; general condition good.

June 17th.—Sloughs not entirely separated; pus secreted in considerable amount; poultices continued.

June 21st.—Poultices discontinued and carbolic dressing applied; wounds granulating.

June 25th.—Wounds healed; discharged cured.

ABSTRACTS AND SELECTIONS.

THE CAUSES, SYMPTOMS, AND TREATMENT OF PHIMOSIS AND PARAPHIMOSIS.* By LAMBERT H. ORMSBY, F.R.C.S., Lecturer on Clinical and Operative Surgery.

The term phimosis signifies an enlogated condition of the prepuce or foreskin, whereby it is so tightly

contracted in front that it cannot be drawn backwards so as to uncover the glans penis. It is of two kinds. 1. Congenital; 2. Acquired. The first variety is very frequently met with in young male infants, and in some it assumes a very aggravated form; so much so, that the prepuce is found so much contracted as to prevent the water being passed without great difficulty, and in certain instances, when the water is being passed, owing to the very contracted condition of the orifice of the prepuce, the urine escapes between the glans penis and contracted skin, and very soon the whole cavity of the prepuce becomes filled with urine or as it is termed "ballooning." This, in due course, gives rise to great pain and other complications.

Phimosis is attended with many inconveniences, among which may be mentioned the retention of the secretion poured out naturally about the glans, and which, not finding a ready and easy exit, produces in a short time, irritation, pain, to be followed by excoriation, ulceration and its consequences. Also when this condition is present, ablutions, and careful washing of the part cannot be attended to, and from this cause a most unpleasant odor from the organ is very frequently observed.

A person suffering from phimosis, when indulging in sexual intercourse, is far more liable to contract gonorrhœa or chancre (provided the sexual intercourse be impure) than those who do not suffer from this contracted condition of foreskin, or those who have their glans perfectly denuded and bare naturally.

In impure connection the subsidence of the penis after erection favors the easy transit of the contagious vaginal discharge to a resting place either in the orifice of the male urethra, or between the skin and glans penis, where it remains in contact with the mucous membrane pent up, producing, in due course, from its acrid character, excoriation, ulceration, or chancre.

In my recollection I have seen far more cases of gonorrhœa and chancre in those with elongated prepuces than those who have naturally the glans penis denuded of foreskin. Nor is the cause difficult to understand for the reasons above mentioned.

The consequences of congenital phimosis, whether local or remote are sometimes very serious, among which may be mentioned—1. Local irritation; 2. Balanitis; 3. Calculus concretions; 4. Dried indurated pent up secretion between glans and prepuce; 5. Ulceration followed by adherence of the prepuce to the glans; 6. Urinary obstruction and bladder irritation; 7. Masturbation; 8. Reflex convulsions, and infantile paralysis of the lower limbs (Sayre). 9. Incipient hip disease (Barwell), and finally, I have met with epithelioma of the prepuce in middle-aged men, due to this contracted condition of parts, and the consequences thereof.

Phimosis exists in a great many cases that never apply to a surgeon; and the few who do are compelled to do so from pain, swelling, and owing to the great delay and difficulty in passing water.

Causes.—In examining carefully a well-marked case of phimosis it is found that the external skin is quite lax, and very dilatable; while the internal mucous membrane is the part that is so tight and contracted; and, after a time, the mucous membrane of the inner surface of the prepuce becomes permanently adherent to the glans, rendering the operation for its relief, when present, most difficult. It is also found in young male children that the aperture of the prepuce, although very small, gradually enlarges as the child grows older, and all the bad consequences which the phimosis might have otherwise occasioned in disease are thus avoided,

* Being a clinical lecture delivered in the Meath Hospital and Co. Dublin Infirmary.

Young mothers are sometimes very anxious about this condition, being told by some old and trusty nurse "that she thinks the child is not right, and she ought to speak to the doctor about it." The anxiety in such parents may, however, be allayed by telling them if the prepuce can with ease be drawn so far back as to display the top of the glans penis they need then have no fear about the matter, and in due course the prepuce may, and will be drawn backwards to the fullest extent.

On two occasions I have been consulted by newly married men to relieve them of paraphimosis, the result of having frequent connections when they were naturally affected with phimosis. I also saw a gentleman not long ago, for paraphimosis, which was produced from the same condition of parts, which was the result of an attempt at the first sexual connection he ever had in his life.

It is worthy of mention when considering the after consequences of phimosis, that out of twelve cases of amputation of the penis for cancerous disease performed by the late Mr. Hey, nine of these cases were affected with natural phimosis. Mr. Roux noticed the same thing in similar examples, and as this distinguished surgeon considered, it may conduce to carcinoma of the penis. This condition of contracted prepuce, when present, ought to be always remedied in time.

Treatment of Congenital or Natural Phimosis.—Before having recourse to operative measures for this condition the surgeon will be anxious to know what are the positive indications for such treatment, for in some mild cases the patient, or his friends, are quite satisfied to allow him to remain as he is without having anything done. However, I would recommend steps to be taken if the orifice in the prepuce was smaller than the orifice of the urethra, for if this condition is present, the prepuce "balloons" during micturition, viz., the urine flows more rapidly into the preputial cavity than it can escape from its orifice. Such a condition, sooner or later, is followed by preputial inflammation, ulceration or adhesion, and retention of secretion.

Van Buren says: "When, therefore, the prepuce of an infant balloons during micturition, phimosis exists, and circumcision should be performed."

The various plans recommended from time to time for the permanent relief of congenital phimosis may be enumerated as follows:—1. Manipulation or gradual dilatation, and retraction; 2. Mechanical dilatation by means of forceps, glove-stretcher, and sponge tents; 3. Longitudinal incisions made in the mucous membrane; 4. Single incision of the prepuce on director; 5. Complete circumcision.

1. *Gradual Retraction by Manipulation.*—In some mild cases this plan succeeds very well. The patient should endeavor, frequently in the week (say night and morning) to make an attempt to draw back the skin over the glans. He may be facilitated by distending the prepuce with warm water or glycerine water, or warm oil introduced with some force by means of a medium-sized syringe, anointing the part with vaseline. In carrying out this treatment the patient ought to be warned that he may produce paraphimosis by too violent an attempt at retraction. When the prepuce can be drawn back so as to uncover the glans half-way, the treatment may be discontinued. If the contraction has been acquired by cicatrices at the orifice, this treatment, as a rule, is not very successful.

2. *Mechanical Dilatation by Forceps and other means.*—Dr. Cruise, of Dublin, recommended that the preputial orifice be stretched and distended by means of the forcible and gradual divarication of the blades of a forceps made for the purpose. In some cases the use

of such a forceps has proved useful. Compressed sponge and sea-tangle bougies have also been used to distend a tight preputial orifice. A small nicely-rounded glove-stretcher has also been pressed into service to carry out the same object. I cannot say much for this line of treatment. I have tried it in a few cases and have not, up to the present, been pleased with the results.

3. *Longitudinal Incisions made into the Mucous Membrane from the Inside.*—Parallel incisions made into the mucous membrane of the prepuce have been recommended and practised for the purpose of relieving the contraction of the structure. A very long, narrow-bladed knife must be used, and care must be taken so as to be sure that the mucous membrane is the only part that is scarified when the tightness has thus been relieved. The external skin becomes as lax as possible, and can with ease be drawn backwards over the glans. After the inside of the prepuce is well scored it bleeds at times freely, but is soon controlled by the application round the top of the penis of strips of lint steeped in some cold evaporating astringent lotion. When these parallel incisions are made the prepuce must be drawn forward and put on the stretch, a director must then be passed in through the preputial orifice until it is stopped by the reflected mucous membrane from the glans to the prepuce. The longitudinal incisions are then made into the prepuce. The use of the director is important, as it prevents the chance of the operator scoring the glans or entering the orifice of the urethra with the point of the knife.—*Medical Press and Circular.*

A RAPID METHOD OF DEMONSTRATING THE TUBERCLE BACILLUS WITHOUT THE USE OF NITRIC ACID.—By HENEAGE GIBBES, M.D., Curator of the Anatomical Museum, King's College.

The following method, which I have used for some time with great success, will I think prove useful to those requiring the demonstration of the tubercle bacillus for diagnostic purposes in a rapid manner. The great advantage consists in doing away with the use of nitric acid. The stain is made as follows: Take of rosanilin hydrochloride two grammes, methyl blue one gramme; rub them up in a glass mortar. Then dissolve anilin oil 3 c.c. in rectified spirits 15 c.c.; add the spirit slowly to the stains until all is dissolved, then slowly add distilled water 15 c.c.; keep in a stoppered bottle. To use the stain: The sputum having been dried on the cover-glass in the usual manner, a few drops of the stain are poured into a test tube and warmed; as soon as steam rises pour into a watch-glass, and place the cover-glass on the stain. Allow it to remain for four or five minutes, then wash in methylated spirit until no more color comes away: drain thoroughly and dry, either in the air or over a spirit-lamp. Mount in Canada balsam. The whole process, after the sputum is dried, need not take more than six or seven minutes. This process is also valuable for sections of tissue containing bacilli, as they can be doubly stained without the least trouble. I have not tried to do this against time, but have merely placed the sections in the stain and allowed them to remain for some hours, and then transferred them to methylated spirit, where they have been left as long as the color came out. In this way beautiful specimens have been made, without the shrinking which always occurs in the nitric acid process. The stains

may be procured from Messrs. R. and J. Beck, 68, Cornhill, E. C., either in crystals or in solution, ready for use.—*Lancet*.

CHEMICAL ANALYSIS OF WATER AND WATER SUPPLY. BY CHARLES T. KINGZETT, F. I.C., F. C. S.

Attention has been recently directed in this JOURNAL to certain investigations, from the results of which it is apparent that "polluting material, potent for harm," may be present in a water, the analysis of which would indicate it as of "extraordinary organic purity." I believe that this fact is recognized by all chemists, and most chemists will admit that an infected water may as readily pass one method of water-analysis as another. There can be no doubt that, while chemical analysis may throw much light upon the history of any particular water, and particularly if an investigation be made (as it always should be) of the source of the water, the methods at present employed by chemists are powerless to discover the presence of disease-germs in water.

Since discussion of this subject has in a manner been invited in these columns, I venture to make reference to some remarks upon Organic Matter in Water which I published at the time when Dr. Tidy was endeavoring to obtain the confidence of chemists and others in that particular process of water-analysis which he prefers to employ. I pointed out (*Chemical News*, vol. xli. p. 254), upon the basis of new experimental evidence, that it was possible to add a certain amount of organic matter to water, after which it would pass Dr. Tidy's process as of "great organic purity," and yet could subsequently become putrid (and therefore pernicious); in which state, judging by the sense of smell alone, or that and the use of the microscope, it would be unhesitatingly condemned by all analysts. Some time before this, I had been investigating some points in the chemical history of putrefaction (*Journal of the Chemical Society*, 1880, p. 15), and, in course thereof, I had come into contact with facts which seemed to me to destroy the very ground upon which the "oxygen process," as defined by Dr. Tidy, rests. For instance, he says (*Journal of the Chemical Society*), "At any rate, it (the oxygen process) undoubtedly furnishes us with exact information as to the relative quantities of putrescent and easily oxidisable matters, and of non-putrescent or less easily oxidisable matters, present in the water." Now, my experiments clearly proved that the oxygen process can do nothing of the kind, for they demonstrated the fact that a water may contain at one time organic matter (extract of meat) in a non-putrescent condition; and that, when these same matters—excellent food originally—shall have become pernicious, the water will absorb far less oxygen than originally. My contention was supported by Mr. Charles Ekin, but neither then nor since has Dr. Tidy in any way confronted this difficulty; he has contented himself with what, for all that can be proved to the contrary, seems to be a merely accidental coincidence between the general indications of the permanganate method and Dr. Frankland's combustion process as applied to water-analysis.

My experiments showed that it is possible to introduce 50 fluid grains of a putrid extract (such as I had described) into a gallon of chemically pure water, without taking it out of Dr. Tidy's class of "waters of great organic purity." Similarly, 170 fluid grains

could be introduced with the result of obtaining a water of "medium purity," and 255 fluid grains would only make the water of "doubtful purity." The putrid extract here referred to was swarming with organisms, and doubtless contained sepsin, which Dr. Burdon Sanderson has proved to be a blood-poison. In the face of these facts, what reliance can be placed upon the oxygen process of water-analysis? Having asked the question, I will also answer it by saying, None.

Apart from that general information which the chemist may obtain from the examination of waters by the well known methods, he can get no information of a precise character. Which way then shall we take to arrive at the information we seek? At present the way is not clear, but Dr. Angus Smith, in his extremely interesting paper (*Sanitary Record*, February 15th 1883), has, I think, wandered near to it. Unfortunately the method which he describes, admits, so far, of no quantitative expression. If we could take a measured quantity of suspected water, and introduce it into a medium in which such organisms as it contained would effect certain decompositions, the products of which we could determine by measure or weight, we should be well advanced in our task, although not at the end of it; for it would still remain to ascertain if any particular product of decomposition or fermentation may be taken as indicative of the work of a particular organism, and finally, we should have to determine if such organism, being thus far identified, is to be feared as the propagating cause of a particular disease.

Forced back in this way upon well ascertained general truths, the policy to be pursued as concerns water-supply, above all things should not be experimental. We well understand the danger of contaminating our rivers with filth which breeds disease, and we also well understand the enormous difficulty and cost of finding and using another source of supply for the metropolis. In this quandary it is not surprising if we involuntarily turn to the system of water carriage now almost universally in use (thanks to engineers), as the source of all this trouble, and I, for one, think that the shortest way out of the difficulty is to return to the dry closet system, taking advantage of chemical means (of which there are plenty) to prevent the excreta from becoming a source of pollution and disease. Our water-courses would then, in due time, reassume their original purity; we should be no longer exposed to the puffs of gas, loaded with diseased-germs and poisons, which escape from the sewers into our houses and from the ventilators into our streets, and we should cease to commit the enormous folly of throwing into the sea those valuable substances which, in the natural order of things, should be immediately returned to the soil which grows our food.—*British Medical Journal*.

SOME POINTS IN THE REPARATIVE SURGERY OF THE GENITAL TRACTS.

Dr. M. A. Pallen of New York, in a paper on this subject, writes: All fallings of the uterus, with regard to its form from the slightest prolapse to the completest procidentia, necessarily involve more or less folding of the vagina upon itself; and, should the substructure, the perineal conjunction, be absent, the process of vaginal folding ultimately becomes complete inversion. Without the necessary amount of time to properly discuss the relations of vaginal dislocations to the perfect integrity of the perinæum, I propose to formulate certain propositions.

I. Should there be perineal laceration, even if the

uterine structure and circumuterine spaces be perfectly normal, the organ, sooner or later, necessarily sinks in the pelvis, most frequently in retroversion.

2. All perineal lacerations, from a simple submucous muscular sundering (of the *transversus perinæi, sphincter*, and *levator ani* conjunctions), to a rent that extends into the bowel, necessarily beget vaginal dislocation, primarily as a slight, later as a complete rectocele, to be followed by a prolapse of the anterior wall, causing urethrocele and cystocele.

3. Urethrocele and cystocele seldom occur spontaneously; they ensue from pressure above (very rarely), or they follow from perineal sundering or laceration. I have never seen a case of cystocele, or even much urethrocele, that was not associated with some prolapse of the posterior vaginal wall.

4. All operative procedures for the *suspension of a prolapsed uterus must be directed mainly to the posterior vaginal wall*, because it arches upon the perinæum below and the uterus above, serving chiefly as a column of support. The anterior vaginal wall, being straight and shorter, serves rather for the support of the urethra and bladder, and being adherent to the pubo-vesical spaces, it prevents the full bladder from rolling the uterus in retroversion.

5. Operations restoring the integrity of the perinæum and posterior vaginal wall, usually develop symmetrical correlations of the canal. In cases of complete procidentia, a perinæum restored by plastic procedures which strengthen the recto-vaginal septum will eventuate in a permanent cure, a condition I have never seen in making operations confined strictly to the anterior vaginal wall.

These propositions assumed, I feel satisfied that very many successful issues of *perineo-vagino-plasty* prove that the theory upon which the operation was based is correct, viz., that the conjunction of the *transversus perinæi, sphincter ani, pubo-ischio-occygeus*, and *levator ani* muscles, (described, but never actually demonstrated as the perinæum) is the true and correct foundation upon which the posterior vaginal wall rests, and that the *support rendered by the connective tissue in front of the rectum is but secondary, in consequence of the variable calibre of the bowel*. The anterior column of the vagina is straighter and shorter, and, as before said, mainly supports the bladder and urethra; but the posterior vaginal column, added to the masses of blood-vessels furrowing the peri-vaginal connective tissue, tends to support the uterus; therefore, when the basement support of the vagina (perinæum) gives way, it folds down upon itself, and drags the uterus in retroversion. I would state *en passant*, that I exceedingly doubt the efficacy of the so-called ligamentous support of the uterus, farther than the misnamed structures (broad ligaments) serve as vehicles for carrying masses of erectile tissue and blood-vessels; and that in the healthy female the uterine body maintains its normal plane, or it is lifted, or it is depressed therefrom, in consequence of plenitude or emptiness of these same blood-vessels. Furthermore, I am disposed to think that all misplacements, except from direct or mechanical causes, depend upon fracture or destruction of the connective tissue in the circumuterine spaces, because of pathological changes in the blood-vessels.—*British Medical Journal*.

THE PICRIC ACID TEST FOR ALBUMEN.

Dr. George Johnson, M.D., F.R.S., Professor of Clinical Medicine, Senior Physician to King's College Hospital, writes:

It should always be borne in mind that, in testing for albumen, the *picric acid must be in excess*. A few drops of saturated solution of picric acid in a highly albuminous specimen will form a coagulum, which is quickly redissolved. When urine contains much albumen, it should be mixed with its own volume of the picric acid solution; and in testing a fresh specimen, it is better to begin by adding an equal volume of the test liquid.

One difference between picric acid and nitric acid as tests for albumen is, that whereas an excess of nitric acid, especially when the urine is heated, will entirely redissolve the previously precipitated albumen, no excess of picric acid will redissolve the precipitate which it has once found in an albuminous solution. Picric acid solution on the surface of the urine is applicable only for the detection of a minute trace of albumen. For this purpose, in my paper read at the Clinical Society, I advise that a column of urine four inches in height should be poured into a six-inch test-tube, and upon this one-inch of the picric acid solution. The result is that the upper layer of the urine is mixed with about its own volume of the test liquid; and if albumen is present, the stained portion of the urine is instantly rendered more or less opalescent, and thus contrasts with the unstained and transparent urine below. If the picric acid solution were allowed to flow so gently on the surface of the urine as merely to come into contact and not to become mixed with its upper portion, the albumen, if present, would not be detected, or it would be indicated only after an interval of some minutes, when the two liquids had become mixed by slow diffusion. There must be an actual mixture in about equal proportions, and not merely contact of the two liquids, to ensure the action of the test.

The slight opalescence caused by the picric acid solution in a sample of urine which contains a mere trace of albumen is always increased by the application of heat. So that, if the flame of a spirit-lamp be applied to the upper part of the opalescent column, this will become more opaque than the lower part, which had not been exposed to heat. I now invariably apply heat to a specimen of urine which has been rendered opaque, or more or less coagulated, by picric acid; my chief reason for this practice is to ascertain if peptones ever appear in the urine.

The precipitate recently thrown down with artificially prepared peptone appears under the microscope quite homogeneous, and free from solid particles; but when the precipitate, having been dissolved by heat, reforms on cooling, it seems to consist of numerous very minute, apparently globular particles, in which the so-called "Brunonian movement" is very active. The microscopic appearances of uric acid and urates are so well known as to need no description.

The precipitate produced by picric acid with albumen presents irregular clusters of granular material, which appear much larger and more opaque after the application of heat. According to my experience, a deposit of uric acid and urates is about as rare a result of adding picric acid to urine as a similar deposit caused by nitric acid; and hitherto I have met with no specimen of urine in which the presence of peptones has been indicated. A deposit thrown down by picric acid and redissolved by heat, may pretty safely be assumed to consist of urates, but in any case of doubt, the addition of Fehling's solution and the microscopic appearances will at once serve to distinguish between precipitated peptones and urates.—*British Medical Journal*.

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CONTENTS.

Transactions of the American Medical Association at Cleveland, Ohio, June 5th, 6th, 7th, and 8th, 1883.

AMERICAN MEDICAL ASSOCIATION.

The assembly of the American Medical Association was called to order at 10:45 o'clock by Dr. X. C. Scott, who introduced Bishop Gilmour. In a few brief remarks the Bishop formally opened the meeting. He spoke of the connection existing between the professions of the clergy and of medicine. On account of the wide and extended nature of the philanthropy of the meeting here assembled, he deemed it an eminently proper and right thing to offer a prayer to Almighty God to vouchsafe His guidance to the deliberations of the association. An extempore prayer was then made, concluding with the Lord's Prayer. Dr. X. C. Scott introduced Dr. J. L. Atlee, the president of the organization, in terms of high encomium.

General Edward S. Meyer delivered the address of welcome. He said that the medical profession was hastening the day when the lightnings of retributive justice would hurl from their pedestals, in the halls of fame, those who had won distinction by the bloody conquest and desolated homes, and would institute in their stead the mementoes of those whose mission it was to bind up the wounds of humanity and give health to the world. He spoke of the value of the profession to humanity, in its influence upon the dreadful dissipation which is sapping the life-blood of the rising generation, and of their influence in checking the practice of living at the ruinous rate which destroys life by its constant tensions upon the chords of life. He closed with a hearty welcome to all, and a God-speed to the work.

The orator was frequently interrupted by bursts of applause at the conclusion of his many well-turned periods. President Atlee, at the close of the address, invited the vice-presidents to come upon the platform. Dr. X. C. Scott then announced the programme and gave the necessary directions for the finding of the various rooms where meetings are to be held and the residences where receptions are to be held Wednesday and Thursday evenings. He described the various points of interest and recommended the attention of the members of the association. An invitation from the Jewish Orphan Asylum, requesting a visit from the association, was read. A prominent photographer of

the city sent in a proposition to the association asking them to sit for their picture in a body. Protests concerning the omission from the list of names of those who had not signed the Code of Ethics, and other complaints were referred to the Committee on Judiciary.

The annual address of the president was then delivered by Dr. J. L. Atlee, which was listened to with great attention, and was frequently interrupted by applause.

The address was as follows:

GENTLEMEN OF THE AMERICAN MEDICAL ASSOCIATION: Permit me to express my feelings of gratitude for the unexpected honor conferred upon me at the last meeting of the Association, and to cherish the hope that in fulfilling the duties of this responsible position, I may be sustained by your cordial co-operation.

We meet here to engage earnestly in furthering the interests and objects of the medical profession. We have come together from all parts of our broad country, charged with these great responsibilities. It is fitting to express here deep regret at the absence from our councils of delegates from the Medical Society of the State of New York. Let us hope that this absence may be only temporary, and that at the next meeting every State may be represented.

As specialties are so much in favor at the present time, I have thought it well, though far from favoring them on ordinary occasions, to bring prominently forward, in my address to-day, my own rare specialty, namely, the having been a graduate of sixty-three years' standing. Instead, therefore, of calling your attention to the more strictly scientific subjects that are so generally considered upon such an occasion as this, it has occurred to me that some reminiscences of my early medical life might not be wholly unacceptable or devoid of interest and instruction.

When I began my medical studies in 1815, there were but few medical colleges in the country—the medical department of the University of Pennsylvania, the College of Physicians and Surgeons of New York, and the colleges at Baltimore, Harvard, New Haven and Lexington, Ky. The University of Pennsylvania was the leading institution to which students from all parts of the country came. The facilities for clinical instruction at the university were confined to the Pennsylvania Hospital and the Philadelphia Almshouse; but of these lectures and the distinguished clinical teachers I shall speak again.

Having had no opportunities for studying practical anatomy before matriculation at the University of Pennsylvania, I devoted myself more particularly to that branch in my first course of lectures, 1817-18. The chair was then filled by Dr. Caspar Wistar, one of the most able and accomplished teachers of anatomy which this country has produced. His amiable deportment and kind treatment of students made an impression upon me which I shall never forget, and after the lapse of more than sixty-five years the thought of him kindles in my breast emotions of genuine pleasure. As I remember him, he was of medium stature, apparently about sixty years of age, and so impressive was his teaching of anatomy up to the time of his death, which occurred very suddenly in January, 1818, that his words remain with me yet. He was certainly a man of great personal magnetism, extremely courteous in his manners, and gentle in disposition; he was always ready to converse with the students and help them in their difficulties. It is no wonder that he was greatly beloved by the students. The announcement of his sudden

death from disease of the heart, on the night after he delivered his last lecture, produced a shock among the students that I shall never forget.

Just here, I may appropriately allude to the foundation of a social institution, long known in Philadelphia as "Wistar's parties." Dr. Wistar had been in the habit of inviting to his house, on Saturday evening, men of learning and distinction, both citizens and strangers. The ability and social qualities of the professors of the University of Pennsylvania and of the eminent medical men of Philadelphia, caused always the presence of a large infusion of medical science in the composition of his parties. After his death these gatherings were revived and continued by his friends, and they were still known as "Wistar parties," in honor of their founder. In this way originated the celebrated social gatherings, which occupied so important a share in the social annals of Philadelphia. I remember my gratification, when young, of meeting some distinguished gentlemen from abroad, and many no less distinguished from our own country.

The course of lectures on anatomy, interrupted by the death of Dr. Wistar, was subsequently finished by Dr. John Syng Dorsey, a favorite nephew of Dr. Physick. He completed the course with credit, and was subsequently elected to fill that chair. Unfortunately, he also died after a short illness, after delivering his introductory lecture, within a week after the beginning of the term. It was a great loss to the University, and a very severe blow to Dr. Physick, one from which he never recovered. At this period there was no American work on anatomy; but about this time Dr. Wistar's *Anatomy* was published, and adopted as a text-book. It was received with great favor, even with enthusiasm, by the students. The assistants to the professor of anatomy at this period were Drs. William E. Horner and Hugh L. Hodge, afterward highly distinguished in their respective branches, anatomy and midwifery.

Dr. John Redmond Coxe was the professor of chemistry in the winter of 1817-18, a grandson of Dr. John Redmond, one of the leading physicians of Philadelphia in his day, and first president of the College of Physicians. Dr. Coxe had the reputation of being one of the most diligent students in Philadelphia. He was very careful in his experiments, and in lecturing was very punctual in filling the whole of the hour allotted to him.

The chair of midwifery, during my last course, was filled by Dr. Thomas C. James, a very modest and agreeable gentleman of Quaker origin. He had such a sense of delicacy that he could not bring himself to lecture on the female organs of generation, but entrusted this part of his course to Dr. Horner. Although a graduate of the University of Pennsylvania, he subsequently became a pupil of Dr. Denman, of London, whose work on Midwifery, together with that of Burns, and Dr. Dewees' translation of Bandelocque, constituted the principal works on that subject. Dr. James, after Denman, was a strong advocate of the short forceps.

Dr. Nathaniel Chapman, at this time, and for many years afterward, filled the chair of the institutes and practice of medicine. He was a most eloquent and impressive lecturer, and the idol and tried friend and benefactor of the student. He was, moreover, a man of very marked ability, eloquence, and great social qualities. Having to teach the institutes, as well as the practice of medicine, it required two courses of lectures to complete the subject. The physiology of that day was very different from that of the present.

The microscope had hardly begun to be applied to the study of anatomy, and so little did Dr. Chapman appreciate it, that it was a standing joke with him to quote old Leuwenhoeck as having discovered with his microscope twenty thousand devils playing upon the point of a needle, thus foreshadowing some of the most remarkable discoveries of the present day, especially disease germs. Professor Chapman was thoroughly posted in the departments which he taught, at that time, although they have advanced wonderfully since his day. He was a man of very imposing presence, rather above the medium height, always neat in his dress, perfectly well-bred, and always obliging, and polite to the students. I believe that he did more for the advancement of medicine in his day than any other person with whom I was acquainted. He established a school, called Chapman's Institute, for the benefit of his private students, of whom he always had thirty or forty, and other students who chose to attend. The building was in the rear of his house, with a private entrance, and he employed, as teachers of his classes, gentlemen who afterwards became eminent professors at the University and at the Jefferson Medical College, among whom may be mentioned Professor William P. Dewees, Hugh L. Hodge, and John K. Mitchell.

Last but not least among the faculty of that day was Dr. Philip Syng Physick, the great American surgeon, who that winter, 1817-18, delivered his last course of lectures on surgery. A pupil of John Hunter, he taught the doctrines of that great man. As I recall his course of lectures, it seems to me that he was one of the most impressive teachers that I have ever listened to. Dr. Physick was remarkable for great attention to details, and in his operations upon the cadaver he carefully observed all the rules for operating upon the living body. He also recapitulated the lectures of the preceding day before, going on with his subject, by questioning the students who occupied the first two rows of seats in the amphitheatre. I may refer to one incident which may illustrate his method and his carefulness. On one occasion he stumped the whole class; he had been lecturing on lithotomy the preceding day, and he put the question to the first student: "What instruments should be provided for the operation?" The answer appears to have been correctly given, but he was not satisfied. The question was repeated to the next student, and finally to the whole class, with the same result. Dr. Physick then said it was "a pin, gentlemen, a pin," that was needed to complete the list. This showed his precision, and impressed upon us the necessity of taking care never to go to an operation without the minutest preparation.

Dr. Physick was a man of medium height, with very regular features. His face at that time was pale, as if he suffered from delicate health. He was of very abstemious habits. I remember on one occasion at a party given at his house, when the servant brought in a tray with wine, I was standing beside Dr. Chapman, when I placed my hand upon a decanter, as I supposed, of wine; Dr. Chapman touched my elbow and told me not to take that; I filled the glass from another bottle, and afterward asked the Doctor why he had checked me; he said the first was simply colored water that Dr. Physick had provided for his own use.

In speaking of Dr. Physick's teaching, I should also say that he always lectured extemporaneously, the didactic lectures on inflammation being read by Dr. Dorsey, his nephew. Dr. Physick was dignified in his deportment, and eminently grave; we rarely saw a smile

upon his face. His usual dress in the lecture-room was a blue coat with metal buttons, white vest and drab pantaloons. He was remarkably staid and reserved in his manner, and was always regarded with reverence and great respect by the students. He never indulged in any flight of imagination, and was purely a practical lecturer who brought his knowledge from the stores of his large personal experience.

One of his favorite precepts, was to insist upon great attention to diet after surgical operations. I may mention this anecdote. In one of his lectures he spoke of a very important surgical operation, and said that there was a necessity for attention to absolute diet. The next day in recapitulating, he asked a student what was meant by absolute diet. The student said "toast or barley water." "Will any gentleman tell me what is meant by absolute diet?" appealing to the whole class. There was no reply. "Water, gentlemen, water." A precept I have never forgotten, and which I think is not sufficiently observed at the present day after important surgical operations.

The clinical teaching of that day was not given at the Medical College, as it now is, but at the Pennsylvania Hospital, and the Philadelphia Almshouse, then in the city; each institution affording an excellent school of instruction to the students. As the clinical hours were the same at both institutions, I choose the almshouse as affording a larger field.

Among the clinical teachers of that day very few were superior to Dr. Joseph Parrish, who had been a pupil of Dr. Wistar. He was a man of most amiable character, thoroughly devoted to the advancement of the profession, having large classes of private students every year, to whom he lectured, and for whom he also provided able assistants to aid in teaching. One of these was the late Dr. George B. Wood. Dr. Parrish was a man of warm sympathies, and he testified to his benevolence in the manner in which he conducted his clinics. Let me give you an illustration. A poor, weather-beaten sailor was brought to the almshouse suffering very much from rheumatism. Dr. Parrish ordered the man to be clothed in flannel, and have a bottle of porter daily. On the next clinical day Dr. Parrish, on inquiring, found that neither had been attended to. He repeated the order, with a mild rebuke to the steward. At the next visit, three days afterward, finding that his previous orders had been disobeyed, he called for the steward and remained at the bedside of the patient until the order was fulfilled.

With regard to the treatment of that day, I shall say little; the text-books then studied fairly present it to you. Would that I could speak more satisfactorily of the treatment of the insane as I remember it. They were generally confined in the basement of the almshouse in small cells, some with manacles, others with chains, seldom had they access to fresh air, and often they had nothing but loose straw for their bedding. This unhappy and inhuman state of things continued until Pinel and Esquirol established a course of treatment more consistent with the dictates of science and humanity. In a recent visit to the State Lunatic Hospital at Harrisburg, Pennsylvania, of which I am a trustee, not one of the 400 insane inmates was the subject of mechanical restraint.

At that time, the resident physicians at the almshouse were not graduates in medicine, but last-course students, who fulfilled their duties while preparing for graduation. The requirements for graduation were attendance upon two full courses of lectures, of four months each, a written thesis on some medical sub-

ject, attendance at the hospital or almshouse, and an oral examination in the presence of the whole faculty.

Many of the elderly gentlemen present to-day must have heard of the much-dreaded "green-box." During the time of Drs. Rush and Barton, it was reported that favoritism was shown to their respective students, and the same was said of the students of Drs. Chapman and Dorsey. To obviate this, or the appearance of it, a large green screen was placed across one corner of the room, having a door behind it, through which the candidate entered, and here underwent his examination unknown to any one but the dean of the faculty. This mode of examination was adhered to until after the death of Dr. Dorsey, when it was optional with the student to go into the green-box or present himself openly before the faculty. Some ten or twelve candidates had such a terror of the green-box that they went to New York, where they obtained the degree of M.D. by undergoing an examination and paying the graduating fee.

Among the facilities for acquiring knowledge offered the students at that time was the privilege of attending the meetings of the Philadelphia Medical Society, which met every Saturday evening. In order to gain admission as a junior member of the society, which was composed of honorary and junior members, it was necessary for the student to pass an examination. The committee of the year 1817-18 consisted of Drs. Franklin Bache and Jacob Randolph, the latter being Dr. Physick's son-in-law. I remember with what trepidation I went before the committee, and, to my gratification and surprise, the only question asked me was the composition of Glauber's salts. This examination over, I received a parchment certificate of junior membership, and was admitted to the discussions of the society. After graduation I received a certificate of honorary membership. The proceedings of the society did not differ materially from those of the present day. A paper was read and subsequently discussed by many of the leading physicians and surgeons of that period, and was a source of great improvement to the junior members.

It was the time of calomel and the lancet. With regard to the one I need not speak; but of the latter I feel well assured that the almost total disuse into which it has fallen has cost many valuable lives. From a very large experience in its use I am satisfied—fully satisfied—that if we depended more on the early use of the lancet in the congestive and inflammatory states of many diseases, our practice would be more successful than it now is. At the present time there is too exclusive reliance upon medicines affecting the nervous and vascular systems, which act with less efficiency and are less prompt. It is, in my opinion, a very important subject, and I feel assured that ere long the lancet will be more freely used than it is now. In the congestive chills preceding inflammatory diseases and in the old stage of intermittents, I have frequently broken up the paroxysm and relieved the patient by the lancet alone.

In the class of 1817-18, there were many men who afterwards became distinguished in their respective departments. Time will not permit me to enumerate them all.

Among the first was one with whom I was very intimate, Dr. George McClellan. A man of great natural talent, quick perception and wonderful memory, prompt to decide and prompt to act, he made himself during his pupilage one of the best anatomists in the country, and subsequently brought more talent into

surgery than any man I have ever met with. During his brief but brilliant career he performed more surgical operations than any other surgeon in Philadelphia; and he undertook to perform, and did perform successfully, some operations which were considered impracticable by other surgeons. Among these was the removal of the parotid gland. It was my good fortune to visit with him, his first patient the day after the operation; and although it was afterwards reported that it was not the parotid gland, I made a very careful examination of the tumor, and of the patient, and was perfectly satisfied of its identity. This operation he performed several times afterwards, one of them on a young Irishman, where Dr. Dease, an eminent surgeon of Dublin, had previously failed.

A beautiful illustration of his diagnostic ability was shown to me when on a visit to Philadelphia; a female infant, about four or five months old, whose parents belonged to one of the most distinguished families in New York, was brought by her father to Philadelphia, to consult the oldest surgeons of the city, who all pronounced the case hopeless. The child had from birth a complete paralysis of the right arm and hand. As Dr. McClellan, at that time, was beginning to acquire popularity as a surgeon, the father was persuaded to consult him. Dr. McClellan made a careful examination, and found that the clavicle was pressing on the brachial plexus of nerves as it passes over the first rib, and the paralysis was owing to this cause. All that he did was to elevate the shoulder and the clavicle by mechanical means, and the functions of the arm were entirely restored. I saw it playing equally well with either arm on its nurse's lap.

Dr. McClellan was of medium size, fair complexion, and with blue eyes; he was very attractive and agreeable in his manners, very vivacious, and was called "a bundle of nerves." He was very fond of society, and a general favorite wherever he was known. There was no jealousy in his disposition, and I may be permitted to add, that he was the only surgeon in Philadelphia who congratulated me on the success of my first operation for ovariectomy, in 1843; when I revived the operation, which, after its introduction by Ephraim McDowell, had fallen into disuse, he sought me at my hotel when on a visit to the city, and gave me a most cordial embrace.

Dr. McClellan was among the first to suggest and urge the establishment of another medical college in Philadelphia; and with the assistance of Dr. Eberle, he determined to get a charter from the Legislature. Dr. Eberle being a native of Lancaster county, and having practiced both in the city and county for several years before his removal to Philadelphia, had many friends there, and wrote to them asking their assistance in procuring a charter from the Legislature. With the view of furthering the cause, a public dinner was given to Dr. Eberle by the leading gentlemen of Lancaster, and resolutions were then passed instructing our Representatives at Harrisburg to favor the charter. Notwithstanding the opposition that had always existed among the University to the establishment of another school, a charter was obtained, authorizing the trustees of the Jefferson College at Canonsburg, to grant degrees in medicine, and to locate the school in Philadelphia.

Another member of the class of 1817-18, a native of Lancaster, and when young a schoolmate of mine, was Dr. John Rhea Barton, who began the study of medicine with my preceptor, Dr. Samuel Humes, and through the influence of his uncle, Professor Benjamin Smith Barton, of the University, was appointed a resi-

dent pupil at the Pennsylvania Hospital. At that time, I believe, the residents were apprenticed for five years. Such was the distinction he obtained in this position that immediately after receiving the degree of Doctor of Medicine, he was elected one of the attending surgeons, an unprecedented event. While in this position he acquired the reputation of being one of the most dexterous operators in the country. A gentleman—a physician—who, after graduating here had spent five years in Paris, and who had seen Dupuytren, Boyer, and Desault operate, told me that with the exception of Dr. Physick, who had been his preceptor, he had never seen Dr. Barton equalled as an operator. He was ambidextrous, and, instead of changing sides in amputations, he would change hands.

Among my fellow-students in 1817-18, and fellow-graduates in 1820, I should be unmindful of what is due to extraordinary merit were I not to speak of one who has done more for American medical journalism than any other physician in the country; I allude to the late Dr. Isaac Hays, the editor of the American Medical Journal, by whose labors, professional accomplishments and excellent judgment the leading medical journal of this country was established. Having assisted Dr. Chapman in editing the Philadelphia Journal of the Medical and Physical Sciences, the motto of which was the ill-natured quotation from Sidney Smith, "Who reads an American book?" Dr. Hays established, in 1827, The American Journal of the Medical Sciences, which to this day, both in this country and Europe, is admitted to be, in character and ability, the first. Modest and unassuming, he scorned the arts by which many seek prominence, and during a long and very busy life sustained the character of a high-toned and honorable gentleman. To him are we chiefly indebted for the preparation of the Code of Ethics of this Association, which some of our physicians, from motives we cannot appreciate, would be willing to mutilate or destroy.

To another fellow-graduate I may with great propriety allude. Dr. S. Henry Dickson was one of the most accomplished scholars, both in medical and miscellaneous literature, it was my good fortune to know. Having obtained, by his extensive acquirements, sound judgment and high character, the first position in his native city, Charleston, S. C., he was elected professor of the theory and practice of medicine in Jefferson Medical College, where he lectured with distinguished ability to the close of his life.

Dr. George B. Wood, known to many of you, was graduated at the end of my first course, in 1818. The possessor of an ample fortune, he devoted his wealth, his untiring industry and his great acquirements to the promotion of sound knowledge, and the welfare of the Medical Department of the University of Pennsylvania.

In the winter of 1819-20, when I attended my second course, a change had taken place in four of the chairs at the University. Dr. Physick, in consequence of the death of Dr. Dorsey, had been elected professor of anatomy, and Dr. Gibson was brought from Baltimore to fill the chair of surgery. Dr. Cox was taken from the chair of chemistry to teach *materia medica*; and Dr. Robert Hare was appointed to teach chemistry. These changes were not very agreeable to those who, like myself, were attending their last course, as it took from the chair of surgery that great man, Dr. Physick, and placed him in a position where he had to renew his early studies. It placed Dr. Cox in what might be called his favorite element, for there was hardly a single article of the *materia medica*, from

the time of Hippocrates to that day, that he did not notice in his lectures. It was very amusing to the class, after Dr. Chapman had recommended the use of a medicine as emanating from Dr. Physick, to hear Dr. Coxe, a day or two afterward, taking especial pains to tell us that the remedy had been used from the time of Galen or Celsus. Dr. Hare, who never failed in an experiment before the class, had great hesitation in explaining the rationale, not having the gift of fluent speech. He gave an excellent demonstrative course on chemistry, particularly on the subjects of heat, magnetism, electricity and galvanism, which, since his day, have excited the attention of the whole scientific world. Dr. Hare was a large man, of great muscular physique, but possessing the manners and feelings of a courteous gentleman.

Dr. Gibson, who I have referred to as coming from Baltimore, where he had acquired great reputation as a surgeon, had been a pupil of the celebrated Charles Pell, of London. At first, he read his lectures, which made him somewhat unpopular with the class, as his predecessor, Dr. Physick, had always lectured extemporaneously. Being told of this, it was said that he afterwards committed his lectures to memory.

At the time of my attendance upon lectures, there were very few boards of examiners, and the graduating classes were generally divided into "quizzing clubs" of six students, each of whom took notes at the lectures of the different professors. We examined each other twice a week on the lectures of the preceding three days, and recapitulated on Sunday afternoon, having been told by Dr. Wistar that we could not spend Sunday more profitably than in the dissecting room. So Galen ends his book, *De Usu Partium Corporis Humani*, by saying it is an epodos, or a song sung standing before the altars of the gods, *hymnis deos celebrantes*. The result of these frequent examinations was that, although we had some idle fellows among us, every member of our club received his diploma.

With the garrulity, and may I not call it the privilege, of your oldest brother, I present you with some of the reminiscences of my college life. Before I close this address, let me briefly call your attention to some other subjects, which, in my opinion, are of pressing importance. Let me impress upon the mind of every member of the profession the necessity of strict and undivided attention to the duties of his high calling. Let no outside influence operate to interfere with these duties. When you undertake the care of a patient, your whole duty belongs to him. The intermission of a single visit, which, on your part, may have been devoted to pleasure, may sacrifice the life of your patient.

Above all things, ever strive to maintain the honor and dignity of the profession. Let no selfish or mercenary consideration deter you from observing the laws laid down in our noble Code of Medical Ethics. Cultivate friendly relations with your local medical brethren, more particularly the younger; and regulate your intercourse with all men in such a way as to cast no stain upon the honor of the profession, which is in your keeping.

In my day, previous to the establishment of medical societies throughout the country, and the organization of the American Medical Association, and the general adoption of the Code of Ethics, I saw many disastrous effects from the want of brotherly consideration and kindness. The medical men of that day were often in difficulties; patients would be taken from one physician to another without ceremony, and so great was the jealousy existing between them, that for more than twenty years after my graduation it was impossible to

form a medical society in my native city and county, because there were so many aspirants for the honors. Here let me speak of some of the difficulties I had to encounter in my early professional life. Instead of being taken by the hand by the older physicians, every obstacle was thrown in my path—consultations were refused, and the treatment of my patients unfavorably criticised.

By the establishment of medical societies and the adoption of the Code of Ethics, a wonderful change has been effected. We now feel it our duty to sustain our younger brethren, to treat them with courtesy and kindness, to save them from their errors, and encourage them in all their good work. Had the adoption of the Code of Ethics no other result than this, it would have been an invaluable blessing to the profession. But it has accomplished more. It has put the seal of condemnation upon all "isms," and developed an *esprit de corps* that has enlarged the boundaries of our science, and greatly increased the usefulness and social standing of the profession.

Now, gentlemen, before concluding, let me state that, being aware that reports and papers upon every important topic connected with the different departments of medicine will be presented by the chairman of the sections, and by individual members, I have not entered upon the discussion of any subject, either medical or surgical.

Our meetings are for the purpose of promoting social intercourse, as well as for the advancement of medical science; but we should devote sufficient time to the discussion of the various subjects presented to us, and not allow them to be too greatly interfered with by social entertainments.

One word more, and I have done, and I say it chiefly as a word of encouragement to the younger among you. At the close of a long life, devoted unreservedly to the study and practice of medicine, I will say that, notwithstanding its uncertainties, its fatigues, its anxieties, its bitter disappointments, I am completely satisfied that in no other career can a man more fully accomplish his whole duty to God and to his fellow-men; so that when life here is ended, it can be truly said of him as—be it said with all reverence—was said of Him whom we all should imitate, *pertransiit benefaciendo*—He went about doing good. Trusting that our proceedings may be both harmonious and profitable to us all, and, thanking you again for the honor you have conferred upon me, I sincerely hope that the recollections we shall carry home with us will be both agreeable and lasting.

Dr. Keller, of Arkansas, then moved that the association tender its thanks to the president for the very interesting address he had delivered.

Dr. Hedge, of Pennsylvania, then moved that the State Medical Society be admitted to the association, which was carried. It was resolved that a communication from the British Medical Society be referred to the department on atmospheric conditions, of which Dr. N. S. Davis is chairman. The names of those who had registered were read, although it was strenuously objected to by Dr. Gross, of Philadelphia, and others. Dr. H. D. Didama read a communication from Dr. Tindale, of New York, who is unable to attend on account of his connection with the State society. The paper contained a petition to Congress, and the Secretary of War and Signal Service Department, requesting that a committee of five professional gentlemen be appointed to establish climatic observations at the several health resorts and watering places, to collect data in regard to the sanitary value of the localities in

regard to pulmonary diseases. Referred to the association for discussion to-morrow morning. The reading of the names occupied nearly an hour. The association was finally compelled to adjourn until this morning at 9 o'clock. At the close of the general meeting the various State delegations elected their representatives in the Nominating Committee.

THE SECTIONS.

The afternoon was devoted to work by the sections. A brief resume of the transactions in each was as follows:

PRACTICAL MEDICINE.

The section on "Practical Medicine, Materia Medica and Physiology" met in the Y. M. C. A. Chapel, Dr. J. H. Hollister, of Illinois, chairman, and Dr. J. G. Lees, of Pennsylvania, secretary. A paper on "Yellow Fever," by Robert D. Murray, M.D., of the Marine Hospital Service, was read by F. W. Miller, M.D., of Illinois Hospital Service. The author advocated a warm water bath and bed at once; mental tranquillity by whatever means; light diet, and after a few days tonic; to stop vomiting, charcoal early, and a little ice in the patient's mouth; avoid muscular exertion. The paper was discussed by Professor T. Campbell, of Augusta, Ga., who recommended bleeding in plethoric cases.

Dr. Elliott, of Pennsylvania, did not approve of bleeding; patients must be put to bed immediately. Dr. Bell, of New York, approved the treatment given in the paper. Dr. Franklyn, of Ohio, favored calomel in place of bleeding. General Elwell, of Cleveland, thought little was known as yet in regard to the causes of the disease. J. B. Hamilton, M.D., Supervising Surgeon of the Marine Service, recited instances which seemed to warrant the strictest quarantine at every outbreak. The paper was referred to the Committee on Publication.

A paper on "Milk Sickness" was read by Dr. W. M. Beach, of Ohio, and discussed by Professor A. B. Palmer, of Michigan, who thought the germ of the disease was multiplied after its entrance into the body. This paper was also referred for publication.

OBSTETRICS AND DISEASES OF WOMEN.

The section of the Medical Association on obstetrics and diseases of women met at Frohsinn Hall yesterday afternoon, with Dr. J. K. Barklett, of Wisconsin, in the chair. In the absence of the secretary, Dr. G. A. Mons, of St. Louis, Dr. J. T. Jelks, of Hot Springs, was appointed secretary. The first paper was by Dr. W. H. Byford, of Chicago, on "Inter-Pelvic Inflammation of a Chronic Form," read by the secretary. All physicians making speeches were then requested to furnish the secretary copies of their remarks.

The next paper was on "Post Partum Polypoid Tumors," read by Dr. H. G. Landis, of Ohio, and ably discussed by Drs. Watline, of Kentucky, and H. O. Marcey, of Boston. Dr. H. O. Marcey then read a paper on "Restoration of the Perineum by a New Method," the doctor exhibiting the pins, by which means the new operation is performed. The paper was ably discussed by Drs. Brown, of Detroit; E. W. Jenks, of Chicago; H. O. Marcey, of Massachusetts; Haws, of Detroit; Watlin, of Kentucky; Suttin, of Pittsburgh; Reemey, of Ohio; Potter, of New York, and Watson, of Wisconsin. The next paper presented was by Dr. Suttin, of Pittsburgh, on "Enterotomy as a Complication in Ovariectomy or Oophorectomy," discussed by Dr. Murdock, of Pennsylvania.

Dr. Jenks, of Chicago, then moved the appointment of a Committee on Publication of Papers, said com-

mittee to consist of five members, the chairman and secretary to constitute two of the number. On motion the meeting adjourned.

SURGERY AND ANATOMY.

The section on Surgery and Anatomy, which met in Case Hall, was attended quite generally by the most eminent surgeons in the country, and the learning displayed, both in the papers and the discussions which followed, was of so copious a nature as to furnish food for thought for those of the profession who were present for a considerable length of time. Dr. Alfred F. Halt, who was down for a paper upon the Illustration of Anatomical and Pathological Papers, deferred the reading of his essay until the evening, in order that the illustration might be projected on a screen by the oxy-hydrogen light.

The exhibition did not take place, however, even then, owing to some difficulty about arranging the light, and was postponed. Dr. Dudley P. Allen read a remarkably interesting paper on the "Comparison of Antiseptic and Non-Antiseptic Methods of Treatment." Dr. Allen said that without doubt there is less of the antiseptic method in this country than there was a few years ago. The views of Dr. Keith, of Edinboro, were quite freely quoted in reference to the disuse of the spray in cases of wounds in the abdominal cavity, for fear of nephritis. The danger from the germs of the atmosphere was considered less than from the use of the antiseptic in this kind of wounds or operations. The different methods of operation of Volkmann, Halle, Saxony and Billeroth, were described in full. The three systems were presented in the following order: First, that of Lister which prevents the germs from entering the wound; second, that of Volkmann, which prevents the germs from causing septic action by washing out the wound; third, that of Billeroth, which disregards the entrance of germs to the wound and destroys their evil effects by the use of a powder which renders the wound antiseptic. The conclusion was arrived at that different cases demand different treatments, and that while the use of the spray is not to be recommended in the case of wounds of the abdominal cavity, this does not affect its usefulness in other operations where there is an open cut. In fact the spray is the least injurious of the three different methods of application, and while its use is feasible in the case of an open joint wound and in the atmosphere of a hospital, the irrigation of the wound is equally efficacious. Although certain cases do not admit of the use of antiseptics, the writer thought there was more danger in not using them than in their intelligent and legitimate application. The paper of the venerable S. D. Gross, of Philadelphia, was listened to with the most earnest attention, and was highly spoken of by all. Dr. Vance also received a great deal of praise for his admirable paper on the radical cure of hernia, which was said by some of the most eminent surgeons of the country to be of the greatest practical importance to physicians. The discussions were quite lengthy and were participated in by Drs. Hite, of New York; S. H. Weeks, of Maine; Murdock, of Pennsylvania; Martin, of Massachusetts; Nancreed and Gossard, of Minnesota, and many others, whose names it was impossible to obtain.

MEDICAL EDUCATION.

Dr. Albert L. Gibbon, of the United States Navy, read a paper on Medical Education before the section on State Medicine, which met in the United States Court-Room. The following resolutions were also offered by him, which sum up his ideas as expressed

by the paper. The resolutions will undoubtedly be discussed by the association as a whole :

Resolved, That the section in State Medicine urges upon the association the necessity for at once taking steps to exclude unqualified members from the profession, by refusing fellowship to illiterate, ignorant and incompetent graduates.

Resolved, That the association be recommended to authorize the section in State Medicine to act as a standing committee on medical education, the several elected members being required to communicate without delay (I.) with the several State medical societies and the Legislatures of the States they respectively represent, with the object of creating State Boards of Medical Examiners, where such are not already in existence, whose certificate shall be necessary to the issue of a license to practice medicine in that State ; and (II.) with the authorities of every regularly organized medical college in the State, which has not already taken such action, urging upon them, first, the requirement of a proper preliminary education of matriculants, to embrace at least a knowledge of English orthography and grammar, the etymology of the more common Greek and Latin derivations and the fundamental rules of arithmetic, to be ascertained by a written examination preserved for reference ; and, second, greater care in ascertaining the fitness of candidates for a degree by making their final examination in part a written one, to be kept on record and accessible for inspection by State boards of medical examiners, board of censors of medical societies, or other authorized persons requiring information as to the professional qualifications of graduates.

Resolved, That in the opinion of the American Medical Association, medical colleges should confer upon graduates the degree of Bachelor in Medicine, such graduates to be eligible to the degree of Doctor in Medicine at the end of three years, after having given satisfactory evidence of their qualification to the board of censors of the State Medical Society.

Resolved, That Article II. of the plan of organization of the American Medical Association be amended by this additional proviso :

Provided, That every permanent organized State, county or district medical society entitled to representation in this association shall be required to appoint a board of censors, who shall rigidly scrutinize the literary and professional qualifications of every candidate for membership therein, and hereafter no delegate shall be admitted to a seat in this association who shall not have received the certificate of such a board of censors or of a State or National board of medical examiners.

EYE, EAR AND THROAT.

The sections on Ophthalmology, Otology and Laryngology met in the Board of Education room, as announced, at 2:30 o'clock. The section permanently organized by electing Julian Chisholm, M. D., of Baltimore, president, and Carl Seiler, M. D., of Philadelphia, secretary. Dr. Lawrence Turnbull, of Pennsylvania, read a paper on the "Paralysis of the Facial Nerve as Connected with Ear Diseases," which was largely discussed.

Dr. W. C. Jarvis, of New York, presented a paper on "Removing enlarged tonsils without hemorrhage, by means of his 'snare'."

A paper on the "Action of nitrate of silver on the mucous membrane of the throat and nose," by Carl Seiler, M. D., of Philadelphia, in which he stated his opinion that nitrate of silver was not a caustic, drew

forth much discussion, the majority of those present agreeing with the author's theory.

The paper announced to be given by B. F. Ingalls, M. D., of Chicago, was referred to Thursday afternoon, and Dr. W. J. Williams, of St. Paul, not being present, his paper on "Meningitis" was read by title and referred to the Publication Committee, after which the section adjourned to meet again this afternoon at 2:30 o'clock.

DISEASES OF CHILDREN.

The section devoted to the diseases of children met in the Council Chamber. Neither the chairman, Dr. R. F. Blount, nor the secretary, Dr. J. H. Sears, were present, but Dr. Charles W. Earle, was elected temporary chairman, and as the papers to have been read were not presented, read a discussion of his own on cephal-hæmatoma in the newborn.

This is a soft, elastic fluctuating tumor, generally painless, and situated upon one of the bones of the skull, usually upon the right parietal bone. When it is first noticed it is usually a soft and painless enlargement. In the course of a few days a firm ridge is usually noticed surrounding the base of the tumor. This ridge is produced by the efforts of nature to repair the injury. As the process of repair goes on, the tumor loses its soft, fluctuating feeling, and in the course of a few weeks nothing can be detected but a slight want of symmetry in the two parietal bones. The usual teaching as to the cause of this difficulty is pressure upon the cranial surface by a rigid os uteri. In all probability the great majority of these cases are so caused, but from the fact that cephal-hæmatoma have been observed in breach deliveries, it must be admitted that the rigid os uteri does not in every case produce the tumor.

The treatment of these cases really amounts to a judicious letting alone. The physician of course will be importuned in and out of season to poultice, blister, to open, and in every way interfere with the process that nature is following out to perfect a cure. In a few cases, however, when the pain, swelling and tension becomes very great, it is admissible, indeed it is the best practice, to open these tumors and treat them antiseptically.

Quite a lengthy discussion was held, participated in quite freely by Drs. Harris, Boothby, Reed, Lee, Earle and others.

DENTAL AND ORAL SURGERY.

The section which was devoted to dental and oral surgery met in the rooms of the Vocal Society, and was presided over by Dr. Goodwillie, of New York. Dr. T. W. Brophy, of Illinois, acted as secretary of the meeting. Drs. William D. Kempton and W. W. Alpert were to have read papers but were not present. They expected to read them to-day, however. Dr. John S. Marshall, of Chicago, read an interesting essay on the Denudation and Erosion of the Teeth, which was intently listened to and discussed at length, after its completion, by Drs. Goodwillie, Barnes, Noyes and others. A synopsis of the paper is as follows :

The subject is one that is still under controversy, and the object of this paper is to review the previously entertained opinions on the subject to emphasize the objections of these views and recall a satisfactory explanation in a heretofore neglected cause, viz.: electrochemical action. Definitions of the various terms in use were then, offered, and descriptions given of the operation of such destructive processes as denudation and erosion. The upper teeth are much more liable to be attacked than the lower, though cases are quite

common in which both jaws are affected. The views of Hunter, Bell, Fox, Wedle, Salter, Muric, Tomes, Magitot and others were quoted extensively, and the points wherein they failed to apprehend the true status of the conditions of the cases were clearly set forth. The essayist particularized a case which came under his own notice. Fillings were put in the teeth and in four years denudation had acted so vigorously that not a vestige of the filling remained, nor even a depression to indicate where they had been. Dr. Eleazer Paruly, of New York, reported a case some years ago, where erosion had attacked natural teeth that had been set on an artificial plate in precisely the same manner as the teeth having natural attachments. The writer went on to explain that none of the theories as yet advanced gave sufficient explanation of these phenomena, and to show his reasons for believing the true cause to be of electro-galvanic origin, and adduced apparently potent arguments in its favor.

An interesting incident occurred in this section which shows up in a very vivid manner the animus between the adherents of the new code in New York and those who still stand by the old code of ethics. Dr. Goodwillie, who is unquestionably at the head of the department of dental and oral surgery in America, is a permanent member of the American Medical Association, but is also a member of the New York State Society, which is under a cloud in regard to ethics. He was appointed chairman of the section of dental and oral surgery and came in here and was registered, under his own protest, as he says, under the protest of the registrars, as Dr. Nicol says they say. The Judiciary Council had Dr. Goodwillie's name under advisement, and Dr. Henry Nicol made the point that he was consequently not entitled to hold such an important position until his credentials had been approved. Dr. Nicol said in the reporter's hearing that he didn't propose that Goodwillie should get credit on both sides of the code. It was, however, decided not best to disturb him in his position until the judicial council should declare him no longer a member of the association.

SECOND DAY.

The second morning session of the American Medical Association convened in Case Hall yesterday morning at 9:30 o'clock. The admirable ventilation of the auditorium made the session quite pleasant despite the sultry weather. Dr. Charles Pomeroy opened the exercises with an eloquent and fitting prayer, after which the secretary, Dr. Atkinson, read the names of those representatives of the various State delegations who comprise the Nominating Committee, which is in full as follows: Drs. W. O. Baldwin, Alabama; D. A. Linthicum, Arkansas; W. F. McNutt, California; T. M. Hills, Connecticut; H. K. Steele, Colorado; W. Marshall, Delaware, D. C. Patterson, District of Columbia; Eugene Foster, Georgia; C. F. Parker, Illinois; H. J. Wood, Indiana; W. S. Robertson, Iowa; L. S. McMurtry, Kentucky; W. L. Schenck, Kansas; J. W. Dupree, Louisiana; C. A. Suvary, Massachusetts; Julian J. Chisholm, Maryland; B. H. Miller, Minnesota; F. K. Owen, Michigan; E. H. Gregory, Missouri; A. J. Fuller, Maine; V. H. Coffman, Nebraska; E. Grissom, North Carolina; B. A. Watson, New Jersey; H. D. Didama, New York; W. M. Beach, Ohio; S. D. Gross, Pennsylvania; A. Ballou, Rhode Island; R. A. Kniloch, South Carolina; D. J. Roberts, Tennessee; H. C. Ghent, Texas; Alex. Harris, Virginia; J. M. Lazell, West Virginia; S. C. Johnson, Wisconsin; T. W. Miller, United States

Marine Hospital; Joseph R. Smith, United States Army; A. L. Gihon, United States Navy; W. A. Tipton, New Mexico; A. B. Van Nelson, Dakota Territory.

At the conclusion of the reading Dr. Foster Pratt, of Michigan, stated that he wished to call attention to a point which would affect the action of the nominating committee. At the last association meeting an amendment to the constitution was laid on the table, which was to the effect that no members but those present were eligible to office. On motion the amendment was taken from the table, and section 13 of the by-laws was amended so as to read that none but members present would be eligible for the offices of president, vice-president, secretary, treasurer or chairmen or secretary of sections.

Dr. S. D. Gross, offered a paper signed by Austin Flint, Oliver Wendell Holmes and himself, recommending an appropriation for the National Public Museum and Medical Library, and the providing of means whereby this valuable collection shall be preserved from danger of fire. At the conclusion of this paper Dr. H. A. Johnson presented the following pertinent resolutions:

WHEREAS, There has been formed in Washington, under the direction of the medical department of the army, a museum of unrivaled completeness and excellence, illustrating military medicine and surgery, and a medical library which is believed to be the largest and most valuable in the world; and

WHEREAS, It is believed to be of the highest importance for the promotion of medical science, literature and education in this country that these collections should be presented and made and kept as complete as possible; and

WHEREAS, It is believed that this can be best done by keeping them under the management which has already produced excellent results, and by its publications has made them available for use throughout the country; therefore

Resolved, First—That the American Medical Association respectfully urges upon Congress the importance of at once providing a commodious fire-proof building to contain the Army Medical Museum and Library.

Second—That the annual appropriation for this library should be sufficient to enable it to obtain all new medical publications of all countries as soon as they appear, and also to complete its collection of medical books heretofore published, and that for the purpose the sum of \$10,000 is considered a reasonable and proper annual appropriation, and Congress is requested to grant that sum in addition to the amount required for the Medical Museum.

Third—That it is of the greatest importance that the index and catalogue of this library now in course of publication should be issued as rapidly as it can be prepared for the press, and Congress is urged to make the necessary appropriation for the purpose.

Fourth—That a special committee of five be appointed, of which the president of the association shall be ex-officio chairman, to present this matter to Congress and to call the attention of State local medical societies and of all who are interested in the progress of medicine, to the importance of furnishing to members of Congress and Senators full information as to the value of the museum and library, and the esteem in which they are held by the medical profession of the United States. These resolutions were adopted.

The association was about equally divided on the question of having its picture taken, so the president cast the deciding vote in favour of the plan.

Dr. N. S. Davis then read the report of the board of trustees in regard to journalizing the proceedings of the Association in which the history of the plan of publishing such a journal was fully related and the encouragement which the board has received in prosecuting it. The reader was frequently interrupted by enthusiastic applause, and at its conclusion introduced resolutions which make the journal of the A. M. A. an established fact. These resolutions were passed with almost no dissenting voices.

Dr. L. S. McMurtry, of Louisville, declared Dr. N. S. Davis to be the nominee of every member of the board of trustees for editor of the new journal. Dr. Davis then arose, and amid the plaudits of the Association made an interesting extempore address, in which he expressed his feeling of inability to cope with the demands of the position, but said that the last few years of his life should be spent faithfully in this work, and that he would still follow out the principles of his whole life so far, and that was to do with all his might whatsoever his hand found to do.

Dr. Bush, of Delaware, then in a short address moved that a vote of thanks be tendered to Dr. Davis on account of his arduous and faithful labors for the profession.

Dr. Solis Cohen, of Philadelphia, introduced a motion that the minutes of the Association be published in a thin octavo volume, instead of publishing them in the journal. After considerable heated discussion on this proposition, Dr. Burrows solved the difficulty by referring the whole matter to the board of trustees.

Dr. N. S. Davis, on account of his acceptance of the editorship of the journal of the A. M. A., resigned his position on the board of trustees. There being four vacancies in the board of trustees, a committee was appointed to nominate the proper quota of members. Drs. Richardson, of Louisiana; Brodie, of Michigan; Hibbard, of Indiana; Baldwin, of Alabama, and X. C. Scott, of Ohio, comprise the committee, who reported the choice to be Drs. G. O. Hooper, of Arkansas; Alonzo Garcelon, of Maine; L. S. McMurtry, of Kentucky, and J. H. Hollister, of Illinois. The first three gentlemen are re-elected for another term, and Dr. Hollister is chosen to fill Dr. Davis' place.

Dr. J. H. Hollister, the chairman of the section on Practical Medicine, was introduced, and read a most excellent address on the progress of medicine since the last meeting. He discussed in quite an interesting manner the value of the microscope in determining the truth of the germ theory of disease. He mentioned the difficulty of deciding which possessed the most vitality, the bacteria or the blood corpuscles, and the danger in pursuing the germicidal treatment of killing the subject while the bacteria remain unharmed, like the surgeon who saved the tumor but killed the man. The doctor recommended that in course of time a National Board of Medical Examiners be appointed, which alone should grant permission to practice medicine, and that the yearly grists of the diploma-mills should be stopped. Many of the witty and biting paragraphs were greeted with enthusiastic applause, particularly when the speaker referred to the recent law passed in Italy, prohibiting the sale of proprietary medicines whose formula is kept a secret.

At its close the Rocky Mountain Medical Association was announced to meet at the Weddell House in the evening. The Rocky Mountain Medical Association was explained to be that party of physicians who eleven years ago, accompanied by their sweethearts

and wives, crossed the mountains to attend the National Association at San Francisco.

Dr. Bartlett, the chairman of the section of Obstetrics and Diseases of Women, was unable to personally present his address on account of voice trouble, and Dr. Nicholas Senn read it in his stead. The essayist recounted the many advances in obstetrical and gynecological operations. He mentioned as a process of destroying the fetus by electricity in the occasional cases of extrauterine pregnancy an anomaly, which can only result in the death of the mother unless an operation is performed. The transfusion of blood, milk and other solutions in the case of post-partum hemorrhages, was discussed dispassionately and thoroughly. The two-frequent use of forceps was deprecated, and the conclusion arrived at that their use had been of far more injury than benefit to society. The many mechanical contrivances, for aiding child-birth were described in a slightly sarcastic manner.

The address, which was quite lengthy, was received with great favor and was referred to the Committee on Publication.

Professor Toner, of Washington, chairman of the Committee on Necrology, presented the report of the names of members of the Association who had died during the past year. The report was ordered published.

The Association then adjourned until this morning at 9:30 o'clock.

THE SECTIONAL WORK.

Tuesday's programme of work in sections was followed yesterday. Resumes of the various topics discussed are given in a brief way.

DISEASES OF CHILDREN.

The section on diseases of children, meeting in the Council Chamber, convened at 2:35 yesterday afternoon, and was called to order by the chairman, Dr. R. F. Blount. The secretary of this section, Dr. J. H. Sears, being unable to be present during the session, Dr. E. L. Boothby, of Wisconsin, was chosen as secretary for the remainder of the session. Dr. Boothby, who was down upon "Croup and Diphtheria," was unable to give it on account of sickness in his family, which prevented his finishing its preparation. He begged to be excused in favor of Dr. Alexander Harris, of Virginia, who had prepared an essay on precisely the same subject, and embodying precisely the same views. Dr. Alexander Y. P. Garnett, of the District of Columbia, then read a paper upon epidemic jaundice among children. He related the history of an epidemic of jaundice which had come under his notice, for which no apparent cause could be assigned. The history of these cases was related in detail, and the treatment pursued was given entire. The speaker was at a loss to account for the occasion of this epidemic, but, as it was in hot weather, was inclined to ascribe it to some unknown action of the atmosphere and temperature upon the nervous system which produced the described symptoms. After a critical discussion on points of technical interest only, the section proceeded to the consideration of the next theme on the programme.

Dr. Alex. Harris' paper on the "Unity of Diphtheritic and Membranous Croup," excited very warm discussion. Dr. Harris claimed that the diseases are identical, and, in his essay, related the historical evidence which tends to substantiate his views. Virchow at one time based a distinction upon the claim that diphtheritic membrane could not be detached without tearing the underlying surface, while the crupous could

be removed notwithstanding. He, however, surrendered this distinction, after closer observation. Dr. McKenzie holds that it has been fully demonstrated that the difference in the degree of adhesiveness is due only to the structure of the parts upon which they exude. Numerous other authorities were adduced to prove his point, and the objections of the dualists were met.

The discussion which followed was warmly maintained by Drs. Snow Christy, of Iowa; Lee, of Baltimore; Boothby, of Wisconsin; Franklin Freeman, of Indiana; Sheehan, of New York; Earle, of Illinois; Green, of Ohio; Ulrich, and many others, the debaters being about equally divided on the question, half being dualists, and the others agreeing with Dr. Harris in maintaining the unity of diphtheria and membranous croup. The debate became so interesting that the time was extended fifteen minutes to allow Dr. Harris to close.

One gentleman was so enthusiastically in favor of his views that he proposed that the association endorse them, which motion was promptly declared out of order.

Dr. W. H. Myer, of Fort Wayne, Ind., presented a very interesting paper on "Surgical Treatment of Purulent Pleuritic Effusions in Childhood," making the apology for its brevity that it was such a little corpse. The essay is synopsisized as follows: In 1872 the Doctor said he was called to visit a boy, in whose left pleural cavity a hypodermic needle discovered the presence of fluid. He was advised by a physician of well-known ability, to continue the course of aspiration which he had previously pursued. He did so during the six weeks the patient lived. The result of these aspirations, in which large quantities of the fluid were drawn off, impressed him so that never after did he follow up a succession of aspirations in empyæmia, but he is convinced that the aspirator should be used as a curative procedure in serous effusions only, and the knife in purulent effusions.

The question was propounded whether in emptying a pleural cavity of pus with the aspirator, it does not refill, and if so, under what circumstances. The writer gave as his reasons for preferring the exclusive use of the knife after the first aspiration: the necessity of frequent reintroduction of the needle, which is always painful; the ultimate contraction of the side corresponding with the effusion, an effect of the operation; its inability to give complete and speedy re-expansion of the lung, which is afforded by the knife. He recommended a course of action which he had found advantageous in his practice. The discussion upon this theme was of a purely technical nature, and comparatively uninteresting to the public. Dr. Charles W. Earl read a concise and clearly-put paper, entitled, "A Plea for Pleasant Medication for Children, and for a more thorough study of Infantile Therapeutics." He maintained in vigorous style the necessity of doing away with the nauseous doses and vile decoctions which would sicken even the prescriber. He thought it would be far better for the physician if he would leave off the purely scientific trimmings, of his profession, such as studying peculiar curve of a forcep, the study of bacteria in their minutia hobbies in gynæcology and the like, and turn his attention toward making medicine palatable to children. He suggested a great many ingenious methods of disguising the taste of such nauseating drugs as quinine, calomel and the like, and mentioned the advisability of giving the maximum dose at one time, instead of in broken doses. The discussion which followed indicated that

many of those present had thought a great deal on the same line. The propriety of the plan as calculated to dispossess the Homœopaths from their hold on children's practice was strongly presented and was deemed of great importance.

The section then adjourned till 2 o'clock sharp this afternoon, when the subject of the relation of membranous croup to diphtheria will again be brought up.

DENTAL AND ORAL SURGERY.

The section on dental and oral surgery, which met at the Vocal Society rooms, held an interesting session, although none of the gentlemen who were down on the programme for papers appeared. Dr. Williams acted as chairman, instead of Dr. Goodwillie, whose case is under advisement of the judicial council. In the absence of a regular programme, Dr. John Marshall reported a curious case, whose diagnosis exhibited caries of the maxillary bone. The bone was being destroyed and the left central lateral incisor and the left canine became involved. The case was illustrated on the blackboard, and the treatment in the case was detailed. The part was treated with aromatic sulphuric acid, and the restoration of the bone to its normal condition, although gradual, was complete. Drs. Williams, Goodwillie, Talbot, Shattock, Butler, Briggs, Brophy, Buffet and Marshall participated in the debate which followed. Dr. Talbot reported a case of septicæmia, or blood poisoning, which resulted from an alveola abscess. So severe was the case that the patient was confined to his bed for several months, and was restored to health finally by a general antiseptic treatment, local as well as constitutional, full particulars of which were given. The discussion was general, and participated in by all present. The section adjourned until this afternoon, after nominating officers for the ensuing year, upon whom the association will ballot. The nominees are: For chairman, Dr. T. W. Brophy, of Illinois; for secretary, Dr. John S. Marshall, of Illinois.

SURGERY AND ANATOMY.

An attendance of perhaps 250 physicians, with a fair sprinkling of visitors from the city, among whom the proportion of ladies was noticeable, occupied Case Hall yesterday afternoon during the session of the Section on Surgery and Anatomy.

President Peck called the meeting to order at two o'clock, half an hour earlier than the appointed time, and appointed a sub-committee on papers, consisting of Doctors McMurly, of Kentucky; Moore, of New York, and Parke, of Chicago; after which Dr. Robert Newman, of New York, read a paper on the "Surgical use of Electrolysis," illustrating its use in the treatment of stricture of the urethra, for which he claims good results. On motion it was decided to hear the paper of Dr. James R. Taylor, of the Chemical Department of Bellevue Hospital, New York, which was on the programme of to-day's exercises, but had to be read yesterday because of the Doctor's contemplated return to his home in New York.

Dr. Taylor's paper was entitled, "The Treatment of the Fractures of Long Bones," and was profusely illustrated by a large number of well executed engravings, which were distributed among those present. The Doctor first spoke of fracture of the thigh bone, which he treats with a saddle made to fit into the perumeum, whereby he secures the most perfect comfort possible by any apparatus used for the purpose of counter extension. This neatly devised little saddle is held in position by a strap, running to the headboard on each side, thus securing the patient in an im-

movable position. By fastening strips of adhesive plaster, previously secured to the leg, to a screw arrangement in the foot of the bed, he can produce any desired degree of extension of the limbs by simply turning the little screw at the foot of the bed; the chief advantage of the whole apparatus over all other instruments being the little saddle on which the patient sits, as it were, with comfort, he claims, rather than misery, as in most other methods. The doctor announced himself as positively opposed to the old method of using stones and other suspensory weights to produce extension of the limbs, and then turned his attention to the treatment of fractured ribs. He brings the broken ends into place by raising the arms over the head, an original method by which he claims there is no trouble in adjustment. They are then held in place by a band of adhesive plaster around the body. He gave original methods of treating broken wrists and collar bones, illustrating the treatment of the latter with a living example, in the person of an Irish laborer of this city, who was suffering from an injury of the kind named, and who bore unflinchingly the trying ordeal of sitting before the large audience for three-quarters of an hour in a semi-nude condition.

In this experiment Dr. Taylor was assisted by Dr. Henry J. Reynolds, of Michigan. The method is a modification of other methods by which is secured perfect immobility of the shoulder blade, thereby enabling the operator to secure the broken ends in position till healed, avoiding any deformity. The method also allows free circulation of the blood in the arm, which is by many other methods often very hard to secure.

The doctor contended strongly for simplicity and readiness in the performance of surgical operations, and frequently cited Hippocrates in support of his opinions. His paper was received with much applause, as indeed were all that were read during the session.

Dr. Donald MacLean, of Michigan, who was to have read a paper on "Cases in Practice," was absent, and had failed to send in his production. Dr. Taylor was therefore followed by Dr. Henry O. Marcy, of Boston, in a very able discourse on the "Comparative Value of Antiseptics," detailing the results of a series of experiments, in which the proportion of germicidal to infected matter was as three to one, and the time of application from five seconds to five minutes. Dr. Lewis H. Sayre, of New York, followed with a paper on "Amputation Below the Knee Joint in Preference to 'Brisement Force' or Resection, in Certain Cases of Ankylosis with Deformity," illustrated by two cases, the first that of a lady who endured amputation and walked upon an artificial limb within six weeks, and the second a case of amputation performed two weeks since, with the wound now thoroughly healed.

In the absence of Dr. John H. Packard, of Pennsylvania, his "Report of a Case of Re-amputation at the Hip Joint; Secondary Hemorrhage on Sixth Day; Ligature of the Primitive Iliac Artery." was received and referred, without reading, to the Committee on Publication, after which Dr. E. M. Moore, of Rochester, N. Y., read a profound essay on the "Treatment of Unreduced Cases of the Ulna in Connection with Colle's Fracture," which brought out a very prolonged discussion, opened by Dr. Wile, of Cortlandt, N. Y., and taken part in by Drs. S. M. Ross, of Altoona, Pa.; Quimby, of Jersey City; Kinloch, of South Carolina; Mudd, of Arkansas, and Credin, of Illinois. A paper that was listened to with the greatest interest was the concluding one of the session, on the "Treatment

of Tender Spines by Sub-cutaneous Incision," by Dr. V. H. Coffman, of Omaha, Neb. Dr. Coffman was recalled to explain his method of making the incision, after which he was kept standing upon the stage for some time, answering questions from various physicians present relative to his paper. Dr. Moore was then recalled, but begged off and excused. The session adjourned to meet at the same place at 2:30 P. M., to-day.

STATE MEDICINE.

Before the section on State Medicine, H. A. Johnson, M. D., of Chicago, talked on the workings of the Illinois State Board of Health. This paper set forth what the board has accomplished since its organization, in 1877, for the profession. It is the purpose of this board to root out all incompetent men, practicing medicine in the State. At the date of the foundation of this board the profession embraced 7,400 individuals, and was composed of 3,600 graduates in medicine, and 3,800 non-graduates, itinerants and nondescripts, who combined various other vocations with that of a doctor. These, almost without exception, belonged to some of the irregular schools. A very small portion of this number now remains, through the efforts of the board, and the existence of those that remain is due to what is known as the ten years' prior practice clause of the medical practice act. This paper was discussed all the afternoon by the members of the section. It took all the afternoon to discuss this paper, the remarks being quite spirited at times. Time was taken, however, to pass the following resolution, offered Dr. Foster Pratt, of Michigan:

RESOLVED, That the labors of Dr. William Barr, of England, recently deceased, in the organization, classification and compilation of vital statistics, his labors having begun in 1838, and persevering, wisely and ably continued by him for nearly half a century, are recognized by the medical profession of the United States as an enduring monument to his ability and learning as a physician, as the real incentive to and the foundation of our own sanitary work, and as a perpetual blessing to present and future generations of our universal humanity; entitling his name and fame to stand with that of other great men whose genius and labors have resulted in beneficent resolutions of the medical, surgical and sanitary thought and activities of the civilized world.

GYNÆCOLOGY AND OBSTETRICS.

The section on gynæcology and obstetrics again met at Frohsinn Hall, yesterday afternoon, with Dr. J. K. Bartlett, of Wisconsin, as chairman and Dr. J. T. Jelks, of Hot Springs, as secretary. At the opening of the meeting Dr. E. C. Dudley asked permission to postpone the reading of his paper from yesterday to this afternoon, which was granted. Owing to the absence of Dr. R. Beverly Coe, of California, and his paper on "Subinvolution, its Causes and Treatment," not being on hand, the next paper called for was "Post Partum Atrophy of Uterus," by J. Tabor Johnson, of the District of Columbia. Dr. Johnson also being absent, Dr. John Morris, of Maryland, read his paper on "What Means Can be Judiciously Used to Shorten the term and lessen the hours of labor," of which the following is a brief abstract: In describing lingering labor he divided it into three stages, first, when the head remains high up; second, when it has descended into the pelvic cavity, but the parts are tense and undilatable; and, third, when the child inhinges with perineum. He explained the procedures to be used on all these conditions, and at what time to employ them. These

procedures were, detaching the members around the cervix with the finger in the first stage, dilating with the pulpy part of the finger and stretching it cautiously during each pain. Forcible external compression, pushing the cervix over the occiput; the administration of opium ergot, but never in first cases, and finally chloroform. These means all failing, the only alternative is the forceps. The doctor further said that if the means he suggested were employed, laceration of the os and perineum, those betes noir of modern medical literature, would be obviated, and post-partum hemorrhages, that greatest of all complications in labor, would be prevented. The above paper was the cause of considerable discussion, participated in by Drs. McClure, of Pennsylvania; A. C. Gent, of Texas; Reamy, of Ohio; Smart, of Michigan; Gordon, of Maine; Martin, of Massachusetts; Montgomery, of Pennsylvania; Landis, of Ohio; Humiston, of Massachusetts; Robinson, of Pennsylvania; Ruvis, of Ohio; Horlic, of Ohio; Watkin, of Kentucky, and finally closed by the original speakers.

Dr. E. C. Dudley, of Illinois, read the next paper on "The Immediate Application of Sutures in Puerperal Laceration of the Cervix and Perineum," ably discussed by Doctors Harvey Walker, of Kentucky, E. W. Jerks, of Chicago, Morris, of Baltimore, Maughs, of St. Louis, Ulrich, of Pennsylvania, and Parson, of Detroit. The closing paper of the afternoon's session by Dr. W. H. Taylor, of Cincinnati, proved to be a very interesting report of a case of laparo-electrotomy in its various styles until its final development. At the conclusion of the last paper the meeting adjourned.

EAR, EYE AND THROAT.

At the Board of Education Assembly Room, in the Public Library Building, the section on Ophthalmology, Otology and Laryngology held its second day's session yesterday afternoon, beginning at 2:30 o'clock, with President Chisholm in the chair. After the reading of the minutes of the previous session, the president appointed Drs. Conner, Williams and Seiler a committee on publication, after which Dr. Lawrence Turnbull, of Pennsylvania, read a paper on "Tinnitus Aurium and Deafness Which Accompanies the Different Forms of Bright's Disease," in which he stated that in all cases of Bright's Disease ear symptoms are present, and especially in that form in which fatty degeneration of the kidneys has taken place. The paper was quite freely discussed by Drs. Frothingham, of Ann Arbor, Mich., Coser, of Williamsport, Pa., Connor, of Detroit, and Turnbull of Philadelphia. Dr. J. L. Thompson, of Indianapolis, then read a paper on "Questions on Etiology of Some Forms of Lenticular Opacity," describing a peculiar opacity in the lower periphery of the lens, which comes on suddenly and remains unaltered for years, causing blindness, but differing from cataract. The doctor said that he was ignorant of the cause, but had found it in cases of diabetes. In the discussion which followed, Dr. Noyes, of New York, said he had seen similar cases and they were not infrequently associated with myopia of molecular form. There was another class of cases, the cause of the opacity being choroidal retinitis, occurring more frequently in the lower periphery of the lens, and the doctor thought it was due to alteration in the nutrition of the hexagonal epithelium. Dr. Howe, of Buffalo, said that opacity of the lens was frequently absorbed by tearing the capsule. The next discourse delivered was a "Case Illustrating the Segmental Feature of Glaucoma," by

Dr. H. Culbertson, of Ohio, in which its author discussed at great length the causation of glaucoma, occupying almost an hour in reading his paper. A prolonged discussion of the discourse ensued, following which Dr. Roe, of Rochester, N. Y., read a paper on "Nasal Disease as a Cause of Asthma," in which he showed that nasal obstruction or irritation of the mucous membrane would give rise to severe attacks of asthma. Dr. Seiler, of Philadelphia, opened the discussion by saying that he had cases under treatment in which the touch of the probe to the diseased spot had caused an attack of asthma, and that the cure was to cauterize the spot. He said, in addition, that hay asthma or, as it is commonly called, "hay fever," was due to the same cause, and could always be cured by removing the chronic nasal irritation which is aggravated by the pollen always floating in the air in early autumn.

Dr. Frothingham, of Ohio, said he could not see that these cases differed from any ordinary cases of inflammation of the bronchial tubes. Dr. Roe, of Rochester, N. Y., concluding the discussion, clearly showed that Dr. Frothingham was in error, and at 5:45 P. M. an adjournment was had until 2:30 o'clock this afternoon.

PRACTICAL MEDICINE.

The section on Practical Medicine, Materia Medica and Physiology met at the Euclid Avenue Opera House yesterday afternoon, with Dr. Hollister, of Chicago, in the chair, and Dr. J. G. Lee, of Philadelphia, as secretary. The first paper read by Dr. Thomas N. Reynolds, of Detroit, was a voluntary one, the subject of which was "The Alimentary Canal in Bronchitis and Phthisis."

Dr. Reynolds said the adnormal condition of the alimentary canal and portal and lacteal systems was often the predisposing cause of both acute and chronic affections in all parts of the respiratory apparatus. Speaking only of bronchitis and phthisis, acute tracheo-bronchitis was often caused by excess in the dietary elimination with proportionately incomplete waste. In view of this fact, in such cases the treatment should be prompt evacuation of the bowels and restriction of the diet to a light liquid form.

Necessary quiet and warmth of the surface should be maintained, but the atmosphere of the room should not be too warm. The cathartic, hot drinks and a warm surface produced a revulsion of nervous energy from the inflamed part to the bowels, kidneys and skin. He deprecated the use of ordinary cough mixtures to the exclusion of this more rational treatment. Morphine, quinine, aconite and veratrum viride were the more usually appropriate remedies in the first stage, but did not equal the treatment without drugs to which he referred. Derangement of the primæ and secundæ was still more causative of chronic bronchitis, and treatment should have reference to this fact. When purulent, quinine was the best remedy in connection with the management pertaining to ingestion and elimination. It was not wise to press stimulants and strong nourishment when not readily digested. Clothing should be sufficient, but not excessive; a common mistake was wearing too much on the chest. He had a few times seen striking improvement in expectoration in those going about, from removing two or three extra undershirts and a chamois leather lung protector. Physical exercise, involving free use of the lungs, restored wonderfully their normal elasticity after an attack.

(To be continued.)

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SIXTH CONVERSATION BETWEEN DRs. WARREN AND PUTNAM.

Dr. Putnam.—I have read your letter, containing copious references to foreign medical delusions; which I value the more because your notes are enriched by your own personal experience, obtained in your extensive travels abroad.

Dr. Warren.—I trust you will see that the closing proposition made by me in our last interview is sustained.

Dr. Putnam.—It may seem ungracious in me to say so, but, Doctor, I must declare to you frankly, that you have by your superior learning furnished me with new weapons of defense for my own opinions, and given an edge to those which I had intended to use.

Dr. Warren.—I shall not regret it, if only we are enabled thereby to reach the truth.

Dr. Putnam.—The medical delusions of other countries, so far as they have been cited by you, and so far as my own reading has informed me, have been, with few exceptions, associated with religious beliefs or in some other way they belong to the supernatural. The believers in them attribute their cures to a divine or super-human agency. No one derives any pecuniary profit from them; not even the priests, although a fee is sometimes accepted by them; but it has never been charged against these priests that they put the fees into their own pockets. They accept the money, or other presents voluntarily offered them, and put them into the common treasury of the church. They do not make a trade or a profession of curing disease, and they never become personally enriched by it. Observe, Dr. Warren, that while I recognize the medical superstitions to which you have referred as gross errors, I hold them to be only representations of religious faith. In this country medical delusions of this class rarely secure even a temporary footing, and they never spread widely, or indeed beyond very narrow circles. To take root here and to propagate successfully the

medical belief must be human in its source, and be able to present a theory for its existence. It may not be necessary that the theory should be sound, or even specious, or one which any finite mind can comprehend, as is the case with the doctrines of Hahnemann, but without a theory of some sort it can take no hold upon the popular mind. Of the class of medical beliefs and charlatanisms last described, we have now, and have always had, more than our share.

Dr. Warren.—But most of them are of foreign origin.

Dr. Putnam.—Some of them are, but in most of these cases they failed to show any vigor, or they almost died out, until they were transplanted to America. For example, Hahnemann was a German, and after he had fully announced his doctrines he left Leipsic, in which city he commenced the practice of medicine, and having subsequently taken up his residence successively in a score of German towns, he finally left Germany altogether. Says his biographer, in the British edition of his *Organon de Medicini*, "the author of the *Organon* has been persecuted with the utmost rigor; and in 1820 he quitted his native country in disgust." The doctrines of Hahnemann, and the cognate science of animal magnetism, with their offshoots hypnotism, artificial trance, mind reading, and clairvoyance, have never flourished in Germany as they have here. The ingenuity of German handicraft weave these curious fabrics, but they find their best market on this side of the Atlantic.

Dr. Warren.—Do you call hypnotism, artificial trance, and mind reading offshoots from animal magnetism?

Dr. Putnam.—They are the same old sheaves of straw threshed by new flails.

Dr. Warren.—But, Doctor, do you not think there is something in these old sheaves of straw, as you call them?

Dr. Putnam.—Yes; where grains of wheat are so scarce one might chance to find a dead weevil.

Dr. Warren.—A good many intelligent medical men in this country, and a good many shrewd scholars, including lawyers and doctors of divinity, think differently.

Dr. Putnam.—I am not surprised; but I was speaking of imported eccentricities in medical literature as having less reputation at home than here. This will apply to all those which I have named, and also to hydropathy as taught by Preissnitz, and to many others.

Our indigenous products of this class, less ingenious perhaps in most cases, in their construction than the German, are by far the most numerous, and have been the most successful. Among which we may enumerate Perkinsism, or the Metallic Tractors; Thompsonianism, or the Steam and Pepper doctrines; botanic doctors, root doctors, Indian doctors, ecclectics; the clergyman, "the sands of whose life are nearly run out;" a thousand panaceas, pain-killers, magnetic ointments and magnetic cuirasses, soothing syrups, blood purifiers, brain, nerve, muscle, and bone regenerators; many of the inventors of which have realized large fortunes from their sale, notably Swain, Morrison, Brandreth, Helmbold, Ayres, Moffat. Of all of which modes of medication it must be said, that not one of their inventors ever claimed that there was anything supernatural in their action. Accompanying each medicine there has always been a lucid explanation of its mode of operation. Without this satisfactory explanation no genuine American could ever be induced to try the medicine.

Americans have by inheritance inquiring minds. They want to look into things. Our young men go to see Hermann, the prestidigitateur, or the Davenport brothers, not so much to see the tricks, as to try and find out how the thing is done.

It is my opinion that the original Paul Pry was a Yankee.

Dr. Warren.—He was an Englishman, I believe.

Dr. Putnam.—Perhaps he was; but I don't think he could be duplicated any where but in the United States of America.

I omitted to enumerate among the charlatanisms peculiar to this country, one form which is of comparatively recent origin. I refer to the infinite number of preparations invented by druggists, pharmacists, and pharmaceutical chemists, which are placed by the manufacturers upon the tables of physicians; and in the circulars accompanying which they assume to instruct the medical profession what are the proper doses of the various ingredients found in their new compounds, and to have put these together in the best manner to insure the best results.

This system, or scheme of charlatanism, has in a great measure driven the so-called patent medicines from the field; but it is the same thing in another and no less objectionable phase, only that it presents itself in the specious form of direct appeal to the medical profession, and not to the people, for the purpose of first securing the endorsement of physicians, and then selling to the people.

Dr. Warren.—They give you the formulæ, and those who sell patent medicines do not.

Dr. Putnam.—There is no patent medicine which cannot be easily analyzed by a chemist; and the constituents of most of them are known, and may be found published in the pharmaceutical journals.

But of what use is it to know the formula, when you are told by the manufacturer that his preparation is the only genuine article of this kind in the market; and it is apparent that the process of manufacture, which he is careful to describe to you, is so complicated that neither you nor any ordinary pharmacist could make it to order?

Dr. Warren.—Is it of no use to know the formula, so that you can intelligently approve of it or not?

Dr. Putnam.—I can do the same with any patent medicine. To me it is plain that this is but a new phase of the manufacture and sale of quack medicines. But the plan contains an element of impertinence which would never be tolerated in any other country but this. The manufacturers assume to instruct the profession as to the quality and proportions of medicine they ought to give. I venture to say, you will not find these samples and circulars of advice crowded upon the doctors in any other country in the world as they are here.

Dr. Warren.—As I said to you before, I do not think I would ever wish to hold a consultation with an empiric in the formal manner in which consultations are usually held; but I can see no reason why any person suffering from an obscure disease, no matter who may have charge of his case, may not have the benefit of my opinion as an expert upon the question of the nature of his disease. Common humanity seems to me to demand that I shall make this concession to his wishes.

Dr. Putnam.—He can, under the American code, have your expert opinion; he will dismiss the empiric; and the lack of humanity is, therefore, in your supposed case, on the part of himself or his friends.

Dr. Warren.—But he prefers the empiric's practice to mine, although he prefers my diagnosis.

Dr. Putnam.—Would you, as a physician, think a man who could not make a proper diagnosis, and who, on the diagnosis being made by you, refused to accept your suggestions as to treatment, a safe man to trust with the life of the patient? and especially if he frankly declared to you that in this, as in all other cases, his views of treatment were diametrically opposed to yours?

Dr. Warren.—No, Dr. Putnam, but that is no business of mine. Having made the diagnosis and put the empiric on the right track, my responsibility ceases. Don't you think so?

Dr. Putnam.—It is a case of uræmia perhaps; and to-morrow the empiric seeing that the patient is suffering from constipation, may—and he certainly will if he is a sincere believer in the doctrines of Hahnemann—*similia similibus curantur*—give him a dose of morphine, or some other equally inappropriate medicine, and kill him outright.

Doctor, excuse an interruption. There is a man waiting in the reception room who wants my professional advice. May I call him in? you need not retire.

Dr. Warren.—I am in no haste, doctor.

Dr. Putnam.—(Addressing the man who has taken a seat.) Mr. Jenkins, you are an engineer?

Mr. Jenkins.—Yes, sir, I am what some call an engineer, but I call myself an engine-driver.

Dr. Putnam.—Where do you run an engine?

Mr. Jenkins.—I run out from Jersey City on the Pennsylvania Central.

Dr. Putnam.—Suppose the superintendent of your road were to send for you, and tell you that he wished to go to Newark on an engine, but that his engineer did not know how to switch it on to the right track; and upon inquiry you were to learn that the engineer he had selected was a man you knew very well; that all the knowledge of engineering he ever had he obtained in a blacksmith shop, where he sometimes made bolts and coupling-rods for the repair of engines. Suppose further, that you knew he entertained a full belief that he was an accomplished engineer; and that he had such a plausible way of talking, that he often persuaded intelligent people who were not engineers that he understood perfectly the construction of an engine and how to run it. Or, you may suppose that he did understand fully the construction, joinings and purposes of all parts of an engine, but that you knew also that he claimed to have made some important discoveries in the matter of the running of an engine; one of which was, that the proper way to run an engine was to put on all the steam he could, and then shut off the steam escapes, and tie down the safety valves. Suppose you knew, in short, that he was filled with all sorts of cranky and absurd theories relating to this subject, of which the one I have cited will serve as a fair specimen. Would you, knowing that the superintendent, who knew nothing of engineering, had chosen this man to take him to Newark, and could not be dissuaded from his purpose, would you, I ask, obey his order and put the engine on the right track?

Mr. Jenkins.—That is a queer question to ask, Dr. Putnam.

Dr. Putnam.—But you ask me queer questions sometimes, and I answer them.

Mr. Jenkins.—And I knew all about this crank, and the superintendent did not?

Dr. Putnam.—Yes.

Mr. Jenkins.—No, I wouldn't obey the order; for

I would be morally certain that he would blow up the engine before he had run a mile.

Dr. Putnam.—If you refused to obey, the superintendent would discharge you.

Mr. Jenkins.—That would make no difference. I would rather be discharged than to help blow up the engine with all on board. If I did so, I think I would deserve to be discharged not only, but to be hung up on the nearest lamp post.

Dr. Putnam.—That is pretty strong language, Mr. Jenkins.

Mr. Jenkins.—I think any honest engineer would answer the same way.

Dr. Putnam.—You would sacrifice your place for a sentiment?

Mr. Jenkins.—I don't know what you mean by a sentiment, but I would lose my place before I would help blow up the engine. You see, doctor, I love an engine, I was brought up among engines. I know every piece of metal there is in an engine, and when they are put together she is the most beautiful thing in the world. She is intelligent; I talk to her and she understands me, and obeys me; and she talks to me, telling me when she wants more coal, and when I am running her too fast. She knows more than some men; and I half think she has a soul, and that I may meet her in another world; and if I should blow her up I would expect to be haunted by her ghost as long as I live. I don't think I would care so much for the addle-headed superintendent, or for the engineer, but I couldn't knowingly hurt the engine, or help any other man to do it. As I told you, an engine has life; she sleeps, eats, drinks, breathes, smokes, speaks, walks, runs, jumps, backs, and does many other things a man cannot do. Would you help kill a man, doctor?

Dr. Putnam.—No.

Mr. Jenkins.—Nor would I help kill an engine.

Dr. Putnam.—But you would not yourself hurt the engine, you would only put it on the right track.

Mr. Jenkins.—Your philosophy is too fine for me. If neither I nor any other engineer did not put her on the right track, the superintendent wouldn't take his foolish ride, and the engine wouldn't be blown up.

Dr. Putnam.—Mr. Jenkins has given you my answer to your question, Dr. Warren.

If I have anything more to say in reply, it is to repeat what I have already intimated, that I am under no obligation to sacrifice my own self respect for a man who willfully and obstinately refuses to make any sacrifice on his part in order that he may obtain my professional services.

The object which the patient and his medical attendant have in view, in asking an expert to give an opinion in such a case, is seldom or never fairly stated. The charlatan has never intimated to his patient that he has any doubt as to the nature of his disease. That is not the way with men of that class. He has consented to the consultation only to gratify a whim of the patient, and with the ultimate purpose of convincing his patient that he understood the case better than any one else; and inasmuch as he will be left thereafter in exclusive charge of the patient, he will have no difficulty in convincing him. Even in case of the patient's death, and he is permitted to make an autopsy, the proof that he was right and the expert was wrong, will not be wanting. How can a physician consent to occupy such a position for the sake of the fee, and for nothing else: for no other profit can come of it to any of the parties concerned. Please read this paragraph which I have copied from the Homœopathic Code of Medical Ethics:

"§6. As the patient has an undoubted right to dismiss his physician for reasons satisfactory to himself, so, likewise, the physician may, with equal propriety, decline to attend patients, when his self-respect or dignity seem to him to require this step."

May the attending physician indulge in that self-respect which is denied to the consulting physician?

THE DWARFING INFLUENCE OF ROUTINE IN WORK.

The acknowledged belittling of the general intelligence which routine in work effects is applied in the *Lancet*, of May 19th, 1883, to the labors of the Medical Practitioner and some of the dangers to be avoided pointed out as follows:—

"The dangers of excessive haste and consequent worry, of the high pressure at which many lives are now carried on, and of the diseases resulting from all this excitement, have been so often dwelt upon that in the minds of many hurry and worry have become fixed as the great characteristics of the age in which we live. The tremendous leap forward, in all departments of intellectual labor as well as applied science, which has marked recent years, has been so striking and unquestioned that attention has been diverted from another and less picturesque aspect of our social life, which may be put as the counterpoise to the more brilliant characteristic so often referred to: The dash and hurry are, after all, confined to a limited number of the citizens, and the huge majority of our people are perhaps more addicted to the demoralising tendency of mere "routine in work," an influence which has succeeded in making our artisans in many cases mere automata, and which spreads with fatal effect even among members of professions which hold their high positions merely because independent thought is believed to be an essential in their prosecution. The best work is too often carried on by the merest minority, and, while their brilliant efforts are unsupported by the steady, conscientious, and thoughtful labor of the rank and file, the result cannot be commensurate with expectation, and may end in a general and deplorable atrophy. There is more than slight risk at present that, notwithstanding the discoveries made by pioneers in all departments of inquiry, the mass is becoming less thoughtful, less trustworthy on emergencies, and, on the whole, contented with a mechanical performance of every-day duty. The danger of this tendency, when applied to many spheres of work, is evident enough, but in perhaps no case is it of greater consequence than as referring to our own profession. No possible height to which the leaders in medicine can attain could neutralise the evil which would result from the loss of high moral and intellectual application to work on the part of the general body of practitioners. The insidious approach of any such tendency should be guarded against by every individual, and any general influence in that direction should be pointed to, and, if possible, rooted out. The man who fails to see in every case of disease brought under his ken the separate shades which distinguish it from all other cases in the same class is wanting, in direct proportion to the extent of such failure, not only in the higher duties but the highest pleasures of the profession. Routine in medicine is a blighting power which destroys many of the most promising aspirants, who hope for intellectual exercise while striving for pecuniary success; this last too often

comes only over the decaying or dead body of the former. Without earnest effort no man is proof against this wide-spread malady; the prophylactic agents are accurate training, no undue haste for riches, and a high moral resolve. The man who means to pursue throughout life his profession nobly must begin with self-sacrifice that he may end with satisfaction.

"THE INCREASING FATALITY OF CANCER."

An editorial in a recent issue of the *British Medical Journal* presents statistics which go to prove the increasing prevalence and fatality of this disease. The writer very truthfully pictures the magnificent results that have been obtained by treatment and very urgently appeals for most study into the nature and origin of the scourge. He thinks it reasonable to suppose that there may be found for malignant growths a remedy which will disperse them as readily as syphilitic tumors are dispelled by mercury and iodide of potassium.

The founders of the Cancer Hospital which has been recently established in this city surely have anticipated some of the suggestions made by our London contemporary and proposed to take a step in the right direction.

We quote below an extract from the stirring appeal alluded to above.

"The fact is, that the cancer is a very real and common evil, and that fact should be faced boldly, and should have all possible publicity given to it. To know our danger is to insure the adoption of such protective measures as are available, and to set manfully to work to find ways of escape. To shut our eyes to it is to give it the advantage over us. The flatterer is an objectional character, but there is a still more pernicious social nuisance, and that is the flattering unctionist, if we may coin from Shakespeare such a name for the being who lubricates everything with the oil of gladness, and polishes each plague-spot on the body-corporate, till it shines so that we cannot distinguish it from healthy tissue. To the flattering unctionist, whatever is right, progress is universal, and everything *couleur de rose* to souls and eyes that have been properly anointed. Facts that create foreboding may be refined away, statistics that awaken anxiety may be so manipulated as to prove exactly the contrary of their obvious meaning. We have only to stereotype a smile, put our hands in our pockets, and glide into a blissful futurity by the usual route, 'straight down the crooked lane and right round the square.' And it is the flattering unctionist who, whenever we are startled by the inroads of disease, steps forward to assure us, with bland confidence, that we are sadly deceived, that the increase is apparent and not real, and that there is not the slightest necessity for taking our hands out of our pockets; and in doing this, he works incalculable mischief. The ignorant public are ever but too ready to listen to any flattering tale, and so they are soothed by such assurances, and spared that just appreciation of danger which is the necessary condition of investigation of its source, and protection against it.

"With reference to cancer, it seems certain that the public has not yet been awakened to a realization of the truth that it is spreading and claiming a greater number of victims each succeeding year. And surely it is desirable that this truth should be brought home to them: for, once they have grasped it, they will not only sanction, but insist on, searching investigations into the nature and origin of the evil. The sophistries

and sentimentalities of antivivisectionists will be brushed aside, in view of the menacing advance of this dread and excruciating disease; and pathologists will be exhorted to pursue their researches untrammelled, and to sacrifice whatever number of animals may be necessary in the scientific pursuit of means by which its attacks may be warded off, or its ravages arrested. Nor would such researches be undertaken by pathologists without good hope of obtaining valuable results. The tendency of medical and surgical discovery of late has been to remove the barriers which were supposed at one time to separate ordinary inflammation from malignant new growth. It is even taught that inflammatory processes pass by insensible gradations into those of malignancy, while it is pointed out that some of the local applications which are beneficial in inflammation have also an unquestionable influence when used in cancer, in retarding cell-growth, and in retarding its development. There can be nothing, therefore, extravagant in anticipating that we may yet light upon some remedy the internal administration of which will cause a malignant ulcer to heal, or a malignant growth to melt away, just as syphilitic formations vanish under mercury and iodide of potassium."

ORIGINAL ARTICLES.

THE HEALING OF ULCERS IN LARYNGEAL PHTHISIS.*

BY

WM. C. JARVIS, M.D.

New views were advanced by Dr. Jarvis concerning the etiology and curability of phthisical ulcers in the larynx. Rules framed from peculiarities in appearance of the laryngeal lesions, were given as valuable in making a prognosis. He referred to the incredulity in the medical profession regarding the cure of phthisical ulcers in the larynx. Knowledge on the part of practitioners and specialists, of the possibility of confusing the signs of laryngeal phthisis with other conditions, had encouraged doubts. With due respect for pardonable doubt, he fortified the history and results in a case reported by the evidence of others who had previously seen and afterwards observed the patient, thus leaving no excuse for unbelief.

The patient, prior to his charge of her, had been under the care of a well-known throat specialist, who had pronounced the disease consumption of the throat, and incurable. This information was received several months after his first interview with the patient, to whom he also had given an unfavorable prognosis. Coexisting pulmonary phthisis, discovered by lung specialists, strengthened the diagnosis of the laryngeal difficulty.

Treatment was both local and constitutional. The topical applications were mild and unirritating. Thorough cleansing of the diseased parts was accomplished by the use of alkaline sprays. Local sedation was induced by means of atomization with solutions of morphia. Iodoform was employed to relieve pain and favor cicatrization. The internal administration of antispasmodics and sedatives was resorted to to relieve the cough, promote laryngeal rest, and furnish strength

* Abstract of a paper read by Dr. Jarvis before the American Laryngological Association, May, 1893.

from sleep. An easily borne emulsion of cod-liver oil, with pepsin and pancreatin, supplied nourishment during the critical period in conjunction with mild stimulants.

Local treatment was interrupted at a certain point, and change of climate recommended. By these means a patient on the verge of starvation, was resurrected to almost perfect health and personal comfort. Her statement of being absolutely well, seeming to contradict the existence of traces of her old pulmonary trouble. An ulcer which had eroded the larger portion of the right vocal cord had entirely healed, and the trace of its previous existence being an extensive crescentic excavated cicatrix. He referred to certain forms of superficial ulcer in the mouth as affording a striking analogy in their progress, etiology and healing to the course and cure of phthisical ulcer in the larynx. These sores in the mouth were frequently found, and owed their existence to a slight laceration of the mucous membrane, and the action of perverted acrid buccal secretions upon the torn tissues. Proof of the action of local secretions in the production of these lesions, was demonstrated by their rapid disappearance under the simple protection afforded by a varnish or albuminate eschar. If the traumatic ulcer occurred upon a part in frequent motion, as the palatine fold, a train of symptoms resulted, bearing a striking similarity to those induced by the ulcers of laryngeal phthisis. The pain in swallowing caused the familiar phthisical dislike for food, the local irritation induced a nervous erethism resembling that of phthisis, and general debility was eventually caused by the local condition and persistent symptoms. Inasmuch as iodoform acted as a curative agent when applied to the simple buccal lesions he was persuaded of its beneficial efficiency in non-tubercular laryngeal ulcerations. In recognizing the possibility of simple phthisical ulcers being produced by violence applied in the form of a cough or otherwise, with the subsequent action of acrid discharges upon the injured tissues in a state of lowered vitality and constant motion, he considered the analogy nearly complete and the indications for treatment distinctly marked out. Basing his conclusions upon the case treated and a number of others in both private and public practice, he was convinced of the curability of certain forms of non-tubercular phthisical ulcerations in the larynx readily recognized by peculiarities in appearance. A new laryngeal powder blower was exhibited. It worked in accordance with the Ely principle of insufflation and was designed to prevent wastage and the resultant poisonous action of iodoform in the treatment of ulcers of the larynx. The instrument was constructed in such a manner, that when an object became visible in the mirror the opening of a valve permitted the powder to be blown upon it.

NOTES OF A CASE OF INJURY TO THE HIP-JOINT—PECULIAR PATHOLOGICAL SPECIMEN.

BY

WM. OLSLEIGHT, M. D.

Sixty-five years ago, W. M. G., then about eight years old, was leaping from a gate-post with some other lads, seeing who could jump the furthest. He overbalanced himself and fell after his feet reached the ground. He arose said that he could not leap any more, but would "beat them another time." He walked some twenty yards into the house had supper and went to bed.

The next day he had great pain and was unable to rise. Some days later was taken to a bone-setter who said there was a dislocation, but that it would not do to reduce, as some dire change would occur in the "jelly of the joint" and death might ensue. A tedious illness with running sores followed, lasting for many months. Lameness and shortening of the limb resulted.

Another accident occurred to him in adult life—a severe fall down stone steps—his side was badly hurt.

For a year or more before death he had bladder troubles, and an attack of dysentery finally carried him off.

POST-MORTEM.—*Ilium.*—A rounded piece of bone closely resembling but more flattened than the head of the femur was found firmly attached by its edge to the ilium just before the crest and behind the anterior-superior spinous process. Another small bony outgrowth existed below and in front of this. The acetabulum was obliterated and on its usual position—*condyle*—was a sort faceted process.

Acetabulum.—Head gone; two semi-faceted surfaces, one on what is left of neck and one on shaft nearly three inches lower down.

The space between the round piece of bone on ilium, and the trochanters was filled with a mass of fatty, fibrous and connective tissues on and in which the upper part of the femur seemed to play. The two quasi-facettes on femur alternately articulating with the similar process on the obliterated acetabulum.

Ischium and pubes presented evidences of fractures.

A doubt existed as to whether the round piece of bone could be head of femur firmly attached by bony union to ilium, and curiously drawing nourishment from it: or whether it might be an osteophyte.

Even so distinguished and experienced a surgeon as Dr. Frank H. Hamilton (to whom the specimen was sent for examination and who expressed his interest in it) would not decide positively, though seeming to incline to the first alternative. A section was subsequently made and revealed a cancellated structure: a line curving conversely inward seemed slightly more compact than the rest and might be taken as the line of the upper and inner surface of the head.

A possible explanation is that the surfaces of both bones may have been broken, impaction and subsequent union between the two taking place.

P. S.—It may be added that upper part of bladder was sacculated, and a villous projection at the neck rendered catheterization difficult and peculiar—kidneys contained cysts.

SOCIETY PROCEEDINGS.

MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

(Continued.)

At the close of Dr. Reynold's reading, the meeting decided to refer it for publication. Dr. Belfield, of Chicago, then took the floor and delivered a very interesting lecture on "The Germ Theory of Disease," which he explained by means of micro-photographic illustrations. At the close of the lecture, it was discussed by Drs. Austin Flint, Jr., of New York, and Palmer, of Michigan. Dr. John V. Shoemaker, of Philadelphia, read a very interesting paper on the "Mechanical Remedies in the Treatment of Skin Diseases."

There are a number of remedies, said the Doctor, which can be used in the treatment of skin diseases, which cannot be classed as drugs, but being mechanical in their application may be appropriately termed mechanical remedies. They are massage, compression, blood letting, incision, excision, enucleation, scooping, scraping, setons, and cauterization, remedial measures which have been in vogue almost from time immemorial. The use of massage upon certain morbid conditions of the integument, when properly applied, is often followed with marked beneficial change, and at times with complete restoration of the part to its natural state. Massage not only acts in this way locally, but by its indirect effect when used generally, will add tone and vigor to the entire system. He then pointed out the beneficial influence of massage in certain other diseases, and concluded with directions concerning the manner of its appliance. Compression may be applied in the local treatment of erysipelas, and to soothe and protect denuded surfaces of those recovering from eruptive fevers. It is a most important adjuvant in the treatment of herpes, herpes zoster, urticaria, furuncular and glandular affections, erythema and eczema. The Doctor then dwelt upon the abstraction of blood in various diseases, and exhibited his new dermatone and other appliances.

The session then closed with a paper read by Dr. L. B. Tuckerman, of this city, on "A New Method of Procuring New Pancreatic Juice," which the Doctor practically illustrated with exhibition by animal. The process, which has already been fully described in these columns, proved to be one of the most interesting events of the afternoon.

THIRD DAY.

After prayer by Rev. L. S. Rulison, D.D., Dr. Keller offered a resolution to amend the constitution, which now provides for an annual meeting in January or June, and leave this entirely at the option of the committee on nominations. The resolution was adopted. Dr. D. H. Batcheller offered a resolution that one or more members of the association be appointed in each State for the purpose of influencing the legislatures to enact more restrictive laws regulating

THE SALE OF INTOXICANTS.

This resolution was also adopted with very little discussion. A resolution of Dr. Walter Hay that a special section on psychological medicine be established, was laid over for a year under the rules. Dr. Davis, of Chicago, chairman of the committee on atmospheric pressure, read a synoptical report. The Doctor went on to show the importance of statistics secured from government sources on atmospheric conditions. They were thus enabled to get very fair reports from several localities on the prevalence of endemic diseases, and, from the data secured, were enabled to form very shrewd speculations of why pneumonia, for instance, prevailed in one place in January of one year and in the following year in May under exactly the same sanitary conditions. In other places they discovered why typhoid fever was four or five times as prevalent in one locality in 1880 as 1881. He closed by asking that a vote of thanks be extended by the association to General Hazen for his kindness for giving all the information asked.

The following resolution, presented by Dr. Foster Pratt, of Michigan, was adopted:

"That the labors of Dr. William Farr, of England, (recently deceased) in the organization, classification, and compilation of vital statistics—labors begun in

1838 and previously, perseveringly, wisely, and ably continued by him for nearly half a century—are recognized by the medical profession of the United States as an enduring monument to his ability and learning as a physician; as the real initiation to and foundation of our sanitary work, and as a perpetual blessing to present to future generations of our universal humanity; entitling his name and fame to stand with that of other great men whose genius and labors have resulted in beneficent revolutions of the medical, surgical, and sanitary thought and activities of the civilized world."

Dr. Gross presented the following:

WHEREAS, Good nursing is of paramount importance to the comfort of the sick, and to the restoration of their health; and

WHEREAS, The subject is one which strongly addresses itself to the common sense and kindly sympathy of every intelligent member of society; therefore,

Resolved, That this association, fully recognizing the importance of the subject, respectfully recommends the establishment at every county town in our States and Territories of schools or societies for the efficient training of nurses, male and female, by lectures and practical instruction to be given by competent medical men, members, if possible, of county societies, either gratuitously or at such reasonable rates as shall not debar the poor from availing themselves of their benefit.

This resolution was also adopted.

The resolution that a committee of five be appointed to petition Congress to instruct the Secretary of War and Chief Signal Officer to establish stations where the conditions are

AGREEABLE TO PULMONARY COMPLAINTS.

to aid in the better treatment of these diseases, was referred. Dr. Reid, of Iowa, offered a resolution of condolence to the family of the late Dr. J. B. Hubbard, of Ashtabula, which was at once adopted. Dr. Didama, of New York, was added to the committee on atmospheric conditions. A communication was read from the St. Louis Medical Society, in which it was stated that an association can only be ruled by laws made by itself. Good laws, under some conditions of circumstances, become oppressive under others. In the past thirty-four years so many changes have occurred, the code has accomplished all it was designed it should, but at present many of its features are obsolete, and not adapted to their want. The necessity of an early revision is very apparent, is loudly called for in all parts of the country, and it cannot be repressed much longer. The American Medical Association can alone order the revision. State societies can only ask for such revision. The excitement and evil consequences of a schism can be easily averted now and fraternal feeling restored. The paper, therefore, asked that a committee consisting of one member from each State be appointed to take into consideration the advisability of revision and report thereon at the session in 1884, and that the committee be empowered

TO PREPARE A NEW CODE OF ETHICS.

When the resolution was read a motion to table it was immediately made, and being put to the house was carried by a considerable majority. About three-fourths of those present seemed to oppose a revision.

Dr. Bradey presented a resolution that all papers read before the different sections first secure the approval of the chairman of the section. This was also laid on the table.

Dr. C. L. Nardyz, member of several foreign societies, became a member of the association by invitation.

The following gentlemen were selected as delegates to attend the meetings of various societies abroad: G. J. Engleman, St. Louis; W. M. Finley, Altoona, Pa.; Walter L. Ziegler, Lancaster, Pa.; W. H. Alter, Armstrong county, Pa.; R. B. Cole, San Francisco; James H. Warren, Boston; C. H. Von Klein, Hamilton, O.; W. M. Lawler, San Francisco; Henry Martin, Boston; J. C. Hutchinson, Brooklyn; A. M. Hawes, Detroit; Edward Borck, St. Louis; T. F. Prewitt, St. Louis; E. P. Allen, Pennsylvania; H. McCall, Michigan; J. N. Quimby, New Jersey; and S. C. Gordon, Maine.

Dr. N. F. Peck, of Davenport, Ia., as chairman of the section on surgery and anatomy, presented his reports of what had been accomplished in these departments of science during the past year. The paper was a most elaborate review of the advancement in surgical knowledge not only in this country but throughout the world. It was one of the most carefully prepared papers read during the entire section.

The chairman of the section of State medicine, Dr. Foster Pratt, of Michigan, then read his report. He said he was placed in a rather embarrassing position, as discoveries which exercised influences on sanitary knowledge were made in other departments, and he could not even indulge in the luxury of theory. Twenty-seven States have, practically, declared that health is wealth, but eleven still hold out. Before closing his paper Dr. Pratt gave some idea of the system in vogue in Michigan, where they have 1,400 local sanitary boards, besides a State board to act on such questions as the local boards cannot grapple with. He closed the paper by demonstrating the grave necessity that exists for the establishment of a national sanitary commission.

The treasurer, Dr. Richard J. Dungleison, reported a balance of \$903.96 in the treasury. The librarian reported 115 additions to the library, making a total number of 5,713 volumes now in possession of the association. The committee on publication reported that an index to the twenty-three volumes of transactions was in course of preparation by the permanent secretary, and that 1,500 volumes of the transactions would be published. The index will cost \$1. The report was adopted.

THE COMMITTEE ON NOMINATIONS.

presented their report through Dr. Eugene Grissom, of North Carolina. Dr. Austin Flint, sr., was announced for president, which created great applause; first vice president, Dr. R. A. Kinlock, South Carolina; second vice president, T. B. Lester, Missouri; third vice president, A. L. Gihon, United States Navy; fourth vice president, S. C. Gordon, Maine; treasurer, Richard J. Dungleison, Philadelphia; librarian, C. H. A. Kleinschmidt, Washington, D. C. They favored Washington, D. C., as their next place of meeting, and the first Tuesday in May as the time of meeting. Dr. A. Y. T. Gamett, of Washington, was selected as chairman of the committee of arrangements, and Dr. D. W. Prentiss, of Washington, secretary. The judicial council consists of F. B. Cunningham, of Virginia, H. O. Marcy, of Massachusetts, W. O. Baldwin, of Alabama, J. S. Billings of the United States Army, Truman W. Miller, United States Marine Hospital surgeon, Eugene Grissom, of North Carolina, and R. M. Todd, of Indiana; to fill a vacancy for the class of 1884, R. M. Todd, of Iowa.

COMMITTEES.

Practice of Medicine—Chairman, Dr. J. V. Shoemaker, Philadelphia; secretary, Dr. W. C. Wile, of Connecticut.

Obstetrics and Diseases of Women—Dr. T. A. Reamy, Cincinnati, chairman; D. J. T. Jelks, Arkansas, secretary.

Surgery and Anatomy—Dr. C. D. Parks, of Illinois, chairman; Dr. H. O. Walker, of Michigan, secretary.

Ophthalmology, otology, and laryngology—Dr. J. J. Chishom, Baltimore, chairman; Dr. Thompson, of Indiana, secretary.

Diseases of Children—Dr. William Lee, of Maryland, chairman; Dr. W. R. Tipton, of New Mexico, secretary.

Oral and Dental Surgery—Dr. T. W. Brophy, of Illinois, chairman; Dr. John S. Marshall, of Illinois, secretary.

State Medicine—Dr. D. J. Roberts, of Tennessee, chairman; Dr. Tranzoni, of Washington, D. C., secretary. The following doctors comprise the committee on State Medicine: Alabama, Jerome Cochran; Arkansas, J. J. McAlmont; California, W. F. McNutt; Colorado, Charles Dennison; Connecticut, C. W. Chamberlain; Dakota, J. V. Van Velson; Georgia, J. P. Logan; Illinois, P. C. DeWolf; Indiana, George Sutton; Iowa, W. S. Robertson; Kansas, D. W. Stormont; Kentucky, J. P. Thompson; Louisiana, S. C. Chaille; Maine, S. H. Weeks; Maryland, John Norris; Massachusetts, H. J. Bowditch; Michigan, F. K. Owen; Minnesota, C. N. Hewitt; New Mexico, M. M. Milligan; District of Columbia, S. Townshend; Delaware, L. P. Bush; Oregon, H. Carpenter; Mississippi, H. A. Gantt; Missouri, Lester Hall; Nebraska, L. B. Larsh; New York, E. M. Moon; New Jersey, Ezra M. Hunt; North Carolina, James McKee; Ohio, T. N. Neal; Pennsylvania, R. J. Dungleison; Rhode Island, C. H. Fisher; Tennessee, C. C. Fite; Texas, Thomas D. Woaten; Vermont, S. W. Thayer; Virginia, J. L. Cobbell; West Virginia, Dr. Moffitt; Wisconsin; J. T. Reeve; United States Army, J. R. Smith; United States Navy, J. M. Brown; United States Marine Hospital Service, P. H. Bailhoche; South Carolina, Manning Simmons.

Committee on necrology—Dr. J. M. Toner, Washington, D. C., chairman; Alabama, R. F. Michel, Arkansas, Dr. Turner; California, Henry M. Gibbons, Jr.; Colorado, Charles Dennison; Connecticut, C. H. Pinney; Dakota Territory, J. B. Van Wilson; Georgia, H. T. Campbell; Illinois, J. W. Chew; Indiana, William Lomax; Iowa, S. B. Chase; Kansas, C. V. Mattram; Kentucky, W. S. Reynolds; Louisiana, Ernest Lewis; Maine, A. J. Fuller; Maryland, Chris. Johnson; Massachusetts, J. H. Gilman; Michigan, W. F. Breakey; Minnesota, F. A. Dunsmore; Mississippi, Wirt Johnson; Missouri, W. H. Mudd; Nebraska, R. C. Moore; New York, H. D. Didama; New Jersey, G. T. Welch; North Carolina, Hubert Haywood; Ohio, Starling Loving; Pennsylvania, Frank Woodbury; Rhode Island, W. E. Anthony; Tennessee, J. B. Lindsley; Texas, M. D. Knox; Vermont, O. F. Fossett; Virginia, L. B. Edwards; West Virginia, S. L. Jepson; Wisconsin, E. L. Boothby; New Mexico, W. H. Page; District of Columbia, William Lee; Delaware, W. Marshall; Oregon, H. H. Carpenter; United States Army, W. S. Farwood; United States Navy, A. L. Gihon; United States Marine Hospital Service, Walter Wyman; South Carolina, F. P. Parcher.

A LETTER FROM DR. GIHON.

Dr. Gihon, medical examiner of the United States Navy, presented a letter, which was read, in regard to the position he had taken in the matter of the code. Dr. Gihon's address, delivered before the section on State medicine, seems to have created the impression in some quarters that he was absolutely opposed to that venerable relic called the code. The letter was in explanation of this and to the effect that he favored the code first, last, and at all times, and was unqualifiedly opposed to such new notions as the New Yorkers have lately introduced. The paper was generally looked upon as a backdown from the stand formerly taken by Dr. Gihon, but it was received with considerable applause.

The following letter of acceptance was read from Dr. Austin Flint:

Dr. Didama, member of the nominating committee, New York State delegation:

My Dear Doctor: Circumstances rendering it necessary for me to return early to-day to New York, will you kindly express to our brethren, the members of the American Medical Association, my sincere thanks, an assurance that I thoroughly appreciate the great honor which has been conferred on me.

I accept the honor, feeling assured that I may confidently expect co-operation and indulgence in my efforts to fulfil the duties which it involves.

Yours, very truly, AUSTIN FLINT
Cleveland, Ohio, June 7, 1883

The association was then adjourned until this morning at 9 o'clock.

CHILDREN'S DISEASES.

The session of the section on children's diseases was largely attended and a number of interesting papers were read. The first was on "Dentition" or teething, by Dr. A. H. Good, of Selma, Ind. The substance of the paper was as follows: Dentition, the Doctor said, is not properly classed as a disease, but the diseases which accompany it are numerous. From dentition and its accompanying diseases the mortality is greater than from all other diseases to which children are subject. Some children are more easily disturbed by teething than others, for the reason that they are not so strongly organized, or because of some peculiar susceptibility to its influence. At the extreme end of each tooth root is the dental forearm through which passes the dental nerve, and during the growth of the tooth there is an inflammatory action which, coming

THROUGH THE NERVE AGENCY.

reflects with great power through the same channel and is generally distributed through the sympathetic nerves. We then have, in addition to the tooth acting as a foreign body, a reflex nervous irritability. Our attention is first called to the teeth, and when the gums are swollen they should be divided to relieve a pressure, pain, and inflammatory action. We have as concomitant a functional derangement of the stomach and bowels resulting from enervation, the sequela of the reflex nervous irritation, and displaying a yeasty and soured condition. This we may find upon microscopic examination to contain myriads of bacteria (germs). Can we not then trace the origin of bacteria, if found in the stomach and bowels of these patients, to be the

result of mal-nutrition and the cause of cholera infantum? The thermal ranges in these cases, said the Doctor, are various, in the acute form often rising to 103, 104, and 105 Fahrenheit. The pulse usually corresponds to the temperature. Viewing the disease from my stand point, he concluded, I give nuxines for the disease proper, and for the secondary symptoms I give I give sub. nit. bismuth and pepsin.

In the discussion that followed the reading of the paper, nearly all the speakers endorsed the opinions therein expressed. Dr. Reed of Ohio, stated that he believed the reflex nervous action interrupted the working of the nerves of the stomach, and in consequence the secretions of the mucous membrane were cut off, the food would not digest, and hence diarrhoea ensued. He would lance the gums of the child to arrest nervous irritation, thus stopping the diarrhoea, and would then place the child on a particular diet. He would feed nothing but milk.

AND ES-SEY ALL STARCHY FOOD.

The next paper, by Dr. J. B. Casebeer, of Auburn, Ind., on "Rational Medication and its relation to General Medicine." Physicians, said the reader, should first treat the patient instead of the disease. He thought the same disease could be cured by the same remedy, no matter who the patient or where he lived, provided the medicine be given in proper doses. That was the main thing, and in his opinion there was more science in fixing the dose than there was in prescribing the remedy. The dose, also, should be made as palatable as possible, so that it would be readily taken and have its full effect. He had noticed in his practice that homœopaths were usually called to attend children, and allopaths to treat adults, the latter being better able to take the doses prescribed by allopaths. He was in favor of a more pleasant medication, and he asked his brethren in the interest of the profession and those whom they serve, to study, appreciate, and teach the true relation existing between children and adults—the sprout and the full-grown tree—and divorce this branch of the practice from the unnatural relation heretofore maintained between it and gynæcology. There is real science in the treatment of children, in whom we read the nature, expression, and influence of the disease by natural and rational symptoms, unaided by verbal language. The treatment of children calls for the best efforts of the most scientific and skillful in our ranks.

The discussion was participated in by Dr. E. Sinnott, of Ohio, Dr. Conrad Ulrich, of Pennsylvania, and others. Dr. Ulrich favored going still further than Dr. Casebeer had gone. He would begin at the beginning of a child's life. First he would get rid of the old woman notions, the flannel petticoats and heavy woolen clothing. So soon as a child is born, he said, it is wrapped in heavy flannel bandages, which the nurse draws around its body as tightly as is possible. Next comes a waistband, large and heavy enough to envelop its entire body, attached to which is a flannel skirt a yard or more in length. The little thing is bundled up in all this mass of clothing, no matter what the temperature of the room, and tucked into bed. Such dressing is pernicious and can result in nothing but injury to the child. It has far more to do with the sickness of small children than teething. Pernicious feeding is another thing. The child no sooner has its eyes open than a spoon is at its mouth, and a stream of sugar and water, catnip tea, etc., is started down its throat. I always leave imperative orders that

a child must be fed nothing but milk from the maternal fount. I say stop feeding and dressing and

LET THE CHILD GO TO SLEEP.

If it sleeps well it is certainly all right. Physicians have too little regard for infants' stomachs. They usually give too much medicine. Another thing: If a child cries its mother nurses it, and the little one soon becomes accustomed to this mode of quieting it, and expects it. The mother does not like to hear it cry, and in consequence its stomach is all the time filled with milk, much to its discomfort.

Dr. C. A. Von Klein, of Hamilton, O., made a few remarks, after which Dr. Casebeer closed the discussion as follows:

"In preparing this paper my subject became too much enlarged for the limits of one paper and I was obliged to omit the therapeutic phase of the subject: I therefore partially prepared a paper on 'Pædiatric Therapeutics and Its Relations to General Therapeutics,' and as members of this section have honored me with so much interest in the paper read, I will offer the unfinished paper by title if they wish it."

The last paper was on "Infantile Paralysis," by Dr. Teale, of Indiana. The tenor of Dr. Teale's production was that physicians were likely to shirk cases of infantile paralysis and to look upon them as incurable. He thought they should be given more attention, and was sure that in many cases the patient could be restored to health.

Dr. Snow, of Michigan, said he was certain the disease could be conquered by judicious attention and treatment. He had seen a case of paralysis caused by the excessive use of bromides, cured by the use of strychnine and other remedies. He was, however, in favor of the use of bromines in cases of epilepsy and insanity. He had used bromide of potassium and bromide of sodium in tremendous doses and cured a lady of insanity of three month's standing.

The discussion of the paper on "Unity of Membranous Croup and Diphtheria," read on Wednesday, was then taken up. It was participated in by Dr. Boothby, of Wisconsin; Dr. Reed, of Ohio; Dr. Sheehan, of New York, and others. The section then adjourned.

SECTION ON STATE MEDICINE.

The section on State medicine met at the Y. M. C. A. chapel at 2:30 o'clock, and spent the entire afternoon in discussing the resolutions offered on Tuesday by Dr. Albert Gihon, of the United States Navy. Before moving the adoption of his resolutions Dr. Gihon said he wished to explain his position in regard to the code, as many physicians had a mistaken impression concerning his views on the subject. He then stated that he believed in the code of the American Medical Association, had signed it and should stand by it. He said that he knew nothing about the New York code, but was opposed to it if it antagonizes the code of the American Association. He added that this is a free country, and of course any man has a right to criticise any portion of the code if he is so disposed. His resolutions, which were published in full in Wednesday's *Leader*, were then taken up *ad seriatim*. The first one, which provided that the section in State medicine urge upon the association the necessity for at once taking steps to exclude unqualified members from the profession by refusing fellowship to illiterate, ignorant and incompetent graduates, was then taken up for discussion. Dr. Rochester, of the Buffalo Medical University,

spoke in favor of it. Dr. H. Hakes, of Wilkesbarre, Pa., amended it so that the last clause read "by declaring the impropriety of professional association with illiterate," etc. The long debate which followed was participated in by Dr. H. R. Hopkins, of Buffalo; Dr. Baldwin, of Alabama; and other gentlemen. The first resolution when put to a vote was lost. The second resolution

MET WITH A SIMILAR FAIL.

after being amended, argued upon, and a substitute offered by Dr. Hakes. Dr. Billings of the United States Army, said that there was no necessity for these resolutions, that the code says enough on the subject, and that the general public is apt to jump to the conclusion that action of this kind is taken for the protection of those now in the profession to exclude other men from getting fees. Action defining the qualifications necessary for physicians, organizing State boards of examiners, etc., he thought, should come from the people, and the question who is competent to prescribe should come from the people. Dr. Hibbard, of Indiana, agreed with Dr. Billings. Dr. Gihon and Dr. Rochester both spoke on the great good that would come from having a board of State examiners, and while the other gentlemen agreed with them in this, they did not think adopting resolutions of this kind would hasten legislation favorable to the formation of such boards. Dr. Pratt said that legislatures are prone to resent any interference from bodies outside the State in matters

FOR THE BENEFIT OF THE STATE.

After the first two resolutions were lost Dr. Gihon was asked if he wished to press the third one. "No, I don't want to press anything any more," answered Dr. Gihon, and the third resolution was tabled. After the adoption of the following resolution introduced by Dr. A. N. Bell, of New York, the section adjourned *sine die*:

Being impressed with the truthfulness and importance of the memorial of the British Medical Association under date of March 17, 1883, the American Medical Association urge upon the Congress of the United States the subject of competent medical and sanitary service, and proper provision for its maintenance on board all transoceanic passenger vessels, and that a committee of five be appointed to promote this object and to report upon the condition of the subject at the next session.

PRACTICAL MEDICINE.

The section on practical medicine, materia medica, and physiology, held its last session at the Opera House yesterday afternoon, Dr. Hollister in the chair, and Dr. Lee acting as secretary. Only two of the papers down in the programme were read. "Elements of Prognosis and Therapeutics of Laryngeal Tuberculosis" was the subject of a paper read by Dr. J. Solis Cohen, of Pennsylvania, and "Is Croupous Pneumonia an Essential Fever, and is Blood-letting Demanded in its Treatment?" were the questions considered by Dr. H. G. Sharp, of Ohio. An additional paper was read by Dr. Keyt, of Cincinnati, on the "Action of Arteries in Heart Disease."

DENTAL AND ORAL SURGERY.

Dr. W. W. Alport, of Chicago, presided at the meeting of the session on dental and oral surgery. Dr. Williams retiring from the chair. Dr. Goodwillie, of

New York, the regular president, who left the chair on Tuesday because of an objection to his presiding being raised by several New York doctors, has been summoned to appear before the committee of the judicial council at 9 o'clock this morning, at which time the difficulty will be settled. The first paper was on "Diseases of the Antrum," by Dr. Parmly, of Hartford, Conn. Dr. Alport made remarks upon a case in practice of

DISEASES OF THE ANTRUM,

and the discussion was participated in by Dr. Buffit, of Cleveland, and Dr. Shattuck, of Detroit.

Dr. John S. Marshall then read the history of a case treated by Dr. Alport, showing that a disease of the eye had been produced by reflex nervous action from a diseased tooth, and that these conditions are produced, as a rule, when there is a lack of vitality in the system. Drs. Buffit and Butler, of Cleveland, and Dr. Brophy, of Chicago, discussed the paper.

Dr. Marshall closed the session with the history of a case of amaurosis, which was discussed by a number of gentlemen.

TREATMENT OF WOMEN.

The section in Obstetrics and Diseases of Women met at Frohsinn Hall, No. 333 Superior street, at 2:30 o'clock in the afternoon. Dr. J. K. Bartlett, of Wisconsin, occupied the chair, and Dr. J. F. Jelks, of Arkansas, acted as secretary. The first paper, "Battey's Operation—Death from Ether," by Dr. R. Battey, of Georgia, was called, but not responded to. Dr. P. Zenner, of Ohio, then read a paper on the

VALUE OF GYNÆCOLOGICAL TREATMENT

in hysteria and allied afflictions. The Doctor said that the occasional dependence of nervous disease in disease of female genitalia, and successful results of the treatment of the same case, has unfortunately led to the too general advocacy of gynæcological measures in nervous diseases. It is time to recognize that such measures may do harm as well as good. Hysteria is essentially dependent upon a constitutional predisposition, often of hereditary origin. Disease of the uterus or ovaries may favor this predisposition by the general debilitative effect of the disease, or may be an exciting cause in an inflex way, by irritating the genital nerves. But this is perhaps not as common a cause as is generally supposed.

The two are often found together, because the same soil favors both. Many cases occur where the cure of the uterine disease does not affect the nervous malady; also, when the latter is cured by proper measures, while the uterine disease remains. The author then detailed cases seen by himself and others, where local examination or treatment had directly provoked aggravated nervous diseases. This effect is perhaps produced principally by mental causes, the humiliation to the maiden, the mind dwelling on the genitalia or its disease; also, local treatment may injure by irritating the genital nerves. As regards practical rules, fortunately local diseases which produce nervous symptoms, usually cause also local symptoms, and therefore in themselves demand local treatment. But we

CANNOT TOO STRONGLY CONDEMN

the promiscuous examination of maidens or married women, mainly because there are nervous symptoms. We must always remember that general treatment is of most value in such cases.

The Doctor concluded: "In the mean time it must be remembered that the general treatment, the toning up of the nervous system, is always the most important object. In fact the duty of the physician demands much more than the mere treatment of existing nervous manifestations. He should attempt to prevent the disease, to eradicate the predisposition upon which it depends. He must warn society that the idle lives of its fashionable ladies, with just such employments or amusements as heat up an already wayward imagination, or foster the morbid feelings in their nature, must produce hysterical affections in them, just as overwork, intense application to business, and, even more, the unfortunately common habits of public and private gambling, are leading to immense mental injury among men. The physician should follow the history of the predisposed individual, and attempt to prevent the development of the disease. He should inculcate the practice of proper hygienic regulations in childhood, point out a system of education that will soundly develop body and mind, and lead to habits of self-control and unselfishness, but especially at the period of puberty, by suggesting useful employment or earnest study; should guard against means that heat a naturally too fervid imagination, and, above all, try to keep the thoughts from the genital functions. When the disease already exists, proper moral hygienic and constitutional treatment, hydrotherapy, etc., and in very obstinate cases the plan of treatment brought forward by our eminent countryman, Wier Mitchell, will often lead to happy results."

G. M. Maughs, M. D., of Missouri, read an interesting paper on the "Midwifery and Gynaecology of the Ancients," which showed that the physicians of the first century were familiar with many of the advanced ideas of modern gynæcology.

EYE, EAR, AND THROAT.

The section on Ophthalmology, Otology, and Laryngology met at the Board of Education rooms, No. 441 Euclid avenue, at 2:30 in the afternoon, Dr. Chisholm in the chair. Dr. Rumbold, of St. Louis, read a paper on "The Appearance of the Mucous Membrane of the Throat and Nose in Adult Patients," in which he stated that the inflammatory processes of the mucous membrane produced different appearances in patients of different ages, and that in smokers the color of the mucous membrane, and especially of the vocal chords, was never normal. He also stated that in most cases of irritation of the throat, the cause must be looked for in the disease of the naso-pharyngeal space. Dr. Seiler said in discussion that he agreed with the author that in most cases of chronic laryngitis the disease was due to nasal disease, and that it would get well if

THE NASAL CATARRH WAS CURED,

but he could not agree with the Doctor when he said that the vocal chords were always discolored in smokers. His experience had been that cigarette smokers were always affected with chronic laryngitis, on account of inhalation of the smoke, while cigar and pipe smokers were never so affected. In conclusion, Dr. Rumbold that he could only answer Dr. Seiler's remarks by saying that every smoker in the room had chronic laryngitis. [Laughter.]

Dr. Chisholm, of Baltimore, then read a paper on the question: "Is Abcision a Proper Operation?" This paper was purely technical, but was largely discussed.

Dr. H. Culberson, of Ohio, read a paper on "A Form of Spectacles in lieu of Nose Pieces," in which he described a pair of glasses being worn constantly, having in front half glasses for near vision, which together institute permanent glasses, producing the correctness of the visual error. He thus avoids the disadvantages of bifocal glasses and illustrated this description by reports of cases. Dr. Frothingham said he thought it would be more convenient and the better way to give the patient two sets of glasses.

SURGICAL SECTION.

At 2:30 o'clock yesterday afternoon the surgical section met in the Opera House for the purpose of witnessing the "Illustration of Anatomical and Pathological Papers," by Dr. Alfred F. Holt, of Massachusetts. This exhibition was on the programme for the first day, but it was impossible to secure a building properly suited until yesterday. The exhibition was brief but interesting. After the section had returned to the usual meeting place, Case Hall, Dr. William A. Byrd, of Quincy, Ill., read a paper on the "Excision of Both Hip Joints for Morbus Coxarius." He said: "Ever since the first suggestion of the removal of the head of the femur by Mr. Charles White, in 1769, for morbus coxarius, and the execution of it first by Schmalz in 1816, as stated by Dr. Sayre, and by Anthony White, in 1822, as claimed by Barwell, there has been great diversity of opinion among surgeons in regard to

THE PROPRIETY OF THIS OPERATION.

A few favored and many condemned it as being entirely useless claiming that even when it succeeded in saving the life of the patient it left a miserably deformed being, unable to walk without the aid of crutch or cane, and the chances of cure were no greater than if the patient was allowed to depend upon the slow process of spontaneous exfoliation of the diseased bone, a process which was rarely accomplished before the death of the patient. Opinions have greatly changed since the excisions have become numerous enough to compare with the older method. Cases where double excisions are necessary are rare. The case I have the honor to report is not only able to walk without crutches but goes up and down stairs very well without them and attends school every day. She needs crutches only when passing over rough ground. I began the operation April 27, 1881. I proceeded to remove the head and upper part of the right femur. I commenced the incision two inches above the great trochanter, and continued it downward, curving it so as to pass behind the great trochanter, ending five inches below its origin. The soft parts were pulled aside and detached carefully with the periosteum from the bone with a dental scraper, an operation easily effected. The head of the bone was thrown out through the opening, and on account of the softened condition of the bone it was divided just below the trochanter with the pliers, there appearing to be no other portion of the bone diseased. Both wounds were dressed with balsam peru and oakum." The reading of the paper was followed by an exhibition of

A GOOD IDEA IN SPLINTS,

the invention of Dr. Charles Parks, of Chicago, and a so-called derrick for raising persons suffering from hip disease so that plaster of paris may be applied. The invention is the work of Dr. W. T. Verity, a young

Chicago medical man, and excited much favorable comment.

This was followed by a paper on the "Surgical Treatment of Intestinal Obstruction," by Dr. Henry O. Marcy, of Boston. The principal point in the paper that provoked discussion was the statement that carbolic acid is the best thing to destroy the germs of decomposition. Dr. Gordon, of Maine, disagreed with this view, and predicted that in a very few years physicians would be held criminally liable for the use of carbolic acid spray. Dr. Moore, of New York, also stated that he did not use the carbolic acid in his practice.

"New Operation for the Cure of Ranula," was the subject of a short paper read by Dr. Prewitt, of Missouri.

Dr. Rauserhoff, of Cincinnati, read a paper on the "Early Use of Trephine." He recommended very strongly the early use of the trephine. Dr. Gunn, of Chicago, and Dr. Hyde, of New York, expressed their approbation of the paper and corroborated the statements made by Dr. Rauserhoff.

Dr. H. J. Reynolds, of Michigan, read a paper on the "Treatment of Stricture of Urethra."

Dr. R. B. Bontecou, of New York, made a few remarks on his manner of "Treatment of Cystitis by External Urethral Section."

Dr. J. H. Warren, of Massachusetts, read a most interesting paper on the little understood question of "Tissue Repair, or Pathology of Subcutaneous Injection in the Case of Hernia."

A PAPER FROM DR. C. H. WILSON

on a form of "Inguinal Hernia Liable to be Overlooked," and one from Dr. C. F. Gay, of New York, on "Syphilitic Mammary Tumors," were referred to the Committee on Publication.

A telegram was read from Professor Dawson, of Cincinnati, expressing his regret over inability to appear at the sessions of the surgical section, and a suitable reply was sent.

Two papers down on the programme were not read: "Treatment of Fractures of the Long Bones," by Dr. James R. Taylor, of New York, and "Carbolic Acid and its Relations to Surgical Therapeutics," by Dr. C. Truesdale, of Illinois.

Dr. Peck, the chairman, was obliged to leave before the session adjourned, so that Dr. B. A. Watson, of Jersey City, N. J., occupied the chair during a portion of the session.

All the surgeons say that the present has been the most interesting session of the section ever held, that more papers were read and that they were all of a more interesting character than ever before.

FOURTH DAY.

Dr. N. S. Smith, of Dakota, offered an amendment to the constitution to provide for the admission to membership of two delegates from the Medical Bureau of the United States Indian service to be nominated by the Surgeon-in-Chief of that bureau, and approved by the Secretary of the Interior. The amendment was tabled.

An amendment was offered by Dr. J. M. Toner, of Washington, to the effect that the office of permanent secretary be vacated and that the Nominating Committee hereafter nominate a secretary who will serve without compensation. Dr. Toner withdrew his amendment in view of the change made in the duties of the permanent secretary which enables him to serve without an honorarium. The amendment of Dr. Sears,

of Arkansas, looking toward the addition of workers to the several sections at the discretion of the chairman and secretary of the section was tabled for one year.

Dr. J. W. Smith, of Iowa, introduced an amendment affecting the right of permanent members to vote, which called forth considerable excitement from the members on the question. Dr. N. S. Davis spoke vehemently against it with such effect that after a confused debate the amendment was indefinitely postponed.

Dr. Turnbull, of Philadelphia, read a brief paper on what might be called pitch-deafness, prefacing a resolution to the effect that Legislatures be requested to take some steps toward having engineers examined in regard to their hearing. The resolution was referred to the section on Otology. The report of the Judicial Committee was presented by Dr. N. S. Davis. In regard to the petition of Dr. D. W. Day, asking for a rehearing of his case which was adjudicated last year, the council ordered the return of the petition to Dr. Day, with leave granted to supplement said paper by a written statement of the character of the new evidence which he proposes to introduce. The council declined to act upon the case until the opening of the session of next year from the impossibility of notifying all the parties concerned. In the case of Dr. D. H. Goodwillie the council decided that the registration of Dr. Goodwillie be cancelled and the annulment be returned to him. This action was taken on account of Dr. Goodwillie's connection with the New York State Society, which is heretical in its adherence to a code different from that of the Association. Dr. Foster Pratt, of Michigan, introduced a resolution by Dr. A. N. Bell, from the section on State Medicine, requesting that Congress be urged to consider the importance of a competent medical and sanitary service on board all transoceanic and passenger vessels, and that a committee of five be appointed to promote the object and report at the next session. Referred to its appropriate committee.

Dr. A. N. Bell then introduced the following resolutions :

WHEREAS, The practice prevails of reading papers before the several sections at the option of their authors, without sufficient regard to the special objects for which the sections were created ; therefore,

RESOLVED, That all papers hereafter offered or intended to be read before the Association, or any of its sections except the addresses of the president and chairmen of the sections shall be first referred to the trustees of the *Journal* for classification and appropriate references. The resolution was tabled.

Dr. Brodie, of Michigan, introduced the following resolution :

WHEREAS, The association takes a deep interest in the efficiency of the Medical Department of the United States Army, and

WHEREAS, The late chief of the department, Surgeon General Joseph K. Barnes, contributed largely to the efficiency of this department in the work which it has been and is doing for medical science and education ; therefore,

RESOLVED, That the Association receives with profound regret the information of the death of General Barnes, and desires to record its appreciation of the great value and importance of the work which he has done and enabled others to do for the advancement of medical science.

RESOLVED, That this association recognizes the energy and ability which characterized the administration of General Barnes and his services in connection with the Army Medical Museum and Library and

publication of the Medical and Surgical History of the War, and other works of great value to the profession.

RESOLVED, That a copy of these resolutions be sent to the Surgeon General of the Army.

These resolutions were adopted and ordered spread upon the minutes.

Dr. Keller, of Arkansas, offered the resolution that in the very near future, if not now, cremation will become a sanitary necessity in the large cities and populous districts of the country. Referred to the Committee on Hygiene. A committee was appointed by the chair, the duty of which it shall be to look after the surgical service aboard steamers and other ocean vessels. The committee is as follows : Dr. A. N. Bell, of New York ; A. L. Gibson, U. S. N. ; I. N. Quimby, of New Jersey ; H. O. Marcy, of Massachusetts ; Henry H. Smith, of Pennsylvania. It was resolved to tender a vote of thanks to the secretary and treasurer for the efficient and satisfactory manner in which they have discharged their several duties.

Dr. R. F. Blount was excused from delivering his report of the section on Diseases of Children and the address was referred to the board of trustees. Dr. I. N. Quimby, of New Jersey, introduced a lengthy resolution of gratitude to the citizens of Cleveland for their hospitality, and particularly to those who opened their doors so freely to them. He especially thanked the *Herald*, *Leader* and *Plain Dealer* for their intelligent reports of the meetings of the Association.

The report of the section on Obstetrics was referred to the Committee of Arrangements.

Dr. Eve, the secretary of the Surgical section, then exhibited an appliance for the extension of the arm, not previously exhibited.

All reports of the various committees were on motion of Dr. Brodie, of Michigan, referred to the Board of Trustees. Dr. Atlee in retiring from the presidency, made an address which is in full as follows :

"GENTLEMEN : I am about to vacate the position with which you have honored me, and in doing so it is with the greatest satisfaction. I had expected to have the honor of inducting into the chair a gentleman who is in every respect most worthy of it. [Applause.] A gentleman who has done as much for the medical literature of the country as almost any other gentleman, and one I characterized a few days ago in a very different place—the Lanek of America. I most heartily thank you for the support you have given me, and I can only say that I hope you will forgive me my shortcomings. I bid you an affectionate farewell."

He was greeted with a hearty round of applause. Dr. Atlee, despite the weight of years, was singularly successful in administering the arduous duties of the position and solving the parliamentary difficulties which constantly presented themselves.

Dr. Alonzo, of Maine, then offered the following resolution of thanks :

Resolved, That the thanks of this Association be extended to Dr. J. H. Atlee, the retiring president, for the able, dignified and satisfactory manner in which he has presided over the deliberations of the Association, and that he retires with the best wishes of every member of the Association for the long continuance of a life so highly useful not only to the present but to all future generations. The resolution was unanimously adopted.

Dr. Lester, the second vice president, in the absence of the president, announced the Association adjourned to meet in Washington City, the first Tuesday of May next.

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SEVENTH CONVERSATION BETWEEN DRS. WARREN AND PUTNAM.

Dr. Warren.—Our long and intimate personal relations encourage me to say some things to you which, under other circumstances, I would not feel at liberty to say.

Dr. Putnam.—You are not likely to say or do anything which will disturb our friendly relations.

Dr. Warren.—You are by some years my senior; and while it is undoubtedly true that age brings, with it many advantages of mental discipline and experience, don't you think that old men are apt to fall into ruts from which it is difficult to extricate themselves? and that they move so slowly that they eventually block the road, and become obstructionists in the way of the car of progress?

Dr. Putnam.—Become old fogies? Yes; but you see how it happens that they get into a rut. They have, in the course of their lives, tried a great many roads, and, having at last found out which is the best, they are apt to stay in it. I don't think, however, that they often seriously block the way; since I have noticed that those on the car of progress manage to switch off, and to go past me with banners and a shout; and this is, in many cases, the last I ever hear of them.

I understand you mean to imply that in my adherence to the code I am somewhat old fogy? Yes, I am; for a medical code is as old as Hippocrates. The father of medicine had that instinctive appreciation of a humane art, which led him to construct a code of ethics for his pupils; and to bind them to its observance by a solemn oath; which they were required to take before entering upon the practice of their profession. This code has been quoted and approved by each succeeding generation of medical men in all parts of the world, from that time until the present day. Some of its precepts—especially that relating to the

disclosure of secrets entrusted by patients to their physicians, for the purpose of obtaining such medical advice as they could not otherwise obtain have become embodied in the laws of most civilized countries.

You must permit me to remind you, however, that the American National Code was engrafted upon our modern civilization not many years ago; and that the term "old fogy" can, therefore, scarcely be applied to the friends of this code.

Dr. Warren.—I am in favor of a code; but I would much prefer the unwritten, yet in polite society the well understood code, known as the "gentleman's code."

Dr. Putnam.—You are, I believe, a member of one of the most prosperous and aristocratic of our city clubs. You are not ignorant of the fact, therefore, that a gentleman of your standing in society, who has always carried about with him the gentleman's code, cannot be admitted into any of the best clubs of this city without first subscribing to its written code of ethics.

To be admitted to the club of which you are a member you were required to say, over your own signature, that you would not play cards for money in the club-house; or in any place utter a disloyal sentiment against the government.

Dr. Warren.—I trust you do not intend to intimate, Dr. Putnam, that in rejecting the code we are playing cards for money, or contemplating treason against our profession?

Dr. Putnam.—Certainly not, Dr. Warren, but I only referred to these facts to show you that your unwritten gentleman's code was not accepted as a passport to membership.

Dr. Warren.—These are by-laws and regulations,—not a code of ethics.

Dr. Putnam.—The same thing under another name. If you think otherwise, let me ask you; if our code of ethics were placed under the head of by-laws and regulations, would you sign it?

Dr. Warren.—I am not prepared to say whether I would or not. I think I would not.

Your by-laws and regulations declare, also, that no game of cards, even when there is no wager for money, shall be played in the club-house. This is not in your gentleman's code.

They declare, also, that "if any person disloyal to the Government of the United States be knowingly introduced to the club-house by a member of the club, such member shall be expelled for the offence." A by-law, which excluded from membership and from admission as casual guests, all those gentlemen who were lately in active rebellion against our government or who sympathized with them in their rebellion, and continues to exclude most of them; for, although the rebellion is ended, no one doubts but that most of those who participated in, or sympathized with it, continue to justify their conduct. Believing as I do that most, or all of them were sincere believers in the justice of their cause, I would not expect or ask them to change their opinions; and yet among them may be found multitudes of men who have always respected the gentleman's code, and who are even chivalric in their adherence to its precepts.

Dr. Warren.—But, Doctor, the club to which you refer was organized for a specific purpose—to support the Government in its struggle against rebellion—and it had to be constructed under specific rules, intended to further the great purpose of the organization. The founders considered themselves the best judges as to what rules of government or of discipline were

most likely to accomplish the ends proposed, and adopted them.

Dr. Putnam.—Even to the extent of regulating their social intercourse?

Dr. Warren.—Yes; and I see no reason why it should not, in this case.

Dr. Putnam.—The American Medical Association, also, was organized for a specific purpose, namely, the advancement of medical science; and its members have adopted rules which, in their opinion, are best calculated to accomplish this end, among which rules or regulations is the National Code of Medical Ethics.

Referring to your opinions on the subject of freedom of thought and action, as expressed to me on a former occasion, I would say you ought at once to withdraw from your club.

Dr. Warren.—I don't see it in that light, Doctor.

Dr. Putnam.—No; but the reason you do not, I think, is that you do not look at the two pictures in the same light. To my sight, the one is as nearly as possible a copy of the other; but as you change your position in looking at them, certain shadows are thrown upon the one which are not seen upon the other.

There is one other point that I am surprised you have not hitherto alluded to. Your friends compare our code to trades-unions, and thus seek to cast upon us the odium which, in the opinion of many, justly attaches to these business combinations.

Dr. Warren.—I did not allude to this matter, Dr. Putnam, for the reason that I never thought it a fair representation of the nature and objects of the National Code.

Dr. Putnam.—I am glad you say so, Dr. Warren. The trades-unions are formed for the purpose of controlling the market and to prevent underselling; and not for the purpose of keeping inferior or worthless articles out of the market. If in any instance they have this latter object in view, in so far at least, their object is commendable, and they ought to receive the approbation of all good citizens.

Every medical man knows that the object of our code is not to monopolize the market and to enhance the value of our services. Such an insinuation is only worthy of those outside of our profession who have no means of knowing to the contrary; but for any one who has spent most of his life in intimate social relations with his medical brethren in this country, and in common with them, has practiced his profession under the existing National Code—and therefore by this time ought to understand its real purposes, and to know in what light it is regarded by medical men—for such a man to utter such a sentiment is, in the highest degree unfair and disingenuous. If he does not know better, he certainly ought to know better.

Dr. Warren.—You know, I presume, that the courts have in several instances refused to recognize the right of medical societies to discipline or expel, for offences against the code, any member who has a legal right to practice medicine; and in one case, I think, a mandamus was issued to compel a society to admit to fellowship a man whose empirical practices rendered him obnoxious. If the courts compel us therefore to associate with these men, of what use is the code? Of what use is it that you seek through the code to dis sever yourself from those whom you cannot keep out of your societies, or discipline if they are actual members?

Dr. Putnam.—It never was the purpose of the code to discipline anyone. Not one word is said about discipline in the code. It simply informs the reader what

conduct is, by those who sign the code, considered becoming medical men in their relations to each other, their patients, and the public; and what conduct they deem derogatory to the honor of the profession.

It is true that the medical societies which, having adopted this code, have attempted to enforce its precepts by discipline, have sometimes been restrained from doing so by the courts; but this fact only shows that the courts, which are supposed to interpret and enforce the laws, do not understand that the laws intend to make any distinction between certain classes of empirics and physicians; and their occasional but not uniform decision upon this point only tend to confirm my opinion already expressed, that what the laws and the courts fail to do, we must do for ourselves. The laws make no distinction between honest, industrious citizens and street vagrants; both are alike entitled to vote, and to enjoy in all other respects the privileges and immunities of citizens; but it does not follow that society is not at liberty to make a distinction, or to draw a social line of absolute separation.

But really it is to us of the smallest possible importance whether we can keep irregulars out of our societies or not. If admitted, they would render themselves more uncomfortable than they would us; but they seldom or never of late ask for admission. As for those who are actual members, an open and premeditated violation of the code on their part, or of any of the regulations of the society to which they have subscribed, and have thus given their formal approval and acceptance, would be certain to bring upon the offender a punishment more humiliating than any official action of the society could contemplate or inflict—he would be left to his own companionship—as would be the case, also, in any other social organization, whether religious, political, or commercial.

THE CAUSE OF SEA SICKNESS.

In another column we print an interesting article on the cause of this malady. From this it will be seen that the causes ascribed for this disorder by various authorities are manifold. Mr. Lovett the author of this paper, gives a very lucid explanation of the theory which he regards as the most acceptable, viz., that the origin of the trouble is in the inner ear; that the stomach is not the cause of the disorder, although generally the seat of it; that the organs irritated seem to be the semi-circular canals, or the abdominal viscera or both, which become full of blood, and cause vomiting, which seems rather an effort of nature to equalize the circulation than any desire on the part of the stomach to rid itself of its contents. He quotes the experiments of Ferrier on pigeons which point to a close relation between these canals and the sense of equilibrium. He argues that the irregular motion causes mechanical irritation of the canals by washing the otoliths up against the nerve filaments at the front of the canals. He is apparently skeptical as to the value of remedies though mentioning those that have been suggested and most approved, and characterizing bromide of sodium as the most prominent one at the present time.

The article is a curious and entertaining epitome of the knowledge on this subject and will doubtless interest the many in whom an ocean trip inspires the fear of this annoying malady.

HIGHER PROFESSIONAL AIMS.

In Dr. J. M. Da Costa's recent valedictory address to the graduating class of Jefferson Medical College, Philadelphia, entitled "The Higher Professional Life," he speaks of what should constitute the higher aim of the physician. This should be to add to knowledge and increase the resources of his profession. It may be sought in various ways: by making original inquiries in the way that Darwin and Pasteur have so brightly illuminated; by cultivating literary tastes, and thereby becoming quicker in perception and more skillful in disseminating truths once learned; by mixing in the great movements that are to benefit mankind, and becoming influential in them; and by becoming active for the advancement of sanitative and preventive medicine. "There are thus many ways in which the aspirations of a higher professional life may be realized in useful or in great work. Some of these can be followed only when success has brought comparative leisure; but all can be kept in mind; one or all can be aimed at throughout our careers, and according to our individual strength."

COMPULSORY REVACCINATION.

To those who admit the beneficence and value of vaccination, and they include all who have given the matter sufficient attention to read the statistics on this subject, in fact, all who are intelligent enough to accept facts as facts, the propriety of revaccination will commend itself.

This matter has been recently reviewed in the editorial columns of the *British Medical Journal*, where an urgent plea is made for the enactment of a compulsory revaccination law.

The argument is, we believe, as applicable to this country as to England, and we should not be behind our neighbors over the water in adopting so important a sanitary reform. "Through the operation of the law as it now stands, the infantile death-rate from small-pox (the larger part of which occurs among the small residuum who succeed in evading the law) has become but the merest fraction of what it was before the introduction of vaccination. Among adults, however, there is still a considerable mortality from the disease, and a large proportion of such adult mortality occurs among those who have in infancy undergone vaccination. The question, therefore, arises—why should not an attempt be made to diminish also the adult mortality? That this result would be attained by making revaccination compulsory, there can be no reasonable doubt. Abundant evidence exists to prove that, as efficient vaccination in infancy confers a large measure of protection against small-pox during infancy and childhood, so efficient revaccination on the threshold of adult life affords a large measure of protection during the remainder of life."

There is a difference of opinion among our sanitary authorities, as to what the practical operation of a compulsory vaccination or revaccination law would accomplish in this country. It is perhaps, more generally believed that the present system of systematic solicitation by inspectors, is best calculated to do most good. In view, however, of the excellent results obtained by compulsion in England, we believe a trial of it here would effect a considerable decrease in the death rate from small-pox.

ORIGINAL ARTICLES.

A PERSONAL NARRATIVE OF OPIUM ADDICTION.

BY

J. B. MATTISON, M. D.

The following narrative by a medical gentleman, addicted to morphia, who recovered under our care, is of so much interest and importance as bearing on causation and prognosis, and as proving several points in a paper on "Opium Addiction among Medical men"—read before the N. J. State Medical Society, at Atlantic City, June 13, and published in the N. Y. Medical Record June 9, 1883—that we secured his consent to its appearance in this journal, and bespeak for it the careful attention it deserves.

The Doctor writes:—About twelve years ago, I made upon myself the first hypodermic injection of morphia. It was taken to relieve an intense sick headache, from which I had been a sufferer once or twice weekly, since boyhood. Such perfect relief was obtained that I determined to use the remedy every time I had a severe attack. The milder bouts did not require morphia, for then I took Elix. Guarana, Hoffman's Anodyne, or, one hundred grains of Brom. of Potassium, but, for the severer ones, I did not hesitate to inject one-third to one-half a grain, the single injection giving me perfect relief and allowing me to continue my work.

For seven or eight years I never dreamt of morphia becoming my master, but in 1878, I noticed that I was compelled to use it oftener, as my headaches occurred more frequently from increased mental work, or other cause. I noticed, too, that I could accomplish much more mental labor when under the influence of morphia; therefore during 1878 and 9, I used the drug every one, two or three days. I had a full practice, which I attended with religious care: lectured in a medical college and performed various duties in other directions. Often, when exhausted from my varied work, I would secure the most perfect results by the hypodermic use of morphia.

I had now—1879—come to use it quite frequently, when not suffering from headache, still I had no idea but that I could leave it whenever I wished. In November, 1879, however, I began to fear that I might fall a victim, and determined to abandon it. To my infinite horror and alarm I found myself a prisoner. I could no more quit its use than I could fly to the moon. At this time I was using only two grains daily, in two or three doses, and no sooner did I find myself a captive, than I loathed the drug and resolved to rid myself of it at the first good opportunity. I did not expect an early chance for foreign treatment, so I determined to tell no one of my ill fortune, but go on as usual until the opening occurred of freeing myself. Meantime the daily amount was gradually increased to four grains in three doses.

No change took place for more than a year, when on the 24th day of December, 1880, I was suddenly taken to bed with broncho-pneumonia. As Mrs. — knew nothing of my having taken morphia for more than a year, I decided not to say anything to her, or the physician whom we had agreed upon to consult. I lay in bed a little more than two weeks, suffering vastly more from sudden withdrawal of the morphia than my other illness.

The winter was severe, and I determined to go to Florida as soon as I could travel, leaving my

syringe at home. I started in February, 1881, but, before leaving Atlanta, I was attacked by as bad a sick headache as I ever experienced. I "thanked my stars" that I had left my syringe, for had it been with me, I should most likely have used it, but an afternoon's rest and a full night's sleep cleared my head. I then went to Savannah, tarried there a week, thence to the headwaters of the St. John's and back, past St. Augustine and Jacksonville to Fernandina. During this time I had not the least desire for morphia, but my cough continued. So I sailed for the capital of the Bahamas, and never coughed after my arrival. I tarried for a week or more at Nassau, which is, indeed, the most delightful spot I have ever rested eyes upon, and from there I returned home about the middle of March, feeling in better health than for many years. I had, really, not had a vacation in twelve years.

Resuming my practice, I had no craving for morphia—except, perhaps, on one or two occasions. But my oldest child was taken violently ill. She grew rapidly worse and meningitis developed. Her I loved more than life and second only to my wife. Never since early childhood had I been called on to mourn the loss of a loved one, and gladly would I have chosen to be taken rather than my dear girl. But all was without avail and she passed over to join the silent majority. My grief seemed more than I could bear, and, weakly, I strove to drown my sorrow in an injection of morphia. Almost four months had passed since I had felt its effect, and the first injection seemed to set my blood on fire. My grief was in abeyance: I felt able to endure any loss, and I took another. After a few repetitions, I was again a slave. This was in April, 1881, and the morphia was rapidly increased to six grains, daily.

So affairs went on for eleven months, when I resolved to quit at once, and in March, 1882, I did, and suffered ten-fold more than in December, 1880. For two full nights I slept not a second, and for ten days I slept neither night nor day more than a few minutes at a time. Every muscle, bone and joint of my body was racked with excruciating pain. For five days I was confined to bed and for one week a prisoner in the house. Had I been away from home the cure might have been complete, but, being there, I was compelled by my patrons to resume practice as soon as they saw me going about. So, this time, my freedom lasted only three weeks, for, on resuming work, my strength was insufficient to keep me up without the opiate.

During the next month I made another effort quitting six grains at once. I thought I could manage to keep out of the way of my patients, but I could not, and again failed, going only two weeks without morphia. However, I suffered less than in the preceding month, though hallucinations of sight and sound existed.

I now determined that I never again would attempt to abandon the drug at home, feeling sure success would not crown my efforts. Accordingly I decided to make a summer tour, and in my absence stop at some place long enough to be cured. So after a time I went to —, secured a room in — hospital and again suddenly stopped the morphia, having been using hypodermically eight grs. daily for more than two months. I lay in bed four and a half days suffering more than I can describe; but, at the end of a week I boarded a steamer for —. After a short rest I made a tour of the lakes and reached home in three weeks from the time I abandoned morphia. This was too soon, and in ten days I was again using the drug.

Now, I vowed that when I again quit morphia a number of months must elapse before resuming my profession, and then, with my previous experience, I would be more likely to secure a permanent success.

Early in 1883 I left home intent on entrusting my case to the care of some one giving special attention to this disease. I was then taking 10 to 12 grs. daily, but in 10 days succeeded unaided in reducing this amount to one-half a grain morning and night. But my ill-look was to follow me, for, just as I was about to begin treatment, telegrams summoned me to a sick friend, where I remained until danger was over, and during this period again increased the opiate to twelve grains daily.

The wished for time, however, arrived at last, and under special professional care I ceased entirely to take morphia in five days.

In all I had been a slave to morphia hypodermically three years; quit it suddenly four times, and had injected about 6,000 grains.

Its effects were apathy, disinclination for either mental or physical labor, and finally to suppress all sexual desire. Nevertheless, I forced myself to do full professional work.

During the last months I did not sleep so well as formerly, and my dreams were of the most horrible kind. Scarcely a night passed but that sights of Pandemonium and its tenants made life terrible to me.

During my addiction I had about once in three weeks an intense and prolonged chill, followed by fever with a temperature of 103 to 105°, which persisted for ten hours and passed off in free perspiration.

The use of morphia made me cross and irritable, so that I guarded myself with exceeding care to avoid giving vent to my feelings.

The above recital tells a tale to which the experience of many a physician affords a striking parallel. As supportive of points in the paper to which reference has been made, it adds another instance to that most frequent factor so far as we have observed—in the genesis of opium addiction—periodical headache.

It proves the power and peril of opium to assuage grief and to give strength and rest when, worn and wearied, the physician finds himself unable to cope with his calling.

It shows how easily the occasional taking glides into confirmed addiction, and how unsuspectingly opium fastens upon and throttles the will.

It instances, too, one peculiar danger attending every habitué—the onset of sudden sickness, when, either from choice—due to desire to keep the secret; or, from necessity—paralysis or insensibility—the opiate is abruptly ended, the medical attendant being unaware of the situation, thus adding largely to the suffering of any illness, or even imperiling life from collapse due to nervous shock caused by sudden withdrawal.

It proves the painful ordeal through which the habitué has to pass who elects, or is compelled to accept, sudden disusing, which some practitioners—well-meaning but mistaken—are so ready to advise. The repeated instances cited show this in only a minor degree, inasmuch as the extent of taking was limited; but to compel a patient after years of confirmed addiction to undergo the torture of such treatment is—unless circumstances imperatively demand—*brutal and utterly without excuse.*

We care not who advocates it, but speak feelingly, emphatically and advisedly on this point, for the simple reason that our experience again and again repeated, proves beyond all dispute that the opium habitué can be

brought out of his bondage without any such crucial suffering as this method of treatment entails. If proof of this be desired, the reader is referred to papers—"Clinical Notes on Opium Addiction," *Cincinnati Lancet and Clinic*, March 3, 1883; "Neurotic Pyrexia with Special Reference to Opium Addictions," *New England Med. Monthly*, June, 1883; and "The Treatment of Opium Addiction," *St. Louis Courier of Medicine*, June, 1883—reprints of which may be had on application.

For further details of this case *vide* paper referred to at the outset.

The most important point in this patient's history is his future. Will he "keep the faith?" Will he, having again routed his enemy, be able to hold the field? That remains to be seen. He left us with firm intent, which, let us hope, will not weaken, but that to him time will bring "strength with resolve, and to worthy purposes a volition equal to the task."

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, MAY 23rd, 1883.

Dr. A. C. Post was elected chairman, pro tem. Dr. Satterthwaite presented the report of the Microscopical Committee. He also presented in behalf of a candidate, specimens showing the lesions of Tuberculosis, and Acute Nephritis. The patient, A. S., a native of Ireland, aged 43, had been suffering from pleuropneumonia, and had been unable to attend to his work for three months, and had suffered also from severe dyspnoea and violent attacks of vomiting. The urine was scanty and high colored, and he had frequent convulsions, as many as seventeen in a day.

On post-mortem examination the heart was found to be normal; both lungs were bound down by adhesions, and studded with miliary tubercles, exhibiting also the lesions of pleuro-pneumonia.

The kidneys showed the lesions of acute nephritis. Their surface was smooth. The malpighian tufts were atrophied.

Dr. Ferguson presented a specimen for a candidate removed from a patient who had been brought to the hospital in a comatose condition, breathing stertorous, temperature, 103°; pulse, 120; urine contained 75 per cent. of albumen. A short time before death she had a temperature of 107° per vaginam, and an epileptiform seizure every ten minutes.

At autopsy the body was found to be well nourished. A large clot was found in the cerebrum. There was no evidence of fracture of the skull. There were old pleuritic adhesions. The liver was the seat of cirrhosis. The uterus weighed two and a half pounds.

Dr. Ferguson also presented a specimen illustrating mitral stenosis, and dilatation of the heart. Three years ago the patient had rheumatism, and since then was troubled with dyspnoea, palpitation and severe cough—general condition very poor. There was a pre-systolic murmur. The præcordial area of dullness was increased. The patient constantly complained of pain in the præcordial region, and died suddenly on May 6th. On autopsy both lungs were congested, and oedematous. The left ventricle was enormously dilated, the right ventricle was also dilated. The mitral valve was stenosed. The endocardium was much thickened. The liver cells were atrophied. The cerebral vessels dilated. The kidneys were the seat of old infarctions.

Dr. Knapp presented a specimen of sarcoma of the eye. Two weeks ago a gentleman 55 years old came to consult Dr. Knapp, with the following history: Two years before the centre of the visual field became obscured without inflammatory symptoms, the trouble increased for eighteen months, when the whole visual field was darkened. The external appearances were normal, the pupil dilated with that of the other eye, and there was no tenderness. The tension was increased, and it was this symptom which led to correct diagnosis. It had been pronounced detachment of the retina. If the patient had been examined with the ophthalmoscope in the first six months of the trouble the growth would have been seen. Five or six years ago Dr. Knapp had removed a similar growth the size of a pea, and to-day there was no recurrence of the trouble, the patient being perfectly well. The diagnosis in the present case was facilitated by the tension. If the condition had been detachment of the retina of two years standing the eye ball would have been softer than normal. The eye was removed, and the sarcoma found to have originated in the yellow spot. The optic nerve was healthy, and there was no perforation of the sclerotic. The case was a typical one of this disease. These tumors are said to be of moderate malignity. This may be so where the tumors are small, but in almost all cases death occurs by metastatic deposit. Dr. Knapp recalled a case that was free from symptoms for ten years, but finally died from metastatic tumors. Medullo-sarcoma, as a rule, occurs after 40, never before 15. Before 20 the growths met with were choroidal, after 20 retinal.

Dr. Livingston presented a uterus of a colored woman, who had the following history. The patient was admitted to the colored home May 21st, being supposed to be suffering from cellulitis of left leg. On examination there was found diffuse swelling of the left leg, which pitted on pressure. There were numerous points of fluctuation, and a large circumference of ulcerated tissue about the ankle. The right leg was oedematous. The P. was 120; R., 30; T., 101.3-10; urine acid, 1012, no sugar; 7 per cent. albumen, granular and hyaline casts. There were no symptoms. The morning after the admission, the patient died.

At autopsy the thorax was normal. The heart was not contracted, the tissues pale. The aorta was the seat of atheromatous degeneration. The valves were normal. Both lungs were oedematous. The spleen was not enlarged. The right kidney contained two small and one large cyst. The kidney was the granular kidney of chronic Bright's. The liver was large and soft. The uterus was enormously distended by numerous fibroids. On opening the uterus the cavity was found to be full of pus. The external os was small, not admitting the little finger. Some of the fibroids had undergone calcareous degeneration. There was no discharge of pus from the vagina noticed before death.

Dr. Neuman presented a specimen of fatty liver, taken from a patient who had suffered for a long time, from derangement of the digestion. Ten years ago he had had an apoplectic stroke, and sixteen weeks before death a second one. The urine was loaded with bile. He died suddenly, and on autopsy the relatives only permitted the abdominal cavity to be examined. The liver was large and fatty.

Dr. Satterthwaite remarked that the pigmented appearance of the liver would indicate some chronic disease of lungs or heart. The Society then went into executive session.

LECTURES.

CLINICAL REMARKS ON SARCOMA OF THE BREAST—NECROSIS OF THE FEMUR AND AMPUTATION AT THE SHOULDER JOINT.

BY

THOMAS M. MARKOE, M. D.

Professor Principles of Surgery, College of Physicians and Surgeons, New York.

CASE I. *Sarcoma of the Breast*—Female æt. 58. Three months ago she first noticed a small, painless lump in the left breast, about the size of a large pea, which itched considerably. Beyond this it caused no inconvenience. It grew rapidly, up to three weeks before admission. It then remained stationary. The patient experienced slight darting pains through the part, but no burning sensation. There was no history of injury or strain. Since the mass was first noticed there has been gradual loss of flesh, and the patient's general health has deteriorated.

On admission patient was well nourished. General condition fair. Bowels regular; appetite good; micturition normal.

Examination reveals a tumor which is remote from the nipple, occupying the outer boundary of the breast on the inside.

In the examination of a tumor of this kind, the first question that presents itself is as to its malignity. This tumor is only of three months' growth. Cancerous growths ordinarily, are longer in developing. It is at a distance from the nipple. This is rarely the case with cancer. Moreover, cancer when at a considerable distance from the nipple draws in the nipple more or less. In the next place cancer is a tumor involving the substance of the gland itself, and is not isolated from it. These are all points which makes us believe that this disease is not cancer. It is of too rapid growth for fibroma, which is always of slow development. We are thus led to the idea of a sarcoma. Sarcomata occur more commonly in younger persons. They present generally a more or less distinct outline which can be very readily felt, and they are not likely to retract the nipple. Moreover, one striking feature of the sarcoma, is that there is no glandular involvement above the clavicle accompanying them. With the rapid development of the tumor, another feature has presented itself which still further increases doubt, namely fluctuation. In carcinomatous and sarcomatous tumors, it is common to find the development of a cyst or softening of the surface so as to give the sense of fluctuation. Still further, this prominence which was very slight three days ago has increased very rapidly, and assumed the character of a supporting action entirely independent of the condition of the tumor itself. Is this a tumor at all or is it the thick wall of a slowly formed abscess. The question can be decided by opening the sac. If I find a serous fluid in small quantity, I should say that it is probably a cyst developed in the mass, which is likely sarcomatous and had better be removed. If on the other hand I find that this pouting point is only the front portion of a chamber containing a large amount of pus, I shall lay it open.

[The syringe was inserted and bloody serum was withdrawn].

I judge that we have to deal here with a sarcomatous tumor of the most rapid kind; probably the small round cell formation with very little stroma, one that will probably return after extirpation.

The prognosis is not so unfavorable as in true carcinoma.

(An oblique incision of three inches was made so as to include the tumor in the upper angle of the wound. After removal an antiseptic dressing was applied.)

CASE II. *Necrosis of the Femur*—This patient, a male, eight years ago suffered an injury of the right hip. Several hours after the injury a dull pain was complained of, which continued to increase in severity. The patient was confined to bed. In about a month an abscess appeared in the upper and inner side of the thigh bone which discharged and remained open for three months. During this time several pieces of bone came away. During the following two years the patient complained at times of aching pains along the bone which increased at night, and in damp weather. The normal resistance to pressure was also lessened. Six years ago a second abscess broke on the anterior surface of the thigh. This remained open two years, and discharged at intervals. Two years ago another abscess formed on the lower part of the thigh, but discharged no bone and has never closed. There has been a constant discharge of pus, alternately thick and thin. Subsequently another sinus appeared externally to this, which afterwards closed up.

On admission patient was well nourished. General condition good.

Examination shows first, that the upper part of the thigh has several scars; the patient has now a very good use of his hip-joint, but the knee is very stiff.

The question narrows itself down to an inquiry as to the condition of the lower bones. Two years ago he had an abscess there, which has never healed, but no bone has ever come away, I infer from this that there has been necrosis.

In examining for necrosis the first thing to do after verifying the fact that the sinus started in the bone, is to appreciate the condition of the bone itself. Here it is found to be very much thickened. This thickening may be periosteal, or popliteal. The anterior boundary of the popliteal space is composed of compact lamina of bone, and is liable to necrosis.

I propose to put this patient under ether, and dilate the sinus in order to appreciate as perfectly as possible what the conditions of things is.

The course of the femoral artery is in a line drawn between the middle of the popliteal space, and the middle of Poupart's ligament. That line follows very closely along the line of these sinuses. I shall go as far as I can with safety behind the bone. This does not impress me as being one of those cases of necrosed popliteal space, and at the orifice of the fistula there are no pouting granulations, as we would expect in such a case.

The patient being etherized, a trocar was introduced into the sinus and did not come into contact with bone. Sounds were introduced and bone was reached. The cavities were explored and found to run behind the femur.

A long incision was made on the posterior surface of the femur and the sinuses laid open.

The wound was kept open, a carbolyzed tent inserted, and a light dressing applied.

CASE III. *Amputation at the shoulder joint*.—Female, colored. Three months ago patient received an extensive burn of the arm from the explosion of a kerosene lamp. There were also some burns over the chest, but these were not very deep. The wounds on the deeper part of the chest have not cicatrized nor have those on the arm.

The history is one of a fruitless attempt at cicatrization during a period of three months. The two features connected with the process of cicatrization must always be borne in mind.

First, there is an actual formation of cicatricial tissue that is a positive and definite addition to the cutaneous surface; secondly, there is a contraction of the surrounding tissues which enables the new formation to draw the surrounding tissues toward the center. It is wonderful how much destroyed tissue can be repaired by the process of cicatrization; but if you have to depend merely upon what can be accomplished by the actual new formation of cutis, then the extent to which you can command cicatrization is very materially limited. This is one of the cases in which the destruction of the cutis vera over a large surface prevents the whole from cicatrizing. I have seen a cicatrix accomplished after many years of care and transplantation with perfect success. But when you come to a region so extensive as this it is perfectly impossible. We have tried transplantation here and have failed. Over two hundred grafts have been applied and we have gained little or nothing by this process. This shows that the demand upon the system is too great for repair. For this reason it has been deemed advisable, and the patient has consented, to perform a shoulder amputation.

(As there was not enough flap to cover the stump it became necessary to remove the acromion process. An incision was made directly towards the head of the humerus and the bone was separated from its attachments. The incision was continued for a distance of two to three inches along the shaft of the bone. An assistant held the arm while the flaps were being trimmed. The wound was left open and a drainage tube was inserted.)

I think after the subsidence of the first inflammation of the stump and when the patient begins to be relieved from the drain of this huge surface that the burns on the chest will rapidly cicatrize.

BOOK NOTICES.

Hand-Book of Electro-Therapeutics by Dr. Wilhelm Erb, Professor in the University of Leipsic—Translated by L. Putzel, M.D., Neurologist to Randall's Island Hospital, and Physician to the Clinic for Nervous Diseases, Bellevue Out Door Department, etc., with, Thirty-nine Wood Cuts—Published by William Wood & Co., New York, 1883.

This book, treating of a subject about which we have had more than one very excellent treatise within a short time is indicative not only of the prominence which electricity has assumed as a therapeutic agent, but also of the increased clearness with which the laws of its operation and application are now understood.

Perhaps the results obtained by no agent are so diverse as those obtained by electricity and even electricians and electro-therapeutists themselves are often widely at variance as to the form of electricity best adapted for the special disease and the range of its application.

This difference of opinion has arisen chiefly from the fact that the methods of applying this agent have been and are so widely divergent. There has been need of a more thorough and definite understanding of what may and what may not be accomplished by electricity, as well as of a better and more universal knowledge of the best means of application, in order that

its true therapeutic value may be justly estimated and all its virtue whatever it may be fully utilized.

A handbook such as this which is accurate, comprehensive and minute in details, does much to fulfill this indication, and must meet with a favorable reception from those who are desirous of perfecting their theoretical knowledge of the range and general and special applicability of this very important therapeutic agent. The book forms the last addition to Wood's Library, with the form of which our readers are already familiar.

The translator has not erred in judgment in opening up for the benefit of English readers the mass of facts and suggestions relating to this subject which are systematically presented in this book.

Proceedings at the Dinner given by the Medical Profession of the City of New York, April 12th, 1883, to Oliver Wendell Holmes, M.D., L.L.D.. Edited by Wesley M. Carpenter, M.D. Published by G. P. Putnam's Sons. New York, 1883.

The embodiment in an attractive and permanent form of the famed proceedings at the dinner to Dr. Holmes, an occasion which, from the distinction of the guests, and the character of the intellectual entertainment afforded, was an event of a decade, is a happy conception of its originator.

Not alone the happy participants in the affair, but as well those who were prevented from being present, will read with pleasure the proceedings thus embodied and carefully edited by Dr. Carpenter, and will treasure this record of an evening's unalloyed joy among their choicest souvenirs. The book contains a short history of the facts which led to the dinner being given. A circumstantial account of the dinner, the toasts and responses, the plan of seats, and portraits of Dr. Oliver Wendell Holmes, Dr. Fordyce Barker, Rt. Rev. T. M. Clark, D.D., Hon. Wm. M. Evarts, Dr. T. Gaillard Thomas, Geo. W. Curtis and Whitelaw Reid.

It is tastefully bound, and in every respect handsomely gotten up by the publishers.

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK. SIMPLE STRICTURE OF THE RECTUM.

SERVICE OF

GEORGE A. PETERS, M.D.

G. M.—, widow, æt. 30, admitted Sept. 4. Patient gave no syphilitic history, never had dysentery or peritonitis. No uterine disease. Has had inflammation of the bladder. Has always suffered from constipation, and four years ago this became very marked, and she began to have pain at stool, tenesmus and small stools. Later she passed blood and mucus with her stools. She suffered also from severe pain in the back, and headache, and her general health was impaired. She has had no hemorrhoids nor prolapse of the rectum.

Examination—Shows a fibrous annular stricture about one inch above the internal sphincter, admitting the forefinger. Around the anus are two fistulous openings on the left side and leading upwards, opening into the rectum just beyond the margin of the anus. Local tenderness not marked.

Sept. 13.—Operation.—Ether, patient placed in Sims' position, probe introduced, and sinuses found

to connect and open into rectum. Grooved director passed through and tissue divided. All undermined tissue freely opened up. Finger introduced into rectum beyond the seat of stricture as a guide, and blunt pointed bistoury passed up and withdrawn, dividing the tissues posteriorly freely. No. 11 rectal bougie then passed up easily beyond the stricture. Wound packed with iodoform, gauze compress and pad and T. bandage applied.

Sept. 14.—There has been no hemorrhage. Patient slept well; complains of some pain in abdomen; urine drawn about ozs. xxvi. Ordered pil. lead and opium. One t.i.d and fluid diet. T. 97, P. 80.

Sept. 15.—No discharge nor local pain. Bowels have not been moved since operation.

Sept. 19.—Nos. 8 and 10 bougies passed last P.M. Surface of fistula granulating. Two fluid movements during the day. Ordered bismuth. subnitrat. grs. xxx. t.i.d.

Sept. 20.—Some abdominal pain; movements fluid. Bismuth continued.

Sept. 23.—Diarrhœa has ceased. Nos. 9 and 10 bougies passed, with slight hitch at seat of stricture. Band of tissue on posterior wall is disappearing.

Oct. 23.—Discharged cured.

ABSTRACTS AND SELECTIONS.

THE CAUSE OF SEA-SICKNESS.—BY ROBERT W. LOVETT.

When such an apparently simple disorder as sea-sickness exists in the midst of mankind for at least two thousand years, claiming yearly more victims, and all in spite of the best efforts of medical mankind to overcome it, it becomes of interest to inquire whether this is because its true nature has never been understood, or because it is essentially incurable.

The phenomena of sea-sickness are too well known to need detailed description. Violent and persistent vomiting is associated with it in most minds, and is the prominent symptom in most cases; but there are also a cold, clammy skin, headache, continuous nausea, great prostration, and indifference, the whole being accompanied by nervous irritability, and, in most cases, intense mental depression.

Plutarch was, perhaps, the first theorist on the subject. He thought that sea-sickness was caused by the smell of the salt-water; and, following him, men have propounded theory after theory, only to leave us to-day with a large stock of theories, and but few good results to show for them.

Perhaps the most acceptable theory to-day is the one which places the origin of the trouble in the inner ear. The ear consists of three parts; the outer of these runs in as far as the drum; the middle part is inside of the drum, and contains the chain of ear-bones; while the inner ear is a complicated affair, containing the essential organ of hearing.

As far as we are concerned, the inner ear is a membranous bag filled with fluid, and situated in the solid bone. From the back part of this bag run out three semicircular tubes communicating at both their ends with the bag or vestibule. These run in three different planes, and are lined with hair-like nerve-filaments, which are much more abundant and more-sensitive at the anterior part of the tubes. The tubes are filled with liquid in which float little calcareous particles, the otoliths. These tubes are known as the semicircular canals. It was difficult to see what connection with the sense of hearing these canals could possibly have and sometime ago it was noticed that injuries to these

impaired the sense of hearing in no way, but caused most curious effects in the loss of equilibrium.

For instance, in pigeons, when the vertical canal was cut, the bird turned a series of back somersaults; and, when the horizontal canal was cut, the pigeon whirled around in an horizontal plane, in every case tending to rotate in the plane of the canal which was cut. And what is especially interesting to us is, that in these and other experiments irritation or injury to these canals was almost invariably followed by vomiting. Experiments, by Professor Ferrier and others, point to a very close relation between these canals and the sense of equilibrium, and an especially strong suggestion is given by the disease known as labyrinthine vertigo, or Ménière's disease. This is characterized by an irritated and congested condition of these semicircular canals, due to some internal cause, and its symptoms are the same throbbing in the head, the pale, cold skin, and vomiting, as in sea-sickness, and in addition the patient reels and staggers, being unable to keep his balance. In this disease we seem to have the exact reverse of sea-sickness, the irritated condition of the canals causing the unusual movements of the body; whereas in sea-sickness we have the unusual movements of the body which result from the pitching of the ship, causing the irritation of the canals, and in both cases the irritated state of the semicircular canals is accompanied by vomiting. The mechanical explanation of why such irregular motion should cause irritation of the canals seems simple. By the pitching movements of the ship, which are by far the worst, the head is carried backward and forward through a long arc. At the end of the descent the head stops, but by its inertia the fluid in the canals rushes on and washes the otoliths up against the nerve-filaments at the front of the canals. These are extremely sensitive, and the repetition of this process a few times serves to establish an excessive irritation which is expressed by giddiness and vomiting. Why such gradual motions should cause sea-sickness, while much more violent ones, such as horseback riding, do not, can only be explained by saying that in the more violent ones the individual has a stimulus to adapt his positions to the motion, which he has not in the often unnoticed pitching of a ship. At any rate, this theory explains why lying down should afford relief, as the otoliths then rests at the back and less sensitive part of the canals; and it also explains why riding backward should cause nausea and giddiness, as here, of course, the otoliths drag behind and irritate the anterior parts of the canals. Moreover, in some recent inquiries addressed to deaf-mutes upon another subject, the fact was noticed that all who were insusceptible to dizziness on account of the impairment of their semicircular canals by disease reported themselves also exempt from sea-sickness.

But the semicircular canals must not receive all the credit. The viscera of the abdomen are very full of blood, and irritated in sea-sickness, and this condition will cause vomiting, as shown by very many experiments on animals. The intestines are attached loosely to the backbone by a fold of membrane containing some very large blood-vessels. Ordinarily the intestines are held up and supported in place by the muscles of the abdomen and consequently do not drag too heavily on their attachment. But in sea-sickness, it is said, either on account of confused messages sent to them from the irritated semicircular canals, or because of the novelty and uncertainty of the motions of the ship, these muscles are unable to tell when to contract and when to relax, thus affording but poor support to the intestines. Consequently by their inertia the intestines bulge for-

ward at the end of each descent of the ship, thereby stretching and irritating their attachment, and in consequence the abdominal blood-vessels are engorged with blood, and this condition is expressed by vomiting, which is merely Nature's effort to equalize the circulation. Force is lent to this view of sea-sickness by the fact that jumping from a great height causes fearful nausea on reaching the ground—in this case also the intestines pushing forward the abdominal wall and stretching their attachment.

There is probably a minor kind of sea-sickness, caused by the mere churning about of food in the stomach, irritating the nerves there as they would be irritated by a dose of mustard. This is often the sort experienced in small boats, and is at once relieved by vomiting.

The power of the imagination as one of the causes of sea-sickness ought not to go without some mention. Whether or not it is more powerful here than in other diseases it would be hard to say, but so prominent is the mental effort that Mr. Bache some years ago wrote a very interesting article on the subject, in which he maintained that sea-sickness was wholly of mental origin; that the idea of motion was the result of the concurrent testimony of the senses; and that in a new motion, where there was a conflict of impressions, the brain was disturbed. He said that motion caused nausea in two cases—1. When the motion of the observer's body is in doubt; 2. When the motion is acknowledged by the mind but the motion is not felt. But, however attractive this may be, it offers us little that is tangible. Of the very many other causes suggested, it seems only necessary to name the prominent ones. Naylor suggested spasm of the capillaries of the brain. Barris attributed it to the instability of surrounding objects. Stocker thinks it largely due to a partial vacuum in the lungs. Wollaston believed it was caused by the rise and fall of blood in the brain, as the mercury would rise and fall in a barometer, under like conditions; and Dr. Baker considers it the result of the sudden changes in the relations of the fluids and solids in the body.

Whether or not the individual is to be sick, and the duration and extent of his sickness, seem to depend to a certain extent on the general condition of the system, and also somewhat upon wholly unknown conditions, in many cases the most robust yielding the first. In this connection it is an interesting fact that children under three or four years are almost invariably exempt from sea-sickness although ordinarily they vomit so much more readily than adults.

This is no place for the discussion of remedies. Bromide of sodium is the prominent one just at present, and probably does lessen the nervous susceptibility somewhat; but let its advocates read the glowing testimonials in favor of Chapman's ice-bags for the spine, nitrite of amyl, champagne, chloral, and all the rest. The belt to support the abdomen seems a rational remedy, but it was first proposed for that use in 1814, and but few to-day have even heard of it, and it seems fair to assume that suffering mankind would not have discarded a really efficient remedy.

In conclusion, what I have tried to show is, that the stomach is not the cause of the disorder, although generally the seat of it; that the organs irritated seem to be the semicircular canals of the ear, or the abdominal viscera, or both, which become full of blood and cause vomiting, which seems rather an effort of Nature to equalize the circulation than any desire on the part of the stomach to rid itself of its contents.—*Popular Science Monthly*.

NITRITE OF AMYL IN URÆMIC ASTHMA.

With reference to Dr. Sanctuary's letter, published in the *Journal* for May 19th, I had a case recently which fully confirms his statements, by the great relief that the inhalation gives in cases of uræmic asthma.

I found J. F., a man aged 56 (who has suffered for some months from albuminuria and slight dropsy), pulseless, extremities cold, forehead covered with clammy perspiration, battling for breath, clutching the back of a chair, and in dread of instant death. I immediately broke one of Morson's capsules of nitrite of amyl, and applied it on wadding to his nostrils. The relief was instantaneous; the arterial spasm relaxed as if by magic, respiration became fuller at every breath, the pulse became perceptible, and the radial artery soon so dilated as to exhibit its usual fullness and tension. A calm expression of intense relief spread over the face, and with eager craving he buried his nostrils in the wadding, and explained that he was quite well now, and his chest free. There was not, on this occasion, nor has there ever been, any angina pectoris. The heart is slightly hypertrophied, secondary to the albuminuria, which dates back to repeated attacks of nephritis, caused by exposure to great hardship.

Half an hour after seeing this case, I saw P. M., a man aged 60, who was suffering from severe dyspnoea, the result of chronic bronchitis, dilated right heart, and congested liver. His urine was free from albumen or sugar; he also was cold and nearly pulseless, battling for breath in a severe attack of cardiac asthma. His jugular veins were turgid and pulsating. I tried the same treatment as in the first case, but the inhalation gave but slight relief, and had, in this case, no effect on the arterial pulse, nor on the general circulation, as was well proved on my cupping him, and finding that, even with the assistance of the amyl, the blood would not flow. An heroic dose of digitalis, ergotine and ammonia, with a brisk purge, gave some relief. The contrasting results of the same treatment in these two cases were very instructive, both being similar in their rough symptoms. The uræmic asthma was at once relieved by the unlocking of the spasm dammed arteries in its case, while the cardiac asthma was in no way benefited by opening wider the lax and toneless capillaries in P. M.'s case.

JOHN RINGWOOD, Kells, Co. Meath.

—*British Med. Journal*.

CASE OF ACUTE PERITONITIS FOLLOWING INTESTINAL PERFORATION.

DR. WILLIAM JULIUS MICKLE, of Bow, describes the following case:

"M. M., aged 45, formerly a soldier in the Seventeenth regiment, was a helper at a laundry for some years, and had made no complaint of any malady whatever, although some mitral obstruction had been made out. Early one morning, complaining of constipation, he was given an aperient. After breakfast, the bowels were freely moved. Then, seeming well, he worked all day till about 4.30 P. M., when he felt abdominal pains, or "cramps," as he called them, coming on, returned to his ward, laid himself down, and looked pale. Next, he was doubled up, groaning, breathing noisily, and complained of "cramps" over the belly, which was tender, and which he would not allow one to examine. The pain was obviously intense. The pulse was frequent, and variable in this

respect; somewhat sharp. Tincture of opium was given internally, and a light hot poultice and turpentine were applied to the abdomen. At 9 P. M. there was slight vomiting of food and mucus, and later of a greenish fluid.

Next morning he lay either on his back or on the right side, with the knees drawn up. The pain was continuous, and he stated it to be worse along the middle line; the tenderness, however, was highly marked over the cæcum; and in both flanks were slight dullness on percussion, and doubtful obscure fluctuation. He was eructating, and then spitting out in mouthfuls a dark greenish, flaky and flocculent soup-like material, with brownish, soft, lather-like flakes floating on the surface. Temperature 99.7°; pulse, 117, soft, feeble; respiration 38, somewhat labored, moaning. No urine was passed. The bowels were not moved; the tongue was moist, with a greenish and brownish coat. The tips of the ears, nose and fingers were chilly. The eyes were heavy; the face was of leaden hue. The pain was heavy and continuous, with exacerbations, during which it resembled the piercing of knives. There was no sign of tumor, strangulation or intussusception of bowels.

I ordered him to have one-third of a grain of morphia hypodermically; also to take, each hour, five minims of tincture of belladonna, one minim of dilute hydrocyanic acid, and one-sixteenth of a grain of morphia. He took three doses of this. Half an ounce of milk was given every half hour. At 1.30 P. M. his nose was cold, his features collapsed; pulse feeble; prostration was advancing. At 3 P. M. he was somewhat drowsy; respiration varied from 18 to 24, and the pulse from 110 to 120, feeble, soft, small, becoming imperceptible. The pupils were moderately contracted. The patient, in reply to inquiries, said that the pain was relieved. After this he gradually became comatose, and the respiration irregular, jerking, as if by several contractions of diaphragm; and, later, hic-cough came on. Brandy was given by the mouth, and it and carbonate of ammonia by the rectum, while heat was applied to the feet. The pulse remained at from 110 to 120, and death occurred at 5 P. M., or twenty-four hours and a half after the first complaint of abdominal pain.

Necropsy.—Omitting most of the parts examined, it need only be said that the abdominal cavity contained some turbid fluid, partly escaped from the bowel, and with sanguineo-purulent material floating in it. These were mainly on the left side of the abdomen. The parietal peritoneum was of an almost uniform scarlet redness. The great omentum was converted into a red fleece, the under surface of which was smeared in parts with purulent fluid. The appendices epiploicæ were smeared in a similar way, as were also some coils of the small intestine, the other coils being slightly lymph-glued together. There was general inflammatory redness of the outer coat of the exposed coils of intestine. In the upper part of the small intestine were much yellow mucus and semifæcal matter. In the descending colon and rectum was patchy redness, and in parts slight excoriation. In the lower part of the sigmoid flexure was a perforating ulcer, with beveled edges and sloughy surface, which was open through an appendix epiploica into the abdominal cavity. Another ulcer with greenish edges was just beginning to perforate. The heart contained clots and treacly-fluid blood; the endocardium was deeply blood-stained; there was mitral stenosis; the mitral valve was thickened, calcareous and deformed. There was some hypertrophy and dilatation, especially of the

left auricle. The heart weighed fifteen ounces. Some large gall-stones were found in the gall-bladder.

R. marks.—As to the duration of this case—at least twenty-four hours and a half—it may be said that, writing of peritonitis, Dr. Habershon stated that instances of intestinal perforation are generally fatal in from five to ten hours; and Dr. J. R. Wardell mentions that, in his cases, death occurred in from seven to twenty-three hours, and cites duration-periods from other authors varying from four to one hundred and five hours.

Possibly constipation, or passing gall-stones, led to the irritation and ulceration of old cicatrices in the colon, results of disease contracted when campaigning long before.—*British Medical Journal*.

FOREIGN BODY IN THE URETHRA. DR. GEORGE HUNTER, M. D., Linlithgow, writes:

"An elderly gentleman, the subject of dysuria from prostatic enlargement, thought to aid the efforts of his bladder in its evacuation by insinuating the rounded head of his wife's veil-pin into the orifice of his urethra, and thereby opening up the passage. To his dismay, in its descent downwards it slipped from his fingers, and the point of the pin disappeared from his sight. His attempts at removal only caused it to make its way further back, and soon a discharge of blood from the meatus, and urgent but ineffectual attempts to pass urine, alarmed him, and induced him to send for me. On my arrival, I could just make out the head of the pin in the membranous urethra in front of the prostate, and could feel the point anterior to the scrotum. To remove it, I fixed the head by pressing on it from behind forwards, and then impaled the urethra against the point. By steady pressure and traction on the point as soon as it emerged from the under surface of the penis, the whole length of the pin was pulled through, only the head remaining in the urethra. The point was then depressed towards the perinæum, and by compressing the flaccid penis in its longitudinal axis, the round head of the pin was easily passed through the meatus, and the entire pin withdrawn. In its removal, not a drop of blood was lost, and the puncture remaining was not more severe than that resulting from the use of the ordinary hypodermic needle. Beyond enjoining rest and quiet for the first twelve hours, nothing further was prescribed, and my patient was next day in his usual health."

British Medical Journal.

REMARKABLE MONSTROSITY. DR. MULVANY, writes:

"On November 2nd, my late partner, Dr. H. C. Linden, sent to me for a case of a primipara, aged 28, who had been some hours in labor. It was a breech presentation, and favorable progress had been made until the pelvic outlet was reached. There the head became jammed tightly, and, during the next two hours, did not advance in the slightest degree. As the pains were ceasing, notwithstanding the administration of ergot, it became necessary to deliver instrumentally. Several attempts at extraction by forceps proved futile, and, as exhaustion was threatened, the blunt hook was employed, and, after an hour's hard hard work, delivery was accomplished. The child was a full-grown anencephaloid male; life was extinct, but very recently. The bones of the face were normally developed, but there was no calvarium. The cerebral substance was wanting, and its place was filled with bloody serum and

a material which looked like a placenta; to this the placenta proper was attached by its membranes. It was very large, measuring $6\frac{1}{4}$ by $3\frac{1}{2}$ inches, and was deeply fissured at its anterior third. Two abortive cerebellar lobes were present. At the upper portion of the spine there was an opening in the spinal canal, from which sprang a lobulated body. Four cords were present, three focussing at this point; one running from the placentoid cerebral substance, the other from the placenta, and the third joining the cord proper, a few inches from the umbilicus; the fourth passed from the placenta in the usual way, and presented a slight degree of fatty degeneration. It was rather large. The cords had undergone fatty degeneration to a great extent. Being rather pressed for time, we were obliged to be content with a cursory examination."

British Medical Journal.

THE OXYTOCIC ACTION OF QUININE.

MR. HARTIGAN, M. K. Q. C. P., of Hong Kong, writes:

"In three different cases I have had on several occasions to discontinue the use of quinine, because it brought on "labor-pains," though the doses used were small, varying from three to five grains. In one of these, during a previous pregnancy, another medical man used quinine, and discontinued it for a similar reason. All three were in fair general health, suffering only from slight malarious fever, and had never aborted. One case has come under my notice in which abortion took place, without apparent cause, after a ten-grain dose of quinine. The patient was the mother of several children, had not previously aborted, was in good health, and took the quinine to cure facial neuralgia. I know of another case of abortion occurring under similar circumstances after quinine. This action of the drug is known to the Chinese, who take it (I am told with success) for the purpose of producing abortion, following its use by copious draughts of hot tea. I have myself heard a Chinese "amah," (*i. e.*, female servant), recommend it. Quinine certainly, in some cases, increases the menstrual flow."

British Medical Journal.

MEDICAL NEWS AND NOTES.

Editor Gazette:—Your report of "An obstetrical phenomenon," in issue of May 26, brings to mind a case unique in my experience, which occurred in my practice on the 16th of the present month.

On that date I was called to attend Mrs. O——, in her first confinement. Her labor was severe, and with breech presentation. After the delivery of the body, the head was delayed at the inferior strait, and while there, the occiput being above the pubis and the face in the cavity of the sacrum, the child made several audible attempts at respiration. I could not say that it cried out, for the noise was not loud, yet perfectly distinct. The air was admitted, of course, during my attempts to depress the perineum.

The child was nearly asphyxiated when born, but after some slight efforts by means of cold and hot douching revived.

I do not consider that the case belongs in the regions of the wonderful, but still may be sufficiently novel to be interesting to others.

FRANCIS W. GALLAGHER, M.D.

TWO DEATHS DURING THE ADMINISTRATION OF ANÆSTHETICS.

Dr. J. H. Lee Macintire, Medical Superintendent Bristol Royal Infirmary, writes: "H. C., male, aged 54, was admitted to the Bristol Royal Infirmary, December 30th, 1881, suffering from a strangulated inguinal hernia of sixty-four hours' standing. He had vomited almost incessantly from the first, and for the last twelve hours the vomited matter had been fæcal. On admission his tongue was moist, his pulse weak but regular, and his aspect somewhat pinched. Chloroform was administered preparatory to an attempt at reduction by taxis, and everything went on well for the first minute and a half, a little over one drachm being inhaled, and this amount was divided into three parts. He then commenced to struggle a little, and his pulse was noticed to have improved, when he was seen to be about to vomit. The vomited matter measured almost half a pint, and was stercoraceous and very fluid. Loud tracheal râles were now heard, and the breathing for the first time became embarrassed. He was immediately turned over, when nearly two quarts of fluid were ejected. His pupils were now widely dilated, his pulse failed, and he became cyanosed. Artificial respiration, inversion, cold affusion, and dragging forward of the tongue were at once tried; air entered the lungs freely, there was no tracheal râles, and the pupils became contracted. He now vomited again, or rather, some more fluid poured out of his mouth. Attempts to resuscitate him were persisted in for over twenty minutes, but without avail. From the first arrest of pulse and respiration, neither heart-beat nor voluntary attempt at respiration was noticed. The first vomit occupied about a minute. The *post mortem* examination showed the heart healthy; aorta slightly atheromatous, kidneys granular, and a small quantity of food, which appeared to be partly digested milk, and which was about as large as a pea, was lodged just below the rima glottidis.

M. T., female, aged 45, who had been in the ward some days with an abdominal tumor, was, on April 19th, 1883, examined under the influence of an anæsthetic mixture consisting of one part chloroform to three parts of ether. She was known to have chronic bronchitis, and was suspected of phthisis at the right apex. She had taken some beef-tea and egg a short time before the examination. She took the anæsthetic very well, becoming unconscious in three minutes, and remaining so for ten, when her breathing was noticed to be growing shallow, but her pulse, color, and pupils remained unaltered. She took three respirations, each more shallow than its predecessor, and gave signs of being about to vomit. She was just about to be turned over on her left side, when her breathing stopped, whilst her heart could still be seen acting. Her pulse then failed, her face became livid, and her pupils about two-thirds dilated. Inversion and artificial respiration were immediately tried, and air entered the lungs freely, with a total absence of tracheal râles. The pupils were now noticed to be about three-fourth dilated, and some half digested liquid food oozed out of her mouth. In case any might have entered the larynx, although there was no reason to suspect such an accident, tracheotomy was performed. Artificial respiration was kept up for half an hour, and inhalations of nitrate of amyl, injections of ether, cold affusion, and an enema of brandy were also unsuccessfully tried, the patient showing no sign of returning animation from the first, with the ex-

ception of closing her jaws firmly about five minutes after the commencement of artificial respiration. *Post mortem* examination showed the heart-vessels and brain to be healthy, and there was no food in the air passages. The abdominal tumor was due to tubercular peritonitis, and there was general bronchitis, and some tubercle was found in the apex of the right lung.

In both cases the anæsthetic was administered on a flannel mask which covered the nose and mouth."

—*British Medical Journal.*

A Doctor's Model House.—Dr. Hogg, of Bedford Park, has built himself a house in the Queen Anne style, where no window can open, and where there is no fireplace, except in the kitchen. Underneath the hall a large passage is used as the intake of fresh air. Here it can be cooled in summer by ice or water-spray, while in winter it is warmed by hot steam-pipes, which are economically heated by a small cook stove. The air then passes up into the hall, from which it is only separated by an iron trelliswork, and travels into every room of the house by apertures made in the skirtings and cornices. In the ceiling of each room there are one or two openings and exhaust shafts, leading to the foul air-chamber in the roof of the house. To produce the exhaust suction, a large shaft runs from the foul air-chamber down to the back of the kitchen fire, where the heat of the boiler and the fire suffice to attract the air. From the back of the kitchen fire, in the basement of the house, the air again travels up. A square brick shaft or chimney conveys it through the roof and into the open. In the center of this shaft is a circular metallic flue, which carries away the smoke of the kitchen fire, and this flue, always more or less heated, stimulates the current of air. A comparison of the minimum velocity at which the air moves forward in the extracting flues (200 feet per minute) with the cubic contents of the house, shows that the atmosphere is entirely changed throughout the dwelling once in every twenty minutes. This result is obtained imperceptibly—that is, without the slightest draught; yet ten persons smoking in one room felt no inconvenience, and next morning there was not the slightest trace or taint of tobacco odor remaining. Every part of the house being equally warm, all danger of catching cold from draughty corridors, chilly bed or bath rooms is obviated.

Syphilis in the Ninth Century.—Between the years A. D. 806 and 810 an Emperor of Japan commanded his court physicians, Abemanas and Idzumo Kirosada, to collect in one volume all extant records of native medicine and surgery. A manuscript copy of this work, for centuries forgotten, although the facts of its origin were recorded in Japanese history, was found in 1827 by a priest in a provincial Buddhist temple. Dr. Scheube, of Leipzig, has recently examined this work and, in an article published in a recent number of Virchow's *Archiv*, has shown its undoubted authenticity and its high value from a purely scientific point of view. It was written long before Chinese ideas had penetrated into Japan and influenced native practitioners. The most interesting passages are descriptions of local and general affections, which clearly prove that syphilis, and several allied disorders, were well known to the ancient Japanese. Chancroid and phagedenic chancre are clearly described, as well as a "swelling on the penis, of the size

of a millet-seed," followed by eruptions, feverishness, pains in the bones and head, blindness, swelling of the testicles, and other very familiar symptoms. These were observed to continue for many years. The passages of this work, called the Daidorui Thiu-ho, which relate to the treatment of these symptoms, have not yet been translated into English. Herbs alone appear to have been used, and without much success; mercurial treatment was introduced at a comparatively recent date from Europe. The ancient Japanese surgeons do not appear to have recognised the venereal origin of the disease which they describe, although the Daidorui distinctly traces all the secondary symptoms to "the poison from the affected organ."

Novel Funeral Reforms.—It is proposed, in consequence of the number of deaths which are occasioned by colds caught at funerals, that skull-caps and gum shoes and Scheveningen wind-screens at the grave shall be as regular paraphernalia of funerals as the pall, the "weepers," and the hearse-horse. The suggestion, says the *New York Herald*, is practical and praiseworthy. It is in line with the recently adopted provision of India-rubber suits for baptism by total immersion, and bears testimony that we live in a progressive age. A better system, however, is that established in Utica, in Oneida county. The principal cemetery there is provided with two chapels—one of stone, where funeral services are held in the summer; the other of iron and glass, where they are held all the rest of the year. Into this "conservatory chapel," full of tropical verdure, the funeral train passes through a covered carriage-way, and the services are held in light and warmth, among trailing vines and blooming shrubs. At their conclusion the corpse is surrendered to keepers, who, after the mourners have departed, remove it to a cold vault to await interment in a grave.

A Comparison of Medical Studies Exacted in 1862 and 1883.

1862.		1883.	
<i>Curriculum of Study at Glasgow.</i>		<i>Curriculum of Study at Glasgow.</i>	
Anatomy, one course...	£3 3 0	Anatomy, three courses.....	£11 11 0
Practical Anatomy, one course.....	1 11 6	Chemistry, two courses.....	6 6 0
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OUR TRANSATLANTIC BRETHREN, AND THE ETHICAL QUESTION.

As indicative of the spirit of our medical friends across the water, we publish without comment the following from the editorial columns of one of the prominent London journals. It embodies a compliment to one of our own most eminent practitioners, and an endorsement of the conservative view of the question of ethics.

"It is not uninteresting to notice that a leading physician of the United States—the President elect, by the way, of the American Medical Association, Dr. AUSTIN FLINT—has just published a little volume entitled 'Medical Ethics and Etiquette.' It is well when such subjects are undertaken by men of acknowledged authority and long experience. It is the happy distinction of our own medical literature to contain a classical work on this subject by a physician whose fitness was acknowledged by no less a judge than Dr. W. HEBERDEN. 'What you have already communicated to the public,' said Heberden, in his eighty-fifth year, writing to PERCIVAL, 'with so much just applause, shows you to be peculiarly well qualified for drawing up a code of medical ethics, by the just sense you have of your duties as a man, and by the masterly knowledge of your profession as a physician.' We may with justice apply the compliment to Dr. FLINT.

"It is well for the United States that one in the position of Dr. FLINT, whose accomplishments, age, and success protect him from all charges alike of presumption or jealousy, has taken up the modest part of a commentator on PERCIVAL, or rather on the Code of the American Medical Association, which is based on PERCIVAL'S Code, the very words being carefully preserved whenever they conveyed the precepts it is

wished to inculcate. We would impress upon all our younger readers to make the principles of medical conduct a part of their care and of their study. We would even go further and, in the words of Dr. FLINT, suggest that the knowledge of the ethical code should be made a part of medical education. In early professional life, and in the pressure of professional competition, there is sometimes a temptation to forget that we are bound, as members of a liberal profession, to abstain from all vulgar methods of success, and especially from that meanest of all methods—taking advantage of a professional brother in any moment of his temporary absence or of his temporary blame or unpopularity among those who are not in a position to judge him. To see the cards, advertisements and puffs—direct and oblique—which reach us every week, in which medicine, midwifery, and surgery are offered on terms more like those of a dealer in rags, is a sight that would make HIPPOCRATES or PERCIVAL weep. Nothing can justify such things in men who seek to strive lawfully. Young medical men may properly feel anxious to succeed. It is affectation to talk as if they had not to live by their profession and to justify their choice of it by showing that they can live. But it is a fatal mistake to make ethical errors at the beginning and think to become more scrupulous with the advance of time and with the advent of success. A little clap-trap, boasting, playing with a false title till a legitimate one can be secured, the entertainment of any gossip or scandal reflecting on a professional neighbor, or unprofessional methods of gaining credit or notoriety, may appear little vices in the early days of professional life. But he errs who thinks so. Such errors corrupt good manners; they are adhesive; they stick to a man awkwardly, even when he would give hundreds to repudiate them. They should be resisted absolutely and in embryo. There are other ways by which young men rise out of the keenest competition into success and honor, such as devotion to their work, to the study of their profession and of its great models, and consideration for their patients on the one hand and for their professional brethren on the other. These are the eternal principles by which professional happiness, honor, and success are to be secured; and he is the wisest man and the worthiest member of his profession who gets them well into his mind and allows them to dominate all his conduct.

"It is well known that a somewhat sharp difference of opinion has arisen among our Transatlantic brethren lately on the question of professional intercourse with homœopaths. Though the principles of medical ethics are good for all time, new questions of application arise. Homœopathy is an instance. It is a thing of yesterday. It is not so much, as mentioned by PERCIVAL, and the profession has had to deal with it as a novelty. Hitherto the profession has been practically unanimous in refusing consultation with homœopaths, either because their practice was based on an exclusive dogma which is contrary to professional ethics, or on the ground, as Dr. FLINT puts it, 'of assuming a distinctive appellation,' implying an essentially distinct system of practice and an attitude of antagonism to the regular professor. Dr. FLINT does not so much object to a man holding any dogma, even an exclusive one, even one so absurd as homœopathy, as to his assuming 'a distinctive appellation.' This is very much the same ground as that taken by our own College of Physicians, which called upon its members to uphold the dignity and freedom of the profession by discountenancing those who trade upon

designations implying special modes of treatment. Our own view is that, of two men practicing homœopathy, the one calling himself a homœopath and the other not, the former is the honest man of the two. But it is not 'for the good of the patient,' which is the great end of medical ethics, that we should meet either of them. Such a consultation is misleading to the patient, and likely to be compromising to both parties.

"The New York Medical Society has altered, as is well known, the National Code of Medical Ethics' which declares that 'no one can be considered a regular practitioner or a fit associate in consultation whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession,' &c. It proposes to authorise consultation with any registered or qualified practitioner, whatever the absurdity or exclusiveness of his dogma, and whatever may be the trade label that he adopts. It is beyond the power of the New York Medical Society to impose such consultations on men who respect themselves or their patients, or the accumulated experience of the profession; and we shall be much mistaken if, under the presidency of Dr. Flint, the American Medical Association does not uphold its own moderate and dignified definition of a regular practitioner, as quoted above. Free institutions are admirable, but they must include freedom for those who decline to be warped by a dogma, or compromised by one who believes, however honestly, in an absurdity."

THE PREDETERMINATION OF SEX.

Some curious experiments on frogs, bearing on this subject, were recently published in the *Archiv für ges. Physiologie* by Griesheim, and Pflüger. Though but little light is thrown on the predetermination of sex, some important facts regarding fertilization were developed by the investigations. The nature of these experiments were reported in the *British Med. Journal* as follows:

"The researches were commenced by Dr. G. Born who artificially impregnated frog spawn by applying to it the semen of frogs in full rut, and then brought up the tadpoles, killing them when they had reached the adult condition, and determining their sex. Ninety-five per cent. proved to be females, whilst, in natural conditions, spawn according to his experience produces male and female frogs in almost even numbers. Dr. Born attributes this increase in the proportion of females to the animal diet which he gave his tadpoles, which in the wild condition are vegetarians; and infers that the determination of sex is due to circumstances affecting the ovum after impregnation. Griesheim found the average proportion of the sexes in frogs under a year old to be naturally 36.3 per cent. males, and 63.7 per cent. females. Pflüger made his experiments from a series of adult frogs, all living in the same conditions. In order to test the relation of concentration or deficiency of semen as influencing the sex of future frogs, a number of eggs were mixed with ripe concentrated semen, 492 tadpoles hatched out of the spawn, and of these, 39.4 per cent. proved to be males; when semen concentrated with water was mixed with spawn, out of 209 tadpoles, 27.3 per cent. were males. Lastly, ripe spawn was fertilised with fluid taken from the testes of aged male frogs that had ceased to exercise sexual functions, and in due time perfect tadpoles were hatched, 35.3 per cent. becoming males. The average,

on adding the above three groups of artificially begotten frogs, was 37.7 per cent. male, that is, almost precisely the natural proportion, according to Griesheim's experiments. Hence the amount or concentration of semen appears to have no influence on determination of sex.

Not content with these experiments, Pflüger began again last spring with a new series, taking every possible precaution to prevent the death of the youngest tadpoles. Three hundred and sixty-eight eggs (A) were fertilized with concentrated seminal fluid; 492 (B) with semen diluted with water. In A, the mortality was 1.3 per cent.; in B, 0.4 per cent. Three hundred and sixty-three remaining tadpoles were reared in two special ponds, and fished out two months later. Of A, 166 frogs were living; of series B, 204. Out of the total of 370 frogs, the proportion of sexes was almost balanced; in group A, 48.4 per cent. were males; in group B, 48.5 per cent. were of that sex. "Hence, under all circumstances, the concentration of semen has no influence in determining sex—in frogs."

Pflüger accounts for the very different conclusions following Born's experiments by showing the fallacies caused by the great mortality among the tadpoles which Born fed entirely on meat; out of 8,400 fertilized eggs, only 1,443 lived to adult age, and of these but 72 were males. In natural conditions, Born found that the excess of females over males was not higher than according to Pflüger's experience.

Pflüger has continued his labors by endeavoring to discover if the relative proportion of the sexes, in frogs, be already determined before fertilization. He reared frogs from Utrecht, Königsberg, Glarus, and Bonn separately, but under the same conditions, and noted the different proportion of sexes in young hatched from the eggs of the Dutch, Prussian, Swiss, and Rhenish frogs; in all cases some of the spawn was fertilized with pure seminal fluid, some with semen diluted with water. The proportion of males in the spawn from Utrecht frogs was 12.2 per cent. when reared from eggs fertilized by pure semen, and 14.1 per cent. when the fluid was diluted, the total average being 13.15 per cent. In the Glarus series, the proportion of males, under the same circumstances, proved to be 22.4 per cent., in the Bonn frogs 35.7 per cent., and in the spawn of Königsberg frogs 48.5 per cent. All these frogs were reared at Bonn. Pflüger, continuing in his extraordinary zeal for the acquirement of precise knowledge, then endeavored to ascertain the proportion of sexes in frogs, actually hatched and reared in their native land, or rather water, proceeding, of necessity, to the above named places, where he found the proportion of males to be, at Utrecht, 13.2 per cent., Königsberg 46.9 per cent., and Bonn (taken from ponds in the neighborhood) 35.5 per cent. The close correspondence of these returns with the same in the case of the spawn of frogs brought from these places to Bonn is very noteworthy, and tends most strongly to prove that the sex of frogs was determined before the eggs, brought to Bonn, had arrived at that town. Thus differences of climate, of water, of nourishment, and even of method of fertilization proved to exert little influence on the proportion of sexes. Pflüger next made an estimate of the proportion of sexes in adult frogs reared, under protection from frog-eating animals, in their native waters, and found the proportion of males to be at Utrecht 47.5 per cent., Königsberg 50 per cent. and Bonn 51 per cent. Thus the ratio for old frogs is nearly the same at Bonn and Utrecht, though it is very different in the case of young frogs. A male frog very rarely impregnates more than one female.

Pflüger attempts to explain the significance of these proportions. He had found an irregular hermaphroditism of young frogs which causes the genital gland of young adults to resemble an ovary when it ultimately develops into a testicle. The complete maturation of this hermaphrodite gland takes place in the beginning of the second year, so that in two-year-old Bonn frogs the males muster 40 per cent. The power of development of this irregular hermaphroditism depends upon race, and accounts for the remarkable differences in the proportion of males in different parts of Europe. In Königsberg this power hardly exists, in Bonn it is greater, in Utrecht greater still, and, greatest of all, at Breslau in Silesia, where Born carried on his observations. It is evident, Pflüger observes, that, in order to search deeper into distinctions of sex, specimens with the least amount of irregular hermaphroditism, as those from Königsberg, should be examined, in order to eliminate sources of fallacy as much as possible. In the course of these experiments, it was found that the seminal fluid remained, within the testes, efficient for fertilization for about a month after the special breeding season.

ORIGINAL ARTICLES.

A CONTRIBUTION TO TRAUMATIC NEURITIS ILLUSTRATED BY A CASE FOLLOWING DISLOCATION OF THE HUMERUS.*

BY

WILLIAM J. MORTON, M. D.

*Read before the American Neurological Association and Reported for the MEDICAL GAZETTE.

The summary of the case in brief is this: Injury to the brachial plexus, motor paralysis, sensory disturbances, exaggeration of the tactile sense; hyperalgesia, diminished temperature sense, reactions of degeneration, cedema, glossy skin, painful joints, fibrous hyperplasia, nervo-muscular hyperexcitability, extension of disturbances to opposite member, that is to say ascending neuritis.

The case presents an instance of the danger of injuring the great nerve-centres by reducing a dislocation. It presents in addition to neuritis the rare symptoms of fibrous hyperplasia and neuro-muscular hyper-excitability. The date of the first examination was February 26, 1883.

The patient, Alexander M., 65 years of age, is here present for examination. About ten months previous to the above date he slipped on the sidewalk and fell, striking on the right shoulder. The arm was rendered nearly motionless. The shoulder was painful and soon the hand and forearm swelled. He then went to Bellevue Hospital, where his shoulder was set. The following is the only report from the records of the hospital:

A. M., admitted Sept. 27, '82. Diagnosis, alcoholism. Dislocation of humerus. Discharged Sept. 29th. This record is unimportant except for the fact that it establishes the existence of a dislocation.

A severe pain began in the hand about a week after the accident and has continued up to date. At the same time the hand began to swell and lately has become glazed. He felt a pricking and numbed sensation in the hand and fingers. It may be stated that the patient presents no evidence of hysteria and cannot be mesmerized. The present condition of the hand is much enlarged, brawny and club-like. Skin is glazed like a polished waxen surface. The upper

portion of the arm is flabby and the skin is flaccid. The hand is continuously cold. The joints are somewhat painful and there are changes in the growth of the nails. They are club-shaped and present transverse ridges. There is complete absence of hair.

Motor Disturbances.—Flexion and extension of elbow limited. Flexion of the wrist impaired, extension of the wrist impaired, pronation and supination slightly impaired. Flexion of the fingers and thumb lost. Movements of shoulder slight.

Sensory disturbances.—Shoulder joint and all the small joints of hand were sensitive to pressure. Contractility of right hand increased. Left hand remained normal. Back hand could appreciate points of æsthesiometer at distance of fifteen millimetres. Second dorsal phalanx five m. m. The arm and forearm exhibited a similar condition.

Reactions of Electricity.—Faradic current. Right arm. Biceps fails to respond. Entirely lost in the extensors and flexors and small muscles of the hand. Left arm exhibited diminished electrical reaction. Left hand and forearm after contraction remained in the stage of contraction until it was forcibly flexed into position again.

Galvanic reaction is well established in most of the muscles of the right arm. Faradic is diminished or lost. In the flexor carpi ulnaris Galvanic and Faradic reactions are lost.

Nervo Muscular Hyper-Excitability.—While testing the biceps by faradism and pressing somewhat strongly upon the motor point of the muscle after withdrawing the electric current, the arm still continued to contract. Thinking that the patient was shamming, I tried the little finger with the same result, producing a strong contraction, which only subsided after some minutes. The muscle could only be made to contract by mechanical excitation. Faradism showed the same condition on the centre of the forearm and extensors. If extensor carpi radialis longior and extensor carpi radialis brevior were thrown into contraction by the Faradic current the wrist remained extended until forcibly flexed by the operator.

Fibrous Hyperplasia.—A curious condition exists over the phalanges and especially the flexors. The pulp of the fingers and the interspaces between the phalangeal joints are greatly enlarged. They are the seat of fibrous swellings resembling marbles. [Photographs were presented illustrating the condition of the fingers.]

Transference to the Opposite Member.—The left arm soon became involved and exhibited similar electrical re-actions to the right. There was also an increased response.

The extensors of the fore-arm were thrown into contraction by faradization. No sensory disturbances appeared in this arm but merely paresis. The skin is at times glossy, cedematous and painful.

Treatment.—June 12, 1883. Patient has been treated with electricity and blisters were applied over the tract of the brachial plexus. Hot and cold douches were employed and cod liver oil was administered internally.

Progress.—The glossy skin and cedema have disappeared. The hand is resuming its natural size and has more freedom. There are no more nodular pains. The hyperplasia has somewhat disappeared. The flexor carpi ulnaris and flexor prof. dig. are disabled, but the biceps and deltoid have regained their normal re-actions. Contractions are invisible in the right deltoid.

The nervo-muscular hyper-excitability is greatly di-

minished. A few movements may be made, but not such as were found to exist when I first saw the case. Surgical authors report numerous cases where dislocations of the head of the humerus into the axilla have produced disturbances in the brachial plexus. It is probable that the efforts at reduction in different cases have more frequently produced a nerve lesion than the original accident. For instance, in the case cited by Mitchell the four lower nerves of the axillary plexus on post-mortem examination were found to be torn across. In other instances complete palsy of the arm has ensued upon the old cases. The circumflex winding around the neck of the humerus is here subject to special injury, and to this ought to be attributed the very common wasting of the deltoid after reduction of the shoulder. In three cases I found well established degeneration where no injury to the circumflex was suspected. The injury set up in the circumflex nerve may extend to the other branches of the brachial plexus, and loss of motor power with degeneration and atrophy of the muscles may ensue. The sensory disturbances observable in this case are the usual results of nerve injury and require no comment. The very well marked nutritive disturbances in the changes of growth of nails, absence of hair, and glossy skin, the condition of the joints and œdema, are those that have been graphically described by Wier Mitchell and Charcot, and are referable to irritations or partial injuries of the nerve trunks rather than to complete section. Where a growth of nails indicates a general tendency to excitation and in all tissues of the hand to exaggerated function.

Here you meet the resemblance to acute articular rheumatism established by the elder Mitchell, and on which he based the theory that rheumatism of the joints was a spinal disease.

The interesting feature of this case, is the fact, that the left or opposite arm, at the end of ten months showed evidence of being affected by an injury originally inflicted upon the right axillary plexus. The quantitative electrical changes are here perceived. In the left arm I cannot approach the reactions of degeneration so prominently displayed by the right arm. The *neuro-muscular hyper-excitability* is here also perceived, though in a modified form. It cannot be brought into play by mere mechanical irritation, but if the hand is extended by a strong current, it remains in a cataleptic state of poise after removing the electrodes. It must be flexed by the operator in order to repeat the experiment of extension.

We have here then developed in a single member, exactly the same condition described by Charcot and Richer, as existing in the entire body during the lethargic stage of hypnotism in hysteria. In Charcot's and Richer's cases the Faradic current was used in order to fix the positions of certain groups of muscles and others remained inexcitable. Mitchell reports a number of cases, in which on injury of nerves of one member, the corresponding member became affected.

J. H. Corliss showed that in a case of left hemiplegia, the right arm afterwards became weak.

Charcot refers to instances of extension of shock of the nerve, where a nervous influence extended upward, involving the cord and causing motor and sensory disturbances in the opposite limb. In the present instance you may fairly suppose that the neuritis has extended to the cord.

Two symptoms remain to be noticed in a more extended manner. They are what I suppose to be *fibrous*

hyperplasia and the phenomena of *neuro-muscular hyper-excitability*. The usual disturbance following injury to nerves and neuritis is of course atrophy. The atrophy usually affects the muscles, and may involve various other tissues, viz. areolar tissue, skin, bones and connective tissue. The opposite condition of hyperplasia, especially of the connective tissue, is so rare that I have been able to obtain only a single reference to sustain it.

Weir Mitchell, referring to his case, says: "In generalized atrophic conditions of a limb, the connective tissue which formerly gave the skin its loose and soft feel, would seem to disappear quite as rapidly as the muscle, and in only a single instance have I seen a nerve wound give rise to a hypertrophic state of the connective tissue. Such a condition of sclerosis of the areolar tissues, is however, a rare incident to spinal myelitis. The case was as follows: A ball entered the left axilla. Very early in the case the first and second fingers and thumb became slightly enlarged without inflammatory action, and with slight darting pains. After the healing of the wound, these parts increased and became firm to the touch, and dark and purplish in tint. The lancinating pains became more severe. The index and second fingers were immovable, chiefly because of the size and stiffness. The enlargement affected principally the thumb, and first and second fingers. The tissues would not pit upon pressure.

Charcot in his study of the nutritive changes consequent upon lesions of the nerves makes no reference to the fact of hypertrophy of connective tissue. The case then in this respect ranks with Mitchell's as one of unique observation.

The *neuro muscular excitability* would by itself furnish material for a long essay. This condition is also of rare occurrence. It was novel to me as the result of injury to nerves when I first observed it in the present case. I have found complete reference to mechanical excitability, but no reference to local traumatism producing it. A local coördinating condition of the muscles represented by the nerve could be set up by mechanical irritation of the muscle. Even the simple mechanical excitability of muscles under wounds of nerves does not seem to be within the compass of this class of injuries to nerves occurring in Mitchell's first series of cases during the last civil war. Dr. Mitchell having stated that the faradic reaction may be entirely lost, continues them after a much longer time, perhaps weeks and months the same muscle may be moved more or less readily and traversed by a current of 20-40 galvanic cells; while it is also noticeable that mechanical irritation may influence the contractions long after the induced currents have ceased to possess any such power.

When we find a case answering to the condition here observed, we must be led to Charcot's examination into conditions, discovered by him to exist during the lethargic state of hypnotism and designated by him *neuromuscular hyper-excitability*, a term which I adopt here to represent the same phenomena in traumatism of nerves.

As is familiarly known, Charcot divides the hypnotic phenomena of hysteria into three stages: somnambulic, lethargic, and cataleptic. In such case a distinct kind of muscular contractions may be evoked according to the motions employed to rotate the muscle. In the somnambulic stage there are trifling cutaneous excitations. In the lethargic stage all the familiar contractions produced by localized faradization may be reproduced by simple mechanical excitation of the muscles. If, for instance, the end of a pen handle or

finger be placed upon the sternocleido mastoid muscle it contracts and draws the head to the opposite side. The biceps treated in the same manner flexes the arm and so on through each of the reactions pointed out by Duchenne and indicated by the motor points indicated by Ziemssen's chart. The form of contraction witnessed in the cataleptic stage is explained by the term itself. It is at once evident, then, that our patient presents the form of contracture witnessed in the lethargic stage of hypnotism. Charcot, to whom alone we can appeal for any information on the subject, considers the phenomena to be due to reflex action. In the last number of the *Archives Neurologies*, he comes to these conclusions:

First. The phenomenon of neuro-muscular excitability is the phenomenon of reflex action.

Secondly. The nature of its manifestations is due to special modifications in the patient of the nervous centres.

Third. The centripetal path of the reflex is other than that of cutaneous nervous sensation. According to this writer, the contracture is due not to the condition of the muscle itself, but rather to the passage inward of an excitation, either friction or pressure, from the periphery to the spinal centre whence proceeds the motor stimulus.

The facts of this case then are: Ascending neuritis, modification of activity of the spinal nerve centers of motion, muscular hyper-excitability not alone on the affected, but also on the opposite side of the body. We may easily suppose that by irradiation to other nuclear parts of the cord, the same phenomena might be effected in other portions of the muscular periphery. The case is instructive as an illustration of ascending neuritis. On no other reasonable hypothesis can we suppose that the opposite member became involved. We must conclude then that the condition of muscular neuro-excitability is not alone found in the condition of hysteria, but that it may exist as the result of ascending neuritis.

LECTURES.

REMOVAL OF FLOATING CARTILAGE—RE-AMPUTATION OF THE LEG.

CLINICAL REMARKS

BY

HENRY B. SANDS, M. D., Prof. of Practice of Surgery at College of Physicians and Surgeons, New York City.

CASE I.—The patient is a male, æt 19, single; occupation tailor. Last November he was struck on the right knee and afterwards had a synovitis which disappeared and returned. He was again struck on the same knee and set up a new inflammation, Dr. Conway discovered the presence of loose cartilage in the knee-joint some time ago. The patient applied for an operation recently at the hospital, but as the cartilage could not be definitely located, he was dismissed and asked to retain it in position when once detected. This was done and the cartilage has since been retained in place. It is situated on the inner aspect of the knee at its lower portion.

It does not seem certain to me what the relation is between the injury received and the disease. Of course it is possible that an injury may have chipped off a portion of bone or cartilage. It is more probable that this case conforms to the rule in which the cartilage

being present and being a pathological product entirely, causes the patient to become lame in consequence of its location between the articular surfaces of the knee-joint. At all events, an examination shows that there is a floating body in the knee-joint, which appears to be about $\frac{1}{2}$ – $\frac{3}{4}$ inches in length, possibly smaller. For we have to examine through a considerable thickness of soft parts. This body is movable and can be made to pass from one side to the other, and from one part of the joint to another. It is now altogether to one corner of the joint, where I hope to find it and remove it.

Floating cartilages are rare in any joint. They are perhaps more common in the knee than in any other part. Sometimes they consist of pure cartilage, sometimes of cartilage and bone, and sometimes they are of a fibrous structure. As a rule they seem to be pathological products developed from the synovial fringes which becoming hypertrophied form these tumors. These are sometimes sessile, but more often they are attached by means of a stem, which giving way causes the cartilage to become loose and then gives rise to the series of accidents to which the patient suffering from this is liable.

The disability which occurs in connection with floating cartilage is very great. The patient falls and stumbles. Repeated attacks of synovitis occur and they may lead to thickening of the membranes or stiffness of the joint.

The prognosis is not favorable as regards anything like a spontaneous cure. Occasionally the floating cartilage becomes fixed in some one of the recesses of the joint and gets out of harm's way, becoming fastened by a process of inflammation.

The only treatment is that of operation, which consists in the removal of the cartilage. This operation although small is important because we wish to preserve the integrity of the joint. At first the mortality was twenty per cent. The patients died of inflammation of the joint, and suppuration. Some cases required amputation while others lost their life from septicæmia or pyæmia. For a long time the operation was abandoned. It was afterwards revived in a modified form by Mr. Syme, who followed the example of a French surgeon. He made a subcutaneous operation, putting in a narrow-bladed knife and making a puncture of the skin, he forced the knife into the tissues between the capsule and the skin. This operation gave a good many successes. The operation has, however, come to be in favor since the use of antiseptics, of putting the finger into the joint. This can now be done without serious consequences. It is important to avoid meddling with the joint as far as can be, especially should syringing be avoided.

The operation may not be so easy as I have intimated, because the loose cartilage is not large and has a very great tendency to change its locality and to pass into a sequestered situation from which it is difficult to remove it.

I have caused the patient to bring the cartilage on the internal aspect of the joint underneath the skin where it is prominent.

Operation.—The patient was etherized and placed upon the table in dorsal decubitus. The knee was examined and the cartilage could not be located. It seems that the struggles of the patient during the administration of the ether had shifted the cartilage from its fixed position. However, after a few minutes active search the cartilage was detected under the finger, and brought to its original position, namely, to the inner inferior angle of the knee-joint. The limb

was then washed with a solution of carbolic acid, and an incision was made $\frac{3}{4}$ inch in length over the joint. This was carried through all the tissues and passed through the capsule. The cartilage was removed by the means of a blunt hook. It was found to have a sharp point, which looked as if it had been adherent, but this could not be, as it was extracted with the utmost facility. The joint was not wounded. The wound was united to the skin by cat gut sutures. A dressing of peet and iodoform was then applied to the wound, and outside of this was placed a large peet bag, over this a bandage with a solution of bi-chloride of mercury 1 to 100 was placed, and the limb was then kept quiet for several days. The carbolic acid employed was of the strength of one to twenty.

CASE II.—The patient coming in now, gentlemen, has undergone two operations already—one an amputation of the ankle-joint, and an amputation of the leg. He is a healthy looking man *æt.* 24. After the first operation—Syme's amputation—the man had secondary hemorrhage. He recovered from the second operation, but did not have a useful stump. This last operation was done on the 23d of February, and ever since then he has been crippled and the cicatrix is very tender. I have consented to the man's desire to perform the operation, as I am satisfied that it was my duty to acquiesce. I have had the artificial limb so altered as to bring the points of pressure high up so as to dissipate it over larger surfaces, but this has done no good, and he is prevented from pursuing his occupation. I think the best thing to do is to shorten the stump by removing the ends of the bones, or make a methodical amputation. I have never regretted making too long a flap, while a short flap is enough to bring the patient subsequent trouble. The last operation was performed with lateral flaps. The limb is now so wasted that it is quite possible that a circular operation will be necessary. If I make lateral flaps here I shall have to go down through a cicatrix.

Operation.—The patient being etherized, a circular incision was made involving the entire stump for a distance of two inches. The tissues were very dense and it was difficult to find one's way between superficial and deep fascia. The Esmarch bandage had been applied, and there was considerable spurting after its removal, when the tissues and bones had all been divided. This spurting was stopped partially by torsion and the application of ligatures to the bleeding vessels. The flaps were approximated with interrupted silver wire sutures next to the bone so as to prevent bagging, and near the ends of the flaps silk sutures were employed and a temporary dressing was applied to stop the hemorrhage.

CASE III.—The next patient is a laborer with a long sinus in his back. He is forty-six years old, and last August he noticed a tumor in the left iliac region about the size of an egg. This tumor gradually worked its way from the left iliac region back to the lumbar region on the same side. It was never tender but somewhat painful on pressure. When first admitted last August the tumor seemed to be hard. It did not fluctuate until March 3d when it discharged, although increasing in size. The patient was readmitted and the tumor was opened in two places and a Lister dressing applied. The source of pus could not then be determined. He applied to the dispensary a few days ago with the same two openings which looked like openings of fistulæ. There seems to be no tendency to heal, and I probed it and found no dead bone. The best thing to do is to make a new incision and explore. It may be a simple tubercular abscess.

A director was passed into the track of the wound and it passed from one opening to the other. Upon this director a long incision was made with a scalpel, thus exposing the entire sinus. There was plainly visible what is ordinarily called the "pyogenic membrane." This is a lining membrane consisting of layers of granulation which are employed in secreting pus and which fills the abscess. In old abscesses the sinus becomes lined with a true membrane which somewhat resembles a mucous membrane. These tracks have to be scraped as there is no tendency to heal. The cavities are always honey-combed, having little recesses which it is necessary ordinarily to divest of their lining membranes.

ENDOCARDITIS OCCURRING IN THE COURSE OF ACUTE ARTICULAR RHEUMATISM.

A CLINICAL LECTURE.

BY

AUSTIN FLINT, M.D.

Professor Practice of Medicine, Bellevue Hospital Medical College, etc. etc.

CASE I.—This patient, gentlemen, was admitted to the hospital a week ago. At that time he was suffering from a rheumatic attack in all his joints, accompanied with slight fever. These symptoms, however, promptly disappeared under the treatment which we adopt in this hospital, viz., a combination of salicylate of soda, with some alkali either sodium or potassium bicarbonate in dose of twenty grains each every two hours. The point I wish to dwell on here is the cardiac complication. This patient has at present a mitral systolic murmur. Now the question is, Does this murmur indicate that with this attack he had endocarditis? Endocarditis is usually developed with very few marked local symptoms. The patient may have no pain; sometimes, however, there is a certain amount of pain. We cannot infer from the amount of fever that accompanies rheumatism that the patient has an endocarditis. If we find a mitral systolic murmur developed under our observation; thus, if to-day we find that the patient is free from mitral murmur and the next day the murmur becomes apparent, then we infer that the patient has had an endocarditis.

This patient has had previous attacks of rheumatism, —one four years ago and another ten years ago. He has also felt dyspnoea on exertion previous to this attack of rheumatism. From this we would be led to suppose, as we have not examined his heart until to-day, that he has had a previous endocarditis, occasioned either four or ten years ago by one of the earlier attacks of rheumatism. If this is so, we would look for enlargement of the heart. The heart is not enlarged. Now if this patient has had endocarditis previous to this attack, then there have not yet resulted sufficient lesions of the valves to cause an enlargement of the heart.

It is a mooted question whether we ever get a functional mitral systolic murmur. However this be, the murmur that persists here denotes a lesion; but the lesion may be different in its character. There may be a simple roughness of the valve resulting in a slight obstruction; or there may be a little regurgitation, which is of no consequence and not sufficient to lead to any enlargement of the heart. In this case I also get a murmur at the base. I think we get a systolic

murmur at the base in cases of rheumatism very generally, especially in women. This we regard as a blood or inorganic murmur. If the murmur is transmitted to the left we must consider it evidence that it is organic. If, however, the murmur persists at the apex but is not transmitted to the left, then it is not organic. This patient then has probably had an endocarditis, which has left a little roughness on the mitral valve, with no interference with the circulation.

CASE II.—This patient, a female, has also had an attack of rheumatism, from which she is convalescing. She has had, like the first case, a previous attack. When rheumatism once occurs, it recurs after various occasions of more or less interval. This patient came into the hospital the day before yesterday. When she entered the hospital every joint was affected, and there was a certain amount of fever. The point I wish to present here is this: I listened to the patient's heart when she entered the hospital, to perceive whether there existed a mitral murmur. I failed to discover a murmur. I did not see the patient yesterday, but to-day I listened, and I found a mitral murmur, feeble, and with the first sound of the heart not transmitted. This is not a mitral regurgitant murmur strictly speaking, but what we may distinguish as a mitral systolic murmur without regurgitation or an intra-ventricular murmur. Unless, therefore, I overlooked a murmur the day before yesterday, we may consider that there has been some endocardial inflammation developed in this case after her admission to the hospital. With the development of this endocarditis, the affection of the joints has diminished and almost disappeared. She was put at once upon the salicylate of soda treatment, and took several doses of the medicine, when her stomach became disturbed. She was taken with vomiting, so that she has had no treatment yesterday.

This case is interesting with regard to the point presented, viz., the evidence of the development of the endocarditis. At present, beyond the liability of accident, which is exceedingly rare, that is lymph or fibrin becoming detached from the valve and carried into the general circulation constituting an embolus, which may block an artery in the brain or elsewhere, this complication of endocarditis is of no immediate danger. The lesion of the endocarditis is the most important element in acute articular rheumatism; because, in a certain proportion of cases, sooner or later, it leads to valvular changes, which become serious. The commencement of those changes, which have resulted in lesions, giving rise first to hypertrophy, and secondly to dilatation is in acute articular rheumatism. It is therefore important in the treatment of this disease to place the patient upon the use of an alkali in sufficient quantity to render the urine alkaline as soon as possible. This can be done in twenty-four hours. Facts have abundantly proved that by bringing the system thus under the influence of an alkali the heart is in a great measure protected against these inflammatory actions. After you have rendered the urine alkaline by drachm doses of bicarbonate of soda or potassium every two or three hours, you may diminish the quantity of alkali.

CLINICAL REMARKS ON BONCHITIS AND LEAD POISONING—HEART DISEASE—CANCER OF THE STOMACH, AND CHRONIC GASTRITIS.

BY

FRANCIS DELAFIELD, M. D.,

Professor of Pathology and Practice of Medicine, College of Physicians and Surgeons, New York.

CASE I. *Chronic Bronchitis and Lead Poisoning*—This man complains a great deal of pain in the side, has had pleurisy three years ago, and at present he has some cough and loss of appetite.

Examination shows good pulmonary resonance on both sides. Expiration is a little prolonged on both sides, more on the right than on the left. Over the lower part of the left lung there is a subcrepitant râle with inspiration. The heart seems to be perfectly healthy. We have then a history of pleurisy with effusion. At the present time the patient is in good general condition, though he complains of not feeling well and loss of appetite. He has pain in the left side, low down, and a general feeling of dullness and indisposition to work. He has a largely developed thorax, without retraction on either side.

Diagnosis—There is pleuritic thickening with pulmonary consolidation or adhesions between the pulmonary and costal pleura. The man is suffering, however, from two separate conditions, old pleurisy resulting in a certain amount of adhesion on the left side, and emphysema with bronchitis. Besides, he also suffers from lead poisoning, as evidenced by the bluish line around the gums. The pain on the left side is owing to the exacerbation of the pleurisy.

The treatment we will try will be the administration of twenty drops of dilute sulphuric acid four times a day.

CASE II. *Heart Disease and Congestion of the Abdominal Viscera*—Male, complains of heart trouble, has been sick since last April, suffering from shortness of breath and heavy feeling in the region of the stomach. He has had a cough since five or six years of age, resulting from scarlet fever.

There is very forcible pulsation of a diffuse character over the region of the heart, the apex is considerably further to the left than normal. The heart's action is irregular. A murmur is heard with the first sound of the heart, loudest at the apex, and transmitted to the left. The edge of the liver is considerably lower than normal, there is little œdema of the anterior abdominal wall, perhaps a little fluid in the abdominal cavity. I detect a few râles over both lungs behind, and the resonance on the left side is not as good as on the right.

Diagnosis—This patient suffers from organic disease of the heart, the heart is increased in size, and he has an insufficient mitral valve. The enlargement of the heart is principally due to dilatation, and there is little hypertrophy. The patient vomits all food taken, has had almost constant dropsy for several months, and is often unnaturally yellow. The urine passed is of small quantity and contains a little albumen. There is, moreover, congestion of the lungs, stomach and liver. The congestion of the liver is evidenced by the increased size of that viscus. The kidneys are also congested. This is manifested by the scanty high-colored urine, and the presence of albumen. There is also some congestion of the veins and subcutaneous tissue throughout the body from the general dropsy.

The duodenitis here accounts for the moderate jaundice.

Treatment—The treatment should be as follows: Let the patient's food be principally milk, to which is added some bicarbonate of soda and oxalate of cerium. Counter irritation over the region of the stomach should be employed, or electricity used to stop the vomiting. The patient should be kept quiet and in a recumbent position. An improved condition of the heart's action cannot be well secured by the ordinary remedies. Iodide of potassium, and tincture of digitalis are the proper medicines for him after a time.

CASE III. Cancer of the Stomach—This patient complains of stomach disease, he feels sick when he stands or walks. He is thirty-two years of age, and has now been troubled for the past five months with constant vomiting and an uncomfortable feeling about the stomach. Has had a diarrhoea which has persisted up to two weeks ago, and he has lost flesh and strength.

Examination shows a tumor occupying the middle and right part of the epigastric region. Another tumor, or part of the tumor mentioned, is detached in the right hypogastric region, these swellings move with the movements of the diaphragm.

Diagnosis—The diagnosis here lies between cancer of the stomach and liver. Cancer of the stomach is more common than cancer of the liver. It is less probably a cancer of the transverse colon, although the diarrhoea looks towards carcinoma of the colon.

CASE IV. Chronic Gastritis and Dilatation of the Stomach—This man is thirty years old, he complains of a pain low down in the epigastrium, which was intermittent at first, but lately has been constantly increasing in frequency and severity. At present it is so severe that he is prevented from attending to his work, and he has lost flesh and strength.

Palpation over the region of the stomach gives a peculiar splashing sound, which indicates that the stomach is larger than normal, and contains fluid.

Diagnosis—I imagine that this is a case of chronic gastritis with dilatation of the stomach, and without any stenosis at the pylorus. His bowels continue regular, and there is no vomiting. If this case is left untreated the pain would continue, and before long there would be vomiting.

Treatment—The treatment consists in the use of the stomach pump, thus emptying the stomach artificially and relieving the irritation.

BOOK NOTICES.

A Text Book of the Diseases of the Ear and adjacent Organs; by Dr. Adam Politzer, Imperial Royal Professor of aural Therapeutics, in the University of Vienna, Chief of the Imperial Royal University Clinic for Diseases of the Ear in the General Hospital, etc. Translated and Edited by James Patterson Cassells, M. D., M. R. C. S., Eng. Aural Surgeon to and Lecturer on Aural Surgery at the Glasgow Hospital and Dispensary for Diseases of the Ear, with two hundred and fifty-seven original illustrations—Published by Henry C. Lea's, Son & Co., Philadelphia, 1883.

This treatise of eight hundred pages comprises a translation of Dr. Politzer's work, which was published at Stuttgart (1878-82) in two volumes.

It treats of the whole science of otology in the fullest and most exhaustive manner. Beginning with the anatomy and physiology of the Ear, it takes up in succession the subjects of "Diseases of the Sound Conducting Ap-

paratus"—"Diseases of the middle Ear"—"Diseases of the Membrana Tympani"—"Diseases of the Tympanic Cavity"—"Diseases of the Naso-Pharynx"—"Adhesive Affections of the middle Ear"—"Purulent Inflammations of the middle Ear"—"Diseases of the Mastoid Process"—"Diseases of the External Ear"—"Ear Disease, and Life Assurance"—"Anatomy of the Internal Ear"—"Physiology of the Internal Ear"—"Diseases of the Internal Ear"—"Diseases of the Labyrinth"—"Diseases of the Auditory Nerve"—"Injuries of the Internal Ear"—"Cerebral Disturbances of Hearing"—"Malformations of the Ear"—"Deaf-mutism"—"Hearing Instruments for the Deaf." To this is added an appendix with copious formulary and a comprehensive index.

From this bare enumeration of the contents it will be seen that little or nothing relating to diseases of the ear has been left unconsidered.

Otologists justly regard this elaborate and painstaking exposition of the science of otology as of incalculable worth, a storehouse of their special lore, which may always be relied upon to furnish the facts of their science.

To those who were unable to enjoy the advantages of such a work in the original, this very excellent translation of the eminent English aural surgeon, will serve not only to gratify their literary desire for this special kind of pabulum, but will supply the place of almost all the literature extant treating of this subject.

Handbook of the Diagnosis and Treatment of Diseases of the Throat, Nose, and Naso-Pharynx—By Carl Seiler, M. D., Lecturer on Laryngology at the University of Pennsylvania; Chief of the Throat Dispensary at the University Hospital; First Vice-President of the American Laryngological Association; Secretary of the section on Laryngology, etc., of the American Association; Curator of the Pathological Society, etc., etc.; Second Edition thoroughly revised and greatly Enlarged—with seventy-seven illustrations—Published by Henry C. Lea's Son & Co., Philadelphia, 1883.

A practical book, designed for reference. Its aim, viz., "to serve as a guide to students of Laryngoscopy in acquiring the skill requisite to the successful diagnosis and treatment of diseases of the larynx and naso-pharynx," is a laudable one, and better than more elaborate works, it is enabled by its clearness and freedom from theoretical myths to fulfill it. In this new edition some important additions have been made to the text, notably to that of the chapter on Diseases of the Nasal Cavities, and illustrations have been added which are for the most part unimportant. One of the new features of the book is a sketch of a Case Record-sheet for keeping a complete record of cases.

HOSPITAL REPORTS.

NEW YORK HOSPITAL, NEW YORK.

COMPOUND COMMINUTED FRACTURE OF TIBIA—AMPUTATION—PHLEGMONOUS ERYSIPELAS—PYÆMIA.

SERVICE OF

GEO. A. PETERS, M. D.

A. L., æt. 38, married, driver, admitted September 18th. Was run over by a street car, sustaining a crush of left leg. Brought to hospital in an ambulance.

On admission—General condition fair. Suffering from shock. Patient was intoxicated at time of the accident.

Examination—Shows a compound comminuted fracture of left tibia. Fracture extends from just below the tuberosity of the tibia to lower third. Extensive comminution longitudinally. Fibula, as far as can be ascertained, is uninjured. The soft parts are extensively lacerated. One wound over the crest of the tibia in middle third is five inches in length, exposing the comminuted pieces of bone. Another situated just external to the tuberosity leads down into an extensive pocket into which the finger passes as far as it can reach on the outer side of leg along the fibula, which latter is not bared of periosteum. On outer side of middle third is another lacerated wound two inches in length connecting with the other. There is much contusion of the soft parts. The main arteries can be felt pulsating. Considerable hemorrhage has occurred. At 6 p. m., patient has recovered from shock; pulse 72, temperature $99\frac{1}{2}^{\circ}$. Submits to amputation.

Amputation at knee joint, Smith's operation was done at 8.30 P.M. Ether. Esmarch's bandage, tourniquet. Parts washed with carbolic acid. Flap dissected up, knee joint opened, leg then forcibly abducted while internal lateral and crucial ligaments are divided, remaining tissues divided, flaps found to be ample. Arteries tied with catgut ligature, flaps brought together with silk sutures, drainage tube inserted and parts washed with carbolic acid, iodoform gauze laid over the stump and full Lister dressing applied. Recovery from ether good. Passed a good night.

Sept. 19.—P. 78, R. 20, T. 98.6° . Patient comfortable, no pain, shock from operation very slight.

Sept. 21.—Sutures and tube removed. No union. Flaps look as if they would slough. No accumulation of discharge. Simple carbolic dressing and Tr. ferri-chlor. 3 i t.i.d.

Sept. 22.—Had a chill of short duration. Temperature rose to 104° , pulse 124. Ordered salicin, grs. xx. every three hours. Patient kept under the influence of morphia. Appetite has remained fair, though strength has much decreased. Bowels moved by cathartics.

Sept. 23.—Chill at 4 A.M. T. 105.3° , P. 120. A dark red blush is apparent on outside of thigh, well marked and with sharply defined edges.

Sept. 24.—This A.M. flaps are almost black, and sensation in them entirely gone. The dead tissue was cut away with scissors. Redness of the thigh disappearing. Almost no discharge from wound, which looks dry and exposes the condyles dark and dry. Pocketing of pus has taken place on posterior and outer surface for some distance. Counter opening made two inches above the outer condyle, and pus expressed and tube run upward $2\frac{1}{2}$ inches. Ordered salicin and stimulants as before.

Sept. 24.—Patient delirious, passing into a typhoid condition. T. 101.4° . This p.m. it was found that slight hemorrhage had occurred, compresses removed and bleeding found to come from neighborhood of popliteal artery, which could be seen pulsating. Compress applied to bleeding spot. Patient is taking very little nourishment. Ordered S. V. G. beef tea and milk $\bar{a} \bar{a} \bar{z}$ ss by enema.

Sept. 25.—Patient has passed a bad night. Is rapidly failing. P. 128 and extremely feeble. T. at 9 A.M. 103.4° . Is delirious. No recurrence of hemorrhage. Enema not retained. Died at 11.45 A.M.

ABSTRACTS AND SELECTIONS.

CANNABIS; A VALUABLE REMEDY IN MENORRHAGIA.—MR. J. BROWN, of Bacup, observes:

"Indian hemp has been vaunted as an anodyne and hypnotic, having the good qualities of opium without its evils. In dysmenorrhœa and insomnia it has not proved of much benefit. The drug has almost invariably produced some marked physiological effect even in small doses. Text-books give the doses as ten minims and upwards, but five minims is the largest dose that should be given at first. If bought from a good house, the drug is not inert or unreliable. A drug having such marked physiological action ought to have a specific use as a therapeutic agent. Indian hemp has such specific use in menorrhagia—there is no medicine which has given such good results; for this reason, it ought to take the first place as a remedy in menorrhagia, then bromide of potassium and other drugs. The *modus operandi* I cannot explain, unless it be that it diverts a large proportion of blood to the brain, and lessens the muscular force of the heart. A few doses are sufficient; the following is the prescription: *B. tincturæ cannabis indicæ Mxxx; pulveris tragac. co. 3j; spiritus chlorof. 3j; aquam ad 3ij.* One ounce every three hours. Four years ago I was called to see Mrs. W., aged 40, multipara. She had suffered from menorrhagia for several months. Her medical attendant had tried the ordinary remedies without success. Indian hemp was given as above. Its action was speedy and certain. Only one bottle was taken. She was afterwards treated for anæmia, due to loss of blood. Twelve months after this my patient sent for a bottle of the "green medicine." I learnt afterwards that she had sent this medicine to a lady friend, who had been unsuccessfully treated by another medical man for several months for the same complaint. It proved equally successful. The failures are so few, that I venture to call it a specific in menorrhagia. The drug deserves a trial. It may occasionally fail; this, however, is not to be wondered at in a complaint due to so many different causes, and associated with anæmia and other cases of plethora."

Robert Batho, M.D., M.R.C.P., Castletown, Isle of Man, writes in reference to the same subject: "Considerable experience of its employment in menorrhagia, more especially in India, has convinced me that it is, in that country at all events, one of the most reliable means at our disposal. I feel inclined to go further, and state that it is *par excellence* the remedy for that condition, which unfortunately, is very frequent in India.

I have ordered it, not once, but repeatedly in such cases, and always with satisfactory results. The form used has been the tincture, and the dose ten to twenty minims, repeated once or twice in the twenty-four hours. It is so certain in its power of controlling menorrhagia, that it is a valuable aid to diagnosis in cases where it is uncertain whether an early abortion may or may not have occurred. Over the hemorrhage attending the latter condition, it appears to exercise but little force. I can recall one case in my practice in India, where my patient had lost profusely at each period for years, until the tincture was ordered; subsequently, by commencing its use, as a matter of routine, at the commencement of each flow, the amount was reduced to the ordinary limits, with corresponding benefit to the general health. Neither in this, nor in any other in-

stance in which I prescribed the drug, were any disagreeable physiological effects observed.

I could say a few words in its favor, as to its action in allaying irritative cough, but I prefer confining myself to a point on which experience has left me no room for doubt."—*British Medical Journal*.

ON THE USE ANÆSTHETICS DURING LABOR.—By THOMAS D. SAVILL, M. D.

In a Paper recently read before the East Surrey District of the South Eastern Branch of the British Medical Association, Dr. Savill indicates what he believes to be the main precautions, the observations of which would render the use of chloroform perfectly justifiable. 1.—There are certain women who have a tendency to flood at every confinement, and others in whom there seems an already too great relaxation of fibre—weak anæmic females in their eighth or tenth confinement; and to these it would be inadvisable to give chloroform, except for necessity. Happily, it is not these women who suffer the most pain, but rather those strong healthy primiparæ whose pelves and general build approximate to the masculine type. 2.—We should not give it when labor is complicated with severe vomiting, or with acute heart or lung-disease, unless there be imperative call for it. 3.—It should not be given to the full extent, except for the operation, convulsions, or spasm of the cervix; and then it is most necessary that one person should devote his entire attention to it. 4.—The inhalation should be stopped directly we find the pulse becoming very weak, or the respiration irregular. 5.—Anything which makes us suspect a fatty or enfeebled cardiac wall should make us cautious in the use of chloroform. Here, as in cases other than those of labor, it is not the most extensive valvular disease (so long as it be attended by compensating hypertrophy), but the atrophied or degenerate wall that constitutes the source of danger. Unfortunately, the signs of these conditions are subtle and uncertain. Fatty heart may be suspected by an exceedingly feeble cardiac impulse, combined with an almost inaudible first sound; or attacks of dyspnoea, vertigo, and syncope, in the absence of anæmia, or valvular lesion; or the copious deposit of fat in other parts of the body, and the occurrence of dropsy without adequate cause. A dilated heart may be suspected by increased area of præcordial dullness, combined with epigastric and venous pulsation, and a want of correspondence between the violence of the cardiac impulse and the strength of the pulse. Pericardial adhesions also form a great source of danger. They may be suspected when the heart's apex is fixed above its normal position, and does not shift with respiration; or when there is a depression instead of protrusion of intercostal spaces over the position of the apex, giving a wavy character to the cardiac impulse. 6.—In all cases, we should take extra care to prevent the occurrence of hemorrhage after birth: by giving a full dose of ergot when the head reaches the perineum; by ceasing the chloroform immediately it is born; and by rousing the patient from her lethargy as soon as possible.—*British Medical Journal*.

A SPINA BIFIDA PRESENTATION.

MR. CHARLES PENRUDDOCK, M. R. C. S., of Winchcombe, writes:

On April 15, 1883, I was called by the midwife to attend Mrs. B., who was in labor with her fourth child. Labor commenced at 2 P. M. on the previous day, the

pains had been very severe until 10 P. M., but after that time became few and far between, and of very little force. When I saw Mrs. B., the pains appeared to be moderately strong but of short duration. There had been nothing abnormal in her previous confinements. On making an examination it was with great difficulty that I could reach the os, which I found nearly fully dilated; its margins were rather flaccid, and during a "pain" the presenting portion of the child exerted no pressure on them whatever.

From what I could feel of the presentation, I at first thought I had a face to deal with, there being something which very closely resembled the well defined margins of the orbits, beyond this I thought I felt the nose, and still, a little further on, my fingers slipped into what I at once took to be mouth, only it was somewhat jagged inside as though it were lined with fully developed teeth; I then came across a hand. I passed my hand into the vagina to make a more thorough examination, satisfied myself it was not the face, and at the same time could feel the unmistakable smooth outline of a child's hip, but owing to the above irregularities I was unable to tell clearly what the arrangement of parts could be, and decided to call in my friend and colleague, Mr. William Cox. We came to the conclusion that it was no face, but the lumbar region that presented, and therefore decided to turn. This was accomplished in the usual way, and the feet brought down, only slight difficulty being experienced until the head was being delivered, but with my left forefinger in the child's mouth and my right hand on its occiput, this was soon overcome. The placenta soon followed, and the mother made a good and rapid recovery. The child, a female, appeared to have been dead about twelve hours, was fully developed. The head was somewhat hydrocephalic. On further examining the body we found the cause of our not being able to clearly diagnose the presentation, to be a large spina bifida situated in the middle of the lumbar region, and very much resembling to the touch the part for which I had at first mistaken. This case struck me as being very interesting in showing how a diseased condition of a fœtus may confound the diagnosis of the accoucheur.—*British Medical Journal*.

READY METHOD OF INTRAVENOUS INJECTION.

It appears certain that the intravenous injection of saline fluids in cases of acute general anæmia has a great future before it. One obstacle to the more extended employment of this eminently conservative operation has been the absence of suitable and inexpensive apparatus. It is true that we have had quite recently brought before our notice apparatus well adapted for the purpose, and of moderate price. It is still uncertain, however, whether any great number of practitioners will care to spend even so small a sum as a couple of guineas on the purchase of an instrument they may never have an opportunity of using. Under these circumstances it will, perhaps, be interesting to learn how intravenous injection has been performed in a case of emergency, in which no specially designed apparatus was at hand. Such a case occurred in the practice of Dr. L. Szuman, of Thorn, and is reported in the last number of the *Berliner Klinische Wochenschrift*: The patient was a youth, 15 years of age, who had met with an accident, resulting in serious hemorrhage, likely to prove fatal. An apparatus for intravenous injection was extemporized on the spot,

and the injection made, with a happy result. A piece of fine drainage tubing, not perforated, was attached to the nozzle of an irrigator (a flat old-fashioned infant's feeding-bottle would answer the purpose very well.) The solution employed was—water 1,000 grm., table salt 6 grm., and bicarbonate of soda 1 grm. The left median vein was exposed, separated by passing under it two hollow sounds, a trocar $1\frac{1}{4}$ mm. in diameter was then introduced until the point of the stillette was well in the vein, when the stillette was withdrawn a little. The canula was then pushed in to a depth of about $1\frac{1}{2}$ ctm. A ligature was then applied round the vein over the canula, the stillette withdrawn, and the tubing drawn over the free end of the canula. The irrigator was then raised about 1 metre in height. When the solution flowed into the vein, 760 grms. were employed. After the injection was completed the vein was ligatured on the peripheral side of the puncture. The operator is to be congratulated on his ability to make use of such apparatus as was at his command, and by means of it tide his patient over a danger that would most likely have proved fatal but for his readiness in thus adapting simple means to an unusual purpose. Let us hope that the lesson thus thought may not be taught in vain.—*Med. Press.*

MEDICAL NEWS AND NOTES.

The Medicine Lay.—The following ingenious trick is described as having been frequently practiced in London. It is known as the "bottle of medicine lay." A healthy vagrant bandages his arm carefully, carries a bottle of water under his coat, collides with a charitable looking gentleman, drops the bottle with a crash, and attracts a crowd by bemoaning his broken-armed, medicineless, miserable condition. Despite warnings, several of these enterprising persons have been carrying on a profitable business and littering the streets with broken glass for some time, until one of them rashly lost his medicine twice in the presence of the same gentleman, whose charitable aspect so far belied him that, on the second occasion, he called in the police.—*N. Y. Medical Record.*

Poisonous Stockings.—In a communication to *The Lancet*, Dr. Woodland states that, having had his attention directed to a number of cases involving great irritation to the feet and legs, causing small pustules to arise and the skin to subsequently exfoliate, and suspicion being fastened upon red stockings which the patient wore, he carefully analyzed a number of the hose, to ascertain the precise nature of the difficulty. He found a tin salt which is used as a mordant in fixing the dye. He succeeded in obtaining as much as twenty-two and three-tenths grains of this metal in the form of the dioxide; and, as each time the articles are washed the salt in question is of course rendered more easily soluble, the result is that the acid excretions from the feet attack the tin oxide, and an irritating fluid is formed.

Death from the Bite of a Horse.—At Airdrie a man named Torrance, the chief of the horse-drivers at Monkland Iron Works, was recently bitten in the arm by a horse so severely that he died from its effects.

The Spread of Contagion by Dead Bodies.—The Boston Board of Health (*Boston Medical and Surgical Journal* May 10) has recently issued a regulation

that bodies of all persons who have died of small-pox, scarlet fever, diphtheria, or typhus fever must immediately be wrapped in a sheet, saturated with a solution (10 per cent.) of chloride of zinc, and placed in an absolutely tight coffin, which is not to be re-opened. With a similar view, a bill has just been passed by the Legislature of Massachusetts, at the request of some railway companies. The bill forbids the transportation through the State of bodies dead of certain contagious disorders, unless they have been so incased and prepared as to preclude any danger of the communication of these diseases through their agency. The diseases named in the bill are the same as those enumerated in the regulation above referred to, save that "typhus" is replaced by "typhoid."

Malaria in Italy.—The Italian Ministry of War has had prepared for the use of the military authorities a statistical map showing the extension and relative intensity of malaria throughout the peninsula. This map has been compiled from an exhaustive series of sanitary observations that have been carried on for years in all the provinces of the kingdom. Italy is divided into sixty-nine provinces, of which only six are completely free from this scourge, while it is felt with great severity in twenty-one. It is estimated that 40,000 men, or more than ten per cent. of the army, are annually victims, many fatally, to malaria; and the annual cost of special hospital arrangements to meet this amounts to over 10,000,000 francs. The general damage to the whole population from the ravages of this plague must be very great, if we remember that it strikes down hundreds of thousands of working men at the most industrious period of their lives, and that it is the tangible cause why many districts are allowed to remain barren and uncultivated. It is noteworthy that malaria seems to have increased both in extent and intensity with the development of railways. This is attributed to the large excavations which are allowed to remain unfilled, becoming in time the seats of stagnant pools or marshes. There are some of the Italian lines which have acquired the reputation of being permanent homes of malarial fever, so that the strongest constitutions cannot resist its continuous attacks. Hence there is great difficulty in securing the supply of personal service necessary to fill the gaps that are being perpetually made by this insidious disease.

Yellow Fever.—Dr. Domingos Freire of Rio de Janeiro has recently reported experiments in which he has communicated yellow fever to fowls and guinea-pigs, primarily by injection of blood from the heart of a deceased patient, afterwards by transmission from one animal to another, and also by confinement of a guinea-pig for five days over earth from the grave of a yellow-fever patient buried a year before. In consequence of his representations of the great peril created to public health by the inhumation of persons dead of yellow-fever, the Minister of the Empire has, according to the *Anglo-Brazilian Times*, ordered the Director of Public Works to proceed to the erection of a furnace at Jurujuba, for the purpose of cremating the bodies of those who die there of yellow fever in the hospital, in whose neighborhood, in fact, yellow fever has now appeared among the local population.

The Chloral Habit.—The largest class of victims of the chloral habit are men who lead sedentary lives and who from temperament and the nature of their work are peculiarly liable to suffer from sleeplessness. One of the most notable examples of the baneful effects of

the chloral habit was Dante Gabriel Rossetti, who, during the latter years of his life was accustomed to take enormous doses, reaching a total of nearly 180 grains daily. For many years he took chloral regularly, at first in small quantities, but gradually increased the dose until his power of resistance was gone. His life was darkened by a power he fought against in vain. His latter days were spent in solitude. He became a recluse and a hypochondriac, filled with groundless fears for himself, cherishing unfounded suspicions against his best friends and admirers. Dr. Maudsley, the great English alienist, stigmatizes chloral as "chrysalized hell" and condemns its use, even in disease, except to tide over some pressing emergency; and there is certainly an increasing reluctance on the part of physicians to prescribe chloral except in exceptional cases.

Unlike opium there are, as a rule, no unpleasant effect, no reaction following the use of chloral. It simply produces perfect sleep, or the best possible imitation of dreamless rest, with no headache or sickness as a reminder that the slumber has been purchased and the debt must be paid for. It is paid later on and the interest demanded is health, hope and often life itself.

Thought Reading.—Mr. Bishop's Experiment in the matter of His Wager With Mr. Labouchère. The *Pall Mall Gazette* gives the following report of the séance given by Mr. Bishop, the thought reader, at the St. James Hall, London. The easy chair set apart for Mr. Labouchère was unoccupied. The £1,000 promised was not tabled. But the experiment could be tried in Mr. Labouchère's absence, and Mr. Bishop was willing to stake his £100 with no other set off than the promise, willingly given, that the audience would demand that if he guessed the number aright Mr. Labouchère should hand over the £1,000 to the Victoria Hospital for Children. Mr. Charles Russell here introduced a diversion which kept the meeting in an uproar for nearly an hour. He sent word from the body of the hall—for he had refused to join the committee—that he had enclosed a five-pound note in an envelope and given it into the keeping of Professor Ray Lankester, who was also in the audience and who alone knew its number. He challenged Mr. Bishop to read in the mind of Mr. Ray Lankester the number of that note. If successful the note should go to the hospital. Mr. Waddy asked Mr. Bishop if he accepted the challenge. Mr. Bishop demurred. He had experimented before with Professor Lankester and found him a hard subject. The chances, he evidently seemed to think, were ten to one against his success with Mr. Lankester. To give him a fair chance he thought he ought to try with some one with whom he had not experimented before. He had, for instance, experimented with Mr. Waddy, and if he were selected as medium the chances were ten to one that he would be successful. It would be fairer to reject all whose capacity for being read had been tested beforehand and confine the experiment to a new subject, to be freely selected by the audience. Professor Lankester did not deny the reasonable nature of this suggestion, but a large proportion of the audience roared their disapproval. A heated and violent wrangle ensued, in the course of which Mr. Bishop was freely denounced as a shuffler.

THE MEDIUM.

At last an old gentleman with stentorian lungs proposed that the chairman should nominate a medium.

Mr. Lane Fox was suggested and negatived. A Mr. Lees was also rejected; and at last, amid great cheering, Colonel Statham, of the Twentieth Lancashire Rifle Volunteers, consented to submit to the experiment. A fruitless attempt was made to induce Dr. Lankester to impart the number of Mr. Russell's note to Colonel Statham for the purpose of the experiment, and then Colonel Trench, to whose high character the Hon. Edward Stanhope bore emphatic testimony, and who declared that he had never seen either Mr. Bishop or Colonel Statham before, produced a five pound note, the number of which he did not know, and handed it to the chairman. A large blackboard was then introduced, on which Mr. Bishop was to write the as yet unknown number of the note. In presence of all the audience, closely scrutinized by the committee and the chairman, while standing at some yards' distance from Mr. Bishop, Colonel Statham unfolded the note far enough to master its number. No one else could see it, nor did any one else in the hall know it but himself. Mr. Bishop then took his stand beside Colonel Statham and drew on the blackboard a parallelogram, which he divided into five spaces, one for each number of the note. He then blindfolded himself, and, grasping a piece of chalk, began to "read" the mind of his companion.

THE READING.

He shook all over, his right hand raised above his head quivered violently; he slightly touched Colonel Statham once for a second, with the tip of his finger, and then, without more than a few seconds' delay, he began to chalk on the board as follows:—

6 | 6 | 8 | 9 | 4

When he reached the last figure he hesitated for a moment, clutched Colonel Statham's hand and then wrote down "4." No one who saw the impassive countenance of the volunteer colonel could tell whether Mr. Bishop had succeeded or failed. "I have two guesses," he said, "by the terms of Mr. Labouchère's challenge. Have I read the number rightly?" Colonel Statham opened the note, glanced at it, and then handed it to the chairman. Mr. Bishop had won his wager. The numbers were right, and the meeting burst out into a roar of enthusiastic cheering, which was again and again renewed. Outside a great crowd was waiting to see the balloon ascent which was to announce the success or failure of the test. As it mounted in the air, displaying not the "lurid red" color of failure, but the bright light typical of success, the crowd cheered lustily. Inside the hall, when a moment's silence had been secured, Mr. Bishop said:—"I appeal to this audience of three thousand Englishmen to demand of Mr. Henry Labouchère that he shall hand over to the Victoria Hospital at Chelsea the £1,000 he offered to stake that I could not read the note. I have met his challenge on every point. Will you demand the money?" A great shout of assent, followed by long and continued cheering, mingled with a few cries of "No," brought the meeting to a close. On questioning Colonel Statham afterward, he said that when Mr. Bishop had reached the last figure he (Colonel Statham) forgot whether it was 4 or 0. It was when he was trying to recall the figure that Mr. Bishop hesitated and grasped his hand. He then decided for the 4, which Mr. Bishop then wrote down.

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EIGHTH CONVERSATION BETWEEN DRS. WARREN AND PUTNAM.

Dr. Warren.—A tree is known by its fruit. What are the fruits which you can justly claim as having been borne by the code? I have been looking for some time, and especially since we began to talk upon this subject, but I am unable to see any valuable results which can be legitimately ascribed to the code.

Dr. Putnam.—In what direction are you looking?

Dr. Warren.—In the direction of the profession, and in the direction of the people.

Dr. Putnam.—And you see nothing?

Dr. Warren.—Nothing that indicates that the code has exerted any healthful influence.

Dr. Putnam.—What did you expect to see, Doctor?

Dr. Warren.—I hoped to see improvement in both directions; but according to your own statements, young men continue to press their way into the medical profession imperfectly qualified, and the people are given over almost wholly to quackery. If the code has had any effect in matters of this sort, it seems to have been a bad effect.

Dr. Putnam.—A man must have a very wide range of vision who can look over the medical horizon for a space of forty years, and estimate correctly the losses and gains for that period of time; and the same would be true of any other public question of equal breadth and importance. Especially is it difficult through so long a period to trace back results to their proper causes. Open and secret violations of the laws continue to exist; men steal, cheat, swear falsely, gamble and commit murder daily, in spite of the laws; and one would find it difficult to say what causes have operated to produce this state of things. Yet one thing is certain: no one would ever think of ascribing

it to the existence of laws; nor indeed would any one doubt that the laws have had a restraining influence, even if it could be shown that matters in these regards were worse than before laws were enacted.

Instead of attributing the general moral decadence to the laws, some other explanation would be sought, such as the changed and peculiar condition in which the people live; or to the opposing influence of certain other powerful agencies which would probably overwhelm us, if their force were not in some measure broken by existing laws.

I will ask you now to confine your attention for a moment exclusively to the progress of medicine in this country; and to consider especially its progress during the last forty years. You say young men continue to find their way into the ranks of the profession imperfectly qualified; but I must remind you again that the regulation of this matter is not within the scope of the purposes of the code, and therefore the code is in no sense responsible for this failure. This evil will continue, I have sought to convince you, until medical colleges are established upon a basis of pecuniary and political independence. They must be fully endowed, and they must be, so far as their management is concerned, free from political, State or Federal control. How long we may have to wait for this I do not know, but the code will not accelerate or delay the advent of this consummation so much to be desired.

Dr. Warren.—Pray, then, what remains to be expected or hoped for from the code?

Dr. Putnam.—I have in one of our earlier conversations indicated one of the chief purposes of the code.

Dr. Warren.—To dry nurse and coddle the sickly infants?

Dr. Putnam.—Yes, and to some extent to continue this sort of fostering care to all the members of our profession whether old or young, feeble or strong, so long as they remain members of the profession. There are many perhaps who could get along well enough without it, but there are many who will need it as long as they live.

The code is intended, among other things, and most especially, to elevate the tone—that is, to improve the general morale of the profession, using the term morale in its widest and most liberal sense, as applied to character, conduct and the courtesies of life,—and thus, indirectly or directly, to secure for ourselves public respect, and to advance the interests of the science of medicine.

Dr. Warren.—I do not see any natural connection between the morale of the profession and progress in medical science.

Dr. Putnam.—I do. Upon the morale of a man will depend chiefly the decision of the question whether he will make his profession a trade or a science; whether he will use it for purposes of selfish gain or of public good; whether he will prey upon the misfortunes of his fellow men, or contribute to science such facts as may tend to alleviate their physical sufferings. I regard a sound morale in the medical profession as the foundation stone of the growing edifice of medical science.

When you were enumerating the objects which you saw or failed to see in your telescopic search for the fruits of the code, you did not mention that you saw progress in medical science.

Dr. Warren.—No; and because I did not recognize that as one of the fruits of the code.

Dr. Putnam.—It is true, however, as you will admit, that for some time past medical science has been making great progress in this country. Such as to

attract the attention and to secure the admiration of medical men in other countries.

Your own friends often refer to this progress as a reason why we should throw off the restraints of the code and thus place ourselves before the public as making the same progress in liberality of sentiment and freedom of thought and practice which we have made in medical science.

Dr. Warren.—And you ascribe all this progress to the code?

Dr. Putnam.—It has occurred under the code, and those who have contributed to the advancement of medical science in this country, are, almost without exception, men who have subscribed to the code and have lived under it. * * * *

The code was instituted having this as one of the ends it sought to accomplish.

It seems to me, therefore, that we have a right to claim it as one of its fruits. Certainly in view of the facts known to you, you cannot claim that it has arrested or retarded progress in medical science.

In addition it is pertinent to remind you of the universally accepted maxim, that in most cases, sooner or later, wholesome advice brings about good results.

Dr. Warren.—It seems apparent that quackery has flourished under the system of proscription enjoined by the code, and I am, according to your own line of argument, warranted in ascribing this condition to the code. It is quite probable also, I think, that the attitude of antagonism and hostility on the part of medical men toward certain forms of empiricism, has rather tended to popularize them, by creating in the minds of the people an impression that the apostles of these creeds were being martyred by us.

Dr. Putnam.—So you would have said nothing?

Dr. Warren.—No, I think it would have been better if we had preserved a dignified silence in reference to these matters.

Dr. Putnam.—In your opinion, then, we never should have allowed ourselves to say that it was detrimental to the interests of medical science, and therefore derogatory to the character of a medical man, to countenance and encourage those who practice under exclusive dogmas, and who publicly proclaim this fact, and declare themselves to be in open hostility to the science of medicine as hitherto taught; and who, in short, ostentatiously renounce all the accumulated experience of many centuries, declaring that the science of medicine began with their own wonderful discoveries.

Dr. Warren.—You do not interpret my remark correctly. I know very well that the science of medicine is a unit, and is incapable of being divided into schools. That a doctor in medicine must be defined as one who is learned in the causes, character and cure of disease; and who draws his remedies from any source where experience shows they can be found without any reference to doctrines or theories. I know that I am at perfect liberty, as a regular physician, to use an infinitesimal dose of any medicine, or the medicines of an Indian doctor. I think it our duty also to teach the public that this is our attitude; that while we are not homœopaths, we regard it as equally disreputable to be called allopathists.

Dr. Putnam.—A nick-name given to us by homœopaths; and which ingenious device on their part has done more to increase their patronage than anything else; since it is calculated, as no doubt it was intended, to convey the impression to the people that our practice, also, was controlled by a dogma, and that like themselves, we constituted a "sect." The people

had, therefore, only to decide which of these two classes of dogmatists or sectarians they preferred; while the fact is, that we do not know or care whether a medicine acts in obedience to the law of *similia similibus*, or the law of *contraria contrariis*, provided only it cures.

Dr. Warren.—I was proceeding to say, Doctor, that I do not object to medical men declaring publicly that they are not sectarians or dogmatists, but I think it unwise to enter into personal disputes with empirics, or to make any public and specific denunciation of a particular sect. It is this which enables them to assume the air of martyrs, and thus to excite public sympathy in their behalf.

Dr. Putnam.—There is not one word in the code naming or pointing to any special class of empirics. It says nothing which, if I understand you correctly, you would not permit and encourage medical men to say; and it cannot therefor be regarded as responsible for the spread of any medical heresy among the people.

Dr. Warren.—It says that it is considered derogatory to the character of a medical man to counsel with empirics.

Dr. Putnam.—Don't you hold the same opinion?

Dr. Warren.—If I do I would not place this opinion in a code of ethics, to be read by every one who chose to look at it. In fact I hold, as I have said before, that this is a matter for my own conscience to decide in any given case, and there may be cases of emergency when I might choose to act differently.

Dr. Putnam.—I do not think any one has ever construed the code as teaching that you may not *meet* an empiric in an emergency, and do for the patient yourself, or assist him in doing whatever may seem necessary; but to *consult* with a blacksmith who calls himself a doctor, or with every medical crank that our legislators may choose to recognize as a doctor, is another thing.

But, Doctor, if our antagonism to and persecution of homœopathy has done so much to popularize this species of empiricism, why has it not benefited and popularized, in like manner, all the other forms of empiricism? They have all shared alike in our persecutions.

Dr. Warren.—I am not certain but that it has.

Dr. Putnam.—If this is your opinion or suspicion, then I shall have to ask you to avail yourself of one of the advantages which age usually brings with it, namely, my longer vision. I think I shall be able to point out to you some facts, which will show that the prosperity and decay of medical errors, have very little or no relation to the amount of persecution which they receive from medical men. It seems probable, indeed, that while some of them are indigenous to certain conditions of society, and may continue to exist under favorable conditions for an indefinite period of time, most of them are ephemeral, and only continue to live until they are supplanted by others.

I shall attempt to show you that a large portion of the people, including even persons of the highest culture and intellectual endowments, are easily deceived in matters pertaining to the science and practice of medicine; and that the number of these credulous people is about the same in each succeeding generation. The delusion varies, but the number who are deluded remains the same.

Dr. Warren.—"Populus vult decipi, decipiatur."

Dr. Putnam.—Yes, "the people like to be deceived," but I am not willing to add, "let them be deceived."

Dr. Warren.—If you will not consider me pedantic in my frequent reference to Latin maxims, I will give you another, which I think you will accept more readily, "Homo animal est credulum et mendax."

Dr. Putnam.—That is not far from the truth; only that I would prefer to have said, *aut mendax*. Mankind is, in this regard, composed of two distinct classes; of which the mendacious being the most intelligent, habitually prey upon the credulous. There is, indeed, another class, which is neither mendacious nor credulous, but I am afraid they are in the minority.

I will now, with your permission, proceed to the task which I have imposed upon myself:

In 1806 the legislature of the State of New York—the same legislature whose opinions on the subject of medical science we are called upon by you and your friends to respect—purchased of J. N. Crouse a secret remedy for the prevention and cure of hydrophobia, paying him, I think, \$3000.

The recipe being given to the public by the humane legislators was found to be:

"One ounce of the jaw-bone of a dog, burned and finely pulverized; the false tongue of a newly foaled colt dried and pulverized; one scruple of verdigris, raised on old copper by laying in moist earth (the coppers of George 1st and 2d are purest and best.) Mix these together, and if the patient be an adult, give one common sized tablespoonful a day," etc.

The Legislature of the State of New York further directs:—if you cannot obtain coppers of the date above named, you may use "a small increase of quantity of a baser metal."

About this time a Doctor Perkins, of Connecticut, announced his discovery of the healing properties of certain combinations of metals, or of the "metallic tractors," as he called them. Dr. Perkins was not at first, nor at any time while he continued the old foggy practice of medicine, very successful. He therefore abandoned the practice altogether, and engaged in the business of breeding mules for the West India market, which was at one time quite a lucrative trade. After a time, the demand for mules having greatly fallen off, he gave up this business also, and in his subsequent hours of retirement he invented the metallic tractors, and the theory upon which their action was based. His success in this new adventure must have exceeded his most sanguine expectations, for in a few years his tractors had won for themselves a wide reputation. Several hundred clergymen—to whom he always sent his tractors gratis, although he declared that he could scarcely afford to sell them for less than \$20 a pair—certified to their wonderful powers. The public pressure was so great here in New York that at one time, the managers of the New York City Hospital felt compelled to permit him to try his tractors on some of the patients then suffering from yellow fever. What was the result of the experiment I do not know; but I have been informed that he himself subsequently died of yellow fever.

Before his death, however, he went to London, and opened a hospital, and for a time attracted great crowds of people, among whom he claimed were some of the titled nobility; but his career in London was brought to a sudden and ignominious close by the ingenious exposure made by Dr. Hogarth of Bristol, and he soon after returned to this country to find that his tractors no longer "drew"—in his absence they had been supplanted in a great measure by other practices and other theories.

While in London a Vermont poet of no mean pretensions, Peter Fessenden, was employed by him to

write a book, entitled "Terrible Tractoration," which was intended to satyriize those medical men who had ridiculed his pretensions.

I have in my possession a pair of these tractors, one of which is evidently brass and the other iron. By drawing the pointed ends of these tractors in parallel lines over the surface of the body the cures were wrought.

The next form of empiricism which attracted much attention, was the Botanic practice.

The disciples of this "school" based their practice upon the ingenious theory that man is not a mineral, and therefore calomel and other minerals could not be proper medicines. They probably never suspected that possibly, also, man was not a vegetable, and that therefore vegetable medicines might be equally inappropriate.

The "new school" published books on botanic medicine, and was for many years very prosperous, so that one or more Botanic doctors were to be found even in the smallest towns and the most thinly settled districts.

The only name, however, in their ranks which has come down to us is that of a Quaker lady, well known at that time in this city as a lady of culture, refinement and of aristocratic connections, who went about the country as a missionary, giving free lectures on this subject.

Samuel Thompson, an honest but uneducated citizen of Western New York, was the next conspicuous laborer in the fertile fields of medical charlatanry. His "theory" of man was, that he was composed of four elements: earth, air, fire and water. His "theory" of disease—"formed," he says, "after mature consideration,"—was "animal heat confined;" and his *Materia Medica* consisted of about ten articles, belonging chiefly to the vegetable kingdom; for, like the Botanic doctors, he held that minerals were poisonous. The medicines upon which he chiefly relied to expel the heat from the body were lobelia, red pepper and steam.

Dr. Warren.—It is within my recollection that we had lobelia doctors and pepper and steam doctors. I presume these were the Thompsonians?

Dr. Putnam.—Yes, and Thompson became famous among the people as a profound and original thinker, and as the founder and defender of the "new school." He published a book on medicine, consisting of about twenty-four pages duodecimo. His chapter on furunculus, consisting of about ten lines, commences as follows: "The bile is a distressing visitor;" and the next chapter, which is of about the same length, and which treats of carbuncle, opens in a similar classic style: "The carbuncle is a large bile."

In Poughkeepsie a journal, called the "Thompsonian," was published, exclusively in the interests of this "school;" the clientage of which school was for many years very large. The learned Dr. Benjamin Waterhouse, who I believe was a disciple, estimated it at not less than 3,000,000.

Thompson secured a patent for his system; which entitled the purchaser to use it in the cases of his own person or of his family; but not in cases of sickness outside of his own family.

Application was finally made to the Legislature of the State of New York, by the friends of Thompsonianism, to authorize the formation of a society under the title of the "New York State Thompsonian Botanic Medical Society," which should exercise powers similar to those exercised by Medical Colleges, namely, the power to confer licenses to practice Thompsonian-

ism, after one year's pupilage with a Thompsonian doctor.

I have seen only the minority report upon the subject; in which the writer says that the petition ought not to be granted, for the reason, among others, "that to give legislative countenance in such cases, would be to encourage gullability and credulity; to advocate the cause of quackery in the case of medical science; to set at naught all those rules of plain common sense, which in other matters usually govern mankind."

Inasmuch as the minority report recommended that the prayer of the petitioners should not be granted, I am compelled to assume that the majority report was in favor of the petitioners.

Dr. Warren.—I hope the Legislature did not dishonor itself, and cast odium upon the science of medicine by elevating these charlatans to the rank of regular physicians.

Dr. Putnam.—No, it did not; but I am unable to see where you make the distinction between the conduct of the Legislature at that time, and the conduct of the same Legislature more recently. It has within a few years elevated to the rank of regular physicians certain classes of charlatans whose doctrines are infinitely more absurd, and more opposed to "all those plain rules of common sense, which in other matters usually govern mankind," than any thing ever taught by Thompson. And those are the men with whom you ask to be permitted to consult.

Dr. Warren.—What became of Thompsonianism after this?

Dr. Putnam.—It died.

Dr. Warren.—Killed by legislative persecution?

Dr. Putnam.—I don't know what caused its death; but it seems to have grown into a healthy manhood, and, having lived its allotted period, to have died a natural death.

The time and circumstances were favorable for new products. Perkinism and Thompsonianism had scarcely disappeared when foreign importations began to arrive; as if shrewd observers had discovered the scarcity of food for the *homo credulum* in the American market, and had determined to supply the demand, and reap the profits. Homœopathy, Hydropathy, Mesmerism, Clairvoyance and Phrenology were sent to us from Germany in, I think, a single cargo.

Dr. Warren.—You do not regard Phrenology as a medical delusion?

Dr. Putnam.—No, but I speak of it as one of the products of German industry, sent to us when we were well-nigh famished, owing to the failure of our home products. Americans were quite willing that the importers should reap the profits, provided only their most pressing wants were supplied.

The Hydropathic "school" at first took the lead. The "theory" of Preissnitz and his disciples was that water caused a "crisis," as indicated by the eruptions consequent upon its use, and thus wrought a cure of nearly all human maladies. The theory proved satisfactory to the people, and water "privileges," for the establishment of baths, were in great demand in all parts of the country. Man was, by almost universal consent, decided to be an aquatic animal, and to attain perfection nowhere but in his natural element.

We supplemented, also, these importations by Grahamism, or by the doctrine that man was not, as had been supposed, an omnivorous animal, but a vegetarian. Some distinguished physicians, and nearly all of the charitable institutions for children, including the "Shepherd's Fold," attached themselves to this

"school." Its doctrines appeared to them to be both sound and economical.

Halsted announced and sold a secret cure for indigestion—what would not Mr. Carlyle have given for it; yet the price, which was \$50, might have placed it beyond his reach—Halsted knew that every American citizen had indigestion, and he had sufficient business tact to render this knowledge profitable.

Dr. Warren.—You have omitted to speak of the Eclectics.

Dr. Putnam.—The Eclectics also are indigenous. As their name implies, they choose their remedies from every available source; and in so much they are in no respect different from regular physicians. If this were their only peculiarity there would have been no need of their separation from us; but the fact is they have other peculiarities.

They have constructed a school on the basis of the inclusion of all the schools; but with special reference to the inclusion of Homœopathy, Hydropathy, Clairvoyance, Mesmerism, "the laying on of hands," etc. Whatever has been rejected as worthless by the regulars, is deemed especially valuable by the Eclectics.

Most of these "schools" are now growing old, and are showing signs of decay, or they are actually dead.

Dr. Warren.—Do you not except Homœopathy?

Dr. Putnam.—No, I do not. It would be difficult to find to-day in this city ten Homœopaths who accept the doctrines and practice of Hahnemann. The tree is therefore dying at its roots, while its branches still furnish a grateful shade for the lambs which are waiting to be sheared.

This doctrine had in its organic construction certain elements of success which did not belong to either of the others. The conception of disease as a dynamic or spiritual entity, and of resisting its progress by medicine exalted by diffusion to a spiritual entity, was much more in accord with the transcendental and æsthetic spirit of the age, than the simple theories of other "schools," or than the vulgar Saxon doses of Botanic Doctors and of Lobelia Doctors, and of the Regular Doctors. Children took the tasteless, colorless and harmless sugar pellets, without a shudder; and, what was practically also of more consequence to the mother, they generally got well; but not more often than do a majority of persons suffering from physical ailments, without the use of medicine, if only the nursing and hygienic conditions are properly attended to.

Dr. Warren.—Probably you believe as I do, that Homœopathy, as originally practiced, served a useful purpose, in substituting no medication for excessive medication.

Dr. Putnam.—Yes, and I could have wished that, for the sake of the good they did in this way, they had never changed their doctrine and practice.

Dr. Warren.—Homœopathy has still a great many patrons in all classes of society.

Dr. Putnam.—Very true. Most of those people who belong to the class which you call "*homo credulum*," now employ Homœopaths; and probably for the reason that nearly all the other "schools" have lost the vigor of their youth and are no longer active competitors. At the present time Homœopathy is a satisfactory substitute for all the others.

Dr. Warren.—The largest serpent has swallowed all the smaller ones.

Dr. Putnam.—Some years ago, Dr. Warren, when the American Medical Association met in Baltimore, I found myself one evening in the drawing-room of Barnum's old hotel with Drs. Wm. Gibson and Nathaniel Chapman, of Philadelphia, and Dr. ———, an equally

celebrated physician, of New York. The subject of conversation being snakes, Dr. ———, of New York, said he knew it as a fact that snakes not only at times make a hissing sound, but that they would swallow their young. "Having surprised a female serpent," said he, "while she was warming herself in the sun, she suddenly made a hissing sound, opened her mouth wide, when full half a dozen young snakes ran down her throat and disappeared.

Dr. Chapman having listened attentively, immediately leaned forwards and said: "Dr. ———, don't you think that was a very large dose of *Serpentaria*?"

Now, Doctor, I don't think that *Homœopathy*, originally constructed with a throat only large enough for sugar pellets of the size of millet seed, could ever swallow so large a dose of *Serpentaria* as your suggestion must imply.

In this enumeration many of the different forms of quackery which have prevailed in this country since about the time that we became an independent nation are not included; such as the Indian Doctors, Root Doctors, Salve Doctors, Cancer Doctors, &c.; but which swarm like locusts along our frontier settlements, and far back in the interior where the population is sparse or is composed chiefly of the laboring classes.

Dr. Warren.—I confess, Doctor, you have brought to my knowledge some facts with which I was not familiar. And so you really think there are no more people employing empirics to-day than there were forty years ago; and that the apparent prosperity of *Homœopathy* does not indicate that such is the fact?

Dr. Putnam.—The evidence to my mind is rather that the people are less inclined to quackery now than formerly; but the probability is that in this respect the people are not much changed, nor would I look for much change in the future. About the same number of people will always be credulous. Says Sir Walter Scott, in his curious book entitled "*Demonology*:" "Sailors have a maxim that every man must swallow his peck of dirt, and it seems quite clear that every generation of the human race must swallow a certain measure of nonsense."

Homœopathy may continue in its present form for some time—that is, as a name, without actual substance, but it will disappear so soon as another and newer empirical "school" appears to challenge its pretensions, and to lay claim to a share of the enormous profits which will never cease to flow from the commerce in human credulity.

Dr. Warren.—And you don't think that persecutions add to the number of its patrons?"

Dr. Putnam.—No, I don't. What you call persecutions—but I do not—have been practiced in the same way, and to the same extent, by us and others, toward all the other forms of empiricism, and yet they have, in a great measure, lost their patronage. If persecution sustains *Homœopathy*, why did it not sustain, or why does it not resuscitate the others?

CEREBRAL LOCALIZATION.

To those who have followed during recent years the careful experiments of Physiologists seeking to establish the theory of cerebral localization, and who have believed or disbelieved as the successive experiments of equally eminent authorities appeared to confirm or disprove this theory, the following comments of *The Lancet* on a recent resume of the subject will be interesting.

It is an interesting and noteworthy fact that pathological observation is doing more to advance our knowledge of cerebral functions than physiological experiment. At any rate this would seem to be true of the doctrine of cerebral localisation, for whereas physiologists agree to differ upon the interpretation of their experimental results in this matter, the clinical and pathological evidence in support of the doctrine is rapidly accumulating. Dr. SHARKEY's recent paper read before the Royal Medical and Chirurgical Society is an instance of this, for, although clinical details were wanting, the lesions found in the brain and so accurately sketched by him harmonized very well with the doctrines of FERRIER. In the current number of the *Revue de Médecine* MM. CHARCOT and PITRES commenced a series of articles upon the subject supplementary to a like contribution to the same periodical made by them four years ago, when they collected and sifted all the recorded cases of cortical lesions bearing on the question of the localisation of motor function. They point out that since that time many observers have become convinced of the truth of the doctrine, which has been upheld particularly in the writings of FERRIER, BOYER, NOTHNAGEL, EXNER, and WERNICKE; but they confess that there is not yet general conviction. Some of the opponents of the theory base their objections on abstract philosophical notions, or on doctrinal subtleties which MM. CHARCOT and PITRES decline to discuss. Others rely too exclusively upon the results of experimentation in the lower animals—results often contradictory, and always more or less complicated. The writers, whilst recognizing the value of physiological experiment, deprecate the propriety of basing upon it too rigid deductions of human cerebral function. In the hope of convincing the still large number, who only half accept the truth of the doctrine, they have collected upwards of 200 cases of cortical lesions recorded in the past four years, not omitting those cases which seem to tell against the theory. The first section of their work is published in the current number of the *Revue*; it deals with cases of destructive lesion of the cortex situated outside of the motor area, and unaccompanied by motor disorder. Thirteen cases of lesion of the prefrontal region are given, it which it is also proved that the root of the frontal gyri may be diseased without causing motor paralysis. Then follow three cases of lesion of the occipital lobe, fourteen of the temporo-sphenoidal, and three of the parietal lobes. They do not think that facts justify the opinion held by some that the inferior parietal lobule is concerned with the movements of the eyes. Only one case of lesion of the insula is given; but as in no case has it happened to be the only part involved, it is not possible to infer much from it. Then follow ten cases of multiple cortical lesions, seated in the "mon-motor" areas, making a total of forty-four cases, which go to prove, as the writers think, that there exists a large portion of the surface of the brain the destruction of which is not followed by any permanent disorder of voluntary motion—the convolutions which, in man at least, subserve motor functions being the frontal, the ascending parietal, and the paracentral lobule. Unless these regions be involved by a cortex lesion, directly or indirectly by compression or irritation, motor disturbances do not arise. Moreover, they believe that these motor areas are symmetrical in their distribution in the two hemispheres.

THE INTERNAL USE OF ANTISEPTICS.

From the nitarians point of view the first and most important practical result of the light thrown upon bacteriic organisms by the activity of modern research will be in the internal application to the treatment of disease of those agents which are proven to be most antagonistic to the existence and development of micro-organisms.

Experiments as to the value of antiseptics administered internally in diseases depending for their existence on bacteria are at variance.

The following presentation of the opinions held on this subject by those who have been most earnest in their advocacy of internal antiseptis appears in a recent number of "*The Medical Times and Gazette*."

One of the most formidable objections to the internal use of antiseptics certainly seems to be the notion that agents which might be capable of destroying germs could only act at the cost of unwarrantable injury to the tissues of the affected animal. This notion has been prominently brought before the profession in Germany by Hans Buchner, and stated as the logical outcome of Koch's teachings; and to the refutation of this doctrine Professor Binz, of Bonn, addressed himself in the *Centralblatt für Klinische Medizin*, No. 18. Many arguments are adduced by Binz in support of the practice of the internal administration of antiseptics for the purpose of checking the course of micro-parasitic diseases. The treatment of syphilis and ague would seem to be two striking illustrations in support of the use of antiseptic measures, since it might be alleged with great probability that mercury and quinine exercise their beneficent influence by virtue of their antiseptic qualities. Alleged cures of a great number of infectious diseases, which it would serve no purpose to enumerate, by the employment of various antiseptics, are quoted by Binz, but there is an obvious objection of much weight to the teaching that the resulting benefit was due to the antiseptics. Indeed, it is simply a truism to say that nearly every infectious disease may spontaneously, or apparently so, take a favorable turn; and hence the reputed benefit may be of the nature of a mere coincidence. Experiments with drugs on human beings, at all events, are always open to this objection. In animals, too, the fallacious argument, *post hoc ergo propter hoc* is of common application, and for reasons which are not difficult to understand. We often hear even reputed scientific persons claim that experiments as clear and demonstrative as those performed in the chemical can be similarly carried out in the physiological laboratory. Now, such conceptions represent almost anything but the truth, and for one excellent reason. The animal body cannot, from a point of view of physiological investigations, be regarded as a known substance of fixed quantity. Were it so, physiological chemistry would have no special right for existence, or, at all events, its existence would become merged into that of well-known elementary chemistry. No two specimens of animal protoplasm are ever exactly the same, and so mistakes may arise even when a so-called control animal is kept: that is, an animal of the same species and weight as the one operated upon is placed in precisely similar external circumstances, with the exception of the one fixed and known condition. That the time may come when we shall be able to exactly gauge the chemical and physical capacities of animals used for experiment, is a thing which can only be hoped for,—we are yet far from it; and whilst such is the state of knowledge, we can certainly do no

more than record the results of experiments as more or less strong probabilities. But there unquestionably are many effects which follow the use of drugs with such perfect regularity that we fully admit the undeniable claims of the remedies to be considered as specifics. The question then arises, How do these drugs act? In infectious diseases, the idea that the medicines employed are directly destructive of the virulence of the poison has long been held to be the true explanation of their action; but the doctrines of the comparative indestructibility of many disease-germs would, indeed, seem to be opposed to such a conception, seeing how diluted the remedies must be, by their admixture with the fluid constituents of the animal body. In the light of the discoveries of Pasteur, Chauveau, and others, regarding the attenuation of charbon virus, the complete destruction of germs would appear not to be in the least necessary to explain the facts. If it could be proved experimentally that certain antiseptics had the power of attenuating the virus of infectious diseases, much light might be thrown on the action of many reputed antiseptic remedies when administered internally. There can be no doubt that any such drugs must be very largely diluted; and so, from the point of view of mere strength, would be utterly incapable of destroying the action of poisonous germs, unless they possessed some sort of selective action which gave them the property of altering the bacteria, whilst they left undamaged the tissues of the animal organism. The line of argument adopted by Binz is of this nature. We are, however, only yet on the threshold of all that concerns the department of pathology known as bacterial, and whilst we are in so much ignorance of the actual working or dependence of the diseases themselves on bacteria, there is good excuse for the paucity of our information concerning the mode of action of the remedial agents.

ORIGINAL ARTICLES.

THE TREATMENT OF MIGRAINE,*

BY

W. J. MORTON, M. D.

The entire subject of migraine is still in such confusion that it may well seem but an unsatisfactory task to enumerate more than categorically the different remedies empirically employed. It is perhaps true that two practitioners would not treat a case exactly alike. Iron, quinine, strychnine, arsenic, opium, ergot and cod-liver oil are among the remedies commonly employed. One extols caffeine, another guarana. Some rely upon cannabis indica, others upon nitrate of amyl. Some employ electricity and hydro-therapy, other use the digestive tract in the shape of pepsin, charcoal, alkaline bitters and cathartics.

In the few remarks that I now bring before the Society, I do not hope to adduce anything new in the way of a specific remedy or other therapeutic measure, but rather to collect on the basis of certain observers the accepted facts in the present jointed army upon the disease, and put such remedies into a systematized method of treatment. This may be accomplished on the vaso-motor theory of the disease.

* Read before the American Neurological Association, and reported for the MEDICAL GAZETTE.

The symptoms of migraine may be explained by the existence of contraction or tetanus of the muscular walls of the blood-vessels in the affected side. The evidence of the 'cord-like artery, the sunken appearance of the eye, dilatation of the pupil all on the affected and painful side of the head, favor this theory. These symptoms indicate a spastic condition of the blood-vessels, and this condition can be brought about by stimulation of the cervical sympathetic nerve. To sustain this theory of debility of the artery is the fact that pressure exerted upon the affected side causes pain; that the fundus of the affected eye is pale while that of the opposite eye is normal.

Of the paralytic type of the disease an instance is recorded by Berger in 1874. His report leaves no doubt as to the clinical disturbances of the paralytic form of attack.

"The patient, *æt.* 45, presented all the characteristic symptoms of migraine, beginning by a red spot above the right eyebrow, extending a few seconds inward, producing redness of the cheek. The right ear became flushed, and in two to four minutes the redness which at the beginning was limited, extended over the entire half of the face. The patient feels intense heat in the reddened parts, and the right ear especially is growing hot. In rare instances these symptoms disappear in ten or fifteen minutes. Then follows an attack of migraine lasting three or four hours."

Erb has added the terms *angio-spasm* and *angio-motor paralyses*. We then possess in the *vaso-motor* theory an explanation in which clinical observations and experimental physiology are singularly in unison. Vascular dilatation or contraction of the arteries, with a corresponding condition of the external parts and with certain characteristic ocular phenomena form collectively a group of symptoms similar to those found in the disease of the *vaso-motor* system. One of the common sources of error in the diagnosis is in setting down from the patient's account the secondary redness that follows the spastic onset as the primary redness that initiates the paralytic onset of the disease. It is to be recollected that an initial pallor or redness may be of five minutes duration and yet be followed by a continued headache lasting twenty-four hours. The truth is that the primary condition whether spastic or paralytic is continuous during the last and during the prodromatic stages. There is therefore little difficulty in deciding against which form to direct treatment. Some authors have claimed that just as in some period of the spastic type there supervenes a subsequent stage of relaxation, so in the paralytic type of the disease there follows a stage of spasm with pallor. The initial stage of the paralytic type is well-defined and serves for a guide. Out of thirty-five private cases I can find but six of *angio-paralysis*. I think it will be generally admitted that the spastic type is by far the more common. For this reason I will refer first to its treatment.

I have found that the most reliable treatment of this type of the disease is by the bromide of sodium, in drachm doses administered at every onset and repeated in one and a half hours if the attack does not cease. I have seldom known this to fail in aborting an attack and bringing about immediate relief. The patient must be put upon a course of the remedy, taking ten grains three times a day for a period of three to six months. Cod-liver oil and preparations of iron may be used in conjunction. In case the diagnosis has been absolutely made, I am positive that a good result may be secured, or at least a relief practically equivalent to a cure. The exceptions to the rule are those

confirmed instances of migraine existing generally from childhood and akin in resistance to all treatment to similar chronic cases of epilepsy. I know that there is a wide-spread prejudice against the bromide treatment owing to its depressing action upon the economy and consequent adynamic symptoms set up. I believe this condition applies only to the potassium salt. It is a matter of clinical experience that large doses of bromide of sodium may be tolerated for months without evidences of the bromide rash and without failure of the health. On the contrary, a patient thus treated gains flesh, eats well and has good color. For instance, M. B., treated for epilepsy, has taken 90 grains of bromide of sodium daily for one year and is the picture of health. Again, Mr. L. has been taking 180 grains of the salt daily for three months in drachm doses for insomnia without a single pimple, pustule or any diminution in the general health. He eats well, sleeps well and has gained in weight.

These instances are merely brought forward to show that the prejudice against the bromide of sodium is unfounded. In the treatment of migraine by careful management with tonics, cod-liver oil, etc., the slight adynamic effects of the sodium salts may be counteracted; while at the same time those over-exalted functions of tissue which we wish to restrain may be wholly suspended. It is this sailing between wind and water treatment which we wish to secure that leads to the best results—the wind being the disease and the water the too great suspension of functions. It is not simply to produce bromism. An objection made against the bromides is that they tend to reduce the amount of blood in the brain. Then why use it in the spastic type when an *anæmia* already exists? Probably no one doubts that under the influence of the bromides the quantity of blood circulating in the cranium is greatly diminished. My explanation to this objection is, that in this spastic type, paradoxical as it may seem, the bromide actually increases the amount of blood in the brain. This it probably does by depressing the excitability of the *vaso-motor* system. As a result the vessels relax, and an equable circulation is set up in place of the local *asthenia* supposed to exist in the brain. This observation is sustained by the fact that anyone may observe that immediately after the administration of large doses of the bromide of sodium in the spastic form, the pallor in twenty to thirty minutes gives place to the natural facial circulation.

The well-known effects of nitro-glycerine and nitrate of amyl in checking spasms have suggested their use as anti-spastics. The spastic attack of migraine has often been relieved by amyl nitrite, though undoubtedly true, as claimed by Erb and others, that the effects are transient. For this reason it is preferable to use nitro-glycerine, whose effects are more lasting. Nitro-glycerine is in some instances of remarkable efficacy. Thus Miss L., aged 30, has been troubled with headaches for the past six years, sometimes having eight to ten attacks a day. Feels nervous after each attack. I administered two drops of a one per cent. solution of glonoin. The remedy produces the same characteristic headache which passes off in twenty minutes and the attacks cease. She has taken one drop of glonoin three times a day, with no return of the headache. Recent investigations of Dr. Matthew Hay have shown that the action of the drug is due to its decomposition in the presence of an alkali into nitrous acid. It follows therefore that if the stomach is much alkaline, the nitro-glycerine will be decomposed immediately, and its effects will be correspond-

ingly evidenced. If the stomach is acid, the nitro-glycerine passes into the blood unchanged, and undergoes slower decomposition. It is usual to give the drug before meals, but clinical experience shows that better effects are obtained by giving it after meals. The dose of nitro-glycerine may be gradually increased from one to five and six drops, three times daily. Glonoin thus relieves the anti-spastic form of migraine. Both the bromide of sodium and glonoin may be used in the same case, the bromide before meals and the glonoin after meals.

The diagnosis of the angio-paralytic type once made, it is evident that measures to restore the tone of the relaxed arterial walls are called for. It may be brought into activity by strychnia given in increasing doses. The chief remedy indicated now is ergot. Its action is to produce a vaso-motor spasm, and as in the spastic type large doses of the bromide may be given to abort the attack, so in the paralytic type I have given large doses of ergot either by mouth or hypodermically. I had intended to adopt the treatment by the cautery to the back of the neck and the use of electricity. It is a well-known fact that the application of the cautery to the back of the neck produces a constriction of the blood vessels, and this is employed to treat the ordinary vaso-motor cephalgia, and may be applied in the treatment of hemicrania, or hemicephalgia. The very careful experiments of Lowenfeld seem to indicate that the ascending current produces a dilatation of the capillaries and arteries of the brain, and the descending current produces a contraction; and that if the anode be placed on one side of the head and the cathode on the other, and if the membranes were carefully watched, Lowenfeld says that the anode makes a dilatation of the vessels, and the cathode a constriction. To remember this useful point, I have devised the following initials: "A. D. D. C.," which being made to stand for Anno Domini, District Columbia, can easily be kept in mind, and confusion as to which current to employ in a given case can thus be obviated.

LECTURES.

CLINICAL REMARKS ON HODGKIN'S DISEASE—PLEURISY WITH EFFUSION AND CONGENITAL MALFORMATION OF THE LARYNX.

BY

FRANCES DELAFIELD, M.D.,

Professor of Pathology and Practical Medicine; College of Physicians and Surgeons, New York.

CASE I.—Female aged 35. Patient was confined four months ago. At the present time she complains of pain in the left side of the body and lumps in her throat. There is a line of dullness beneath the clavicle and top of the sternum.

The swelling that I detect by palpation in the umbilical region is the spleen. It is very much enlarged. The enlargement extends up into the thorax as well as down into the abdominal cavity. The spleen is also somewhat nodulated. The liver is likewise enlarged, and the urine contains fifty per cent of albumen and has a specific gravity of 1017. The blood contains no increase of white blood corpuscles.

Hodgkin's Disease is characterized by changes in

the blood and lymphatic glands including the spleen, as one of the lymphatic glands. Pneumonia, Addison's Disease and Hodgkin's Disease, all have a certain relationship to one another. This disease is complicated with large white kidney. The condition of the spleen in this case illustrates the formation of lymphatic tumors in glandular organs. There are a large number of white nodules in this spleen.

The prognosis is bad. This patient will continue to get worse until she dies. She may die from the Bright's Disease, or she will go on losing flesh and die from exhaustion. The lungs may be involved by new growths of fatty tissue and she may have pulmonary symptoms. The disease is regularly a fatal one.

CASE II. Male, aged 30, complains of a cough on the left side. We get flatness on percussion up to a certain level. Vocal fremitus is absent on the same side. There are a few coarse râles in the upper part of the left lung. The urine has a specific gravity of nearly 1030, but contains no albumen. The patient is a gymnast by profession. He has had a cough for about a month. The absence of vocal fremitus extends up to the angle of the scapula on the left side, and there is a subcrepitant râle.

The diagnosis is pleurisy with effusion. The left side of the chest is nearly half full of fluid. The prognosis is perfectly good. He should commence at once with persistent counter-irritation over the left side of the chest. Iodide of potassium should be given as a diuretic. If the iodide is given, he should take five doses, t.i.d., if the acetate, ten-grain doses, diluted in each case with a good deal of water. Blisters should be applied on the back and over the lower part of the thorax. He should be careful about being out in bad weather. Muscular exercise should be suspended for the present. The patient need not, however, be confined to bed or the house.

CASE III. Boy aged 14, small and badly formed for his age. This boy has apparently had a somewhat precarious existence. He has suffered from enlargement of the glands of the neck. He has had some trouble with the stomach and bowels last summer accompanied by vomiting and purging, which has persisted until lately. Now we find him small, emaciated, and anæmic, with the glands of the neck enlarged. The diarrhœa which he suffered from has been checked, and he is now taking cod liver oil.

The spleen in this case is considerably enlarged. It is enlarged backwards and upwards toward the pleural cavity. The resonance is a little duller on the left than on the right side.

Either this boy is suffering from the results of bad nourishment and scrofula with a disposition to inflamed glands, or else he is troubled with splenic leukaemia. The enlargement of the spleen and rather marked anæmia would incline one to the opinion that this is a case of splenic leukaemia and not an ordinary case of scrofula.

CASE IV. This little boy, gentlemen, is brought before you rather as a curiosity than as a case for medical treatment. He exhibits a dysphonia or difficulty of speech. He is able to use the tongue and mouth well enough, but the larynx, as we view it from without, is exceedingly small. Something could be done for him by vocal gymnastics, by this means improving his articulation.

DYSPEPTIC AND UTERINE HEADACHES: A
CLINICAL LECTURE.

BY

WM. H. THOMSON, M. D.,

Professor of Materia Medica and Nervous Diseases, University
Medical College, New York.

Gentlemen: To-day I propose to make some remarks on the subject of headaches, their symptoms, differential diagnosis, and treatment. In the first place, let me speak to you of that form of headache known as dyspeptic. This variety of headache is due purely to gastric irritation. It is characterized by a sense of uneasiness in the gastric region, either preceding the headache or accompanying it.

The cause of gastric headache is acidity of the stomach, but the acidity here means the absence and not the presence, of gastric juice. A mixture of acetic and butyric acid determines the acidity of gastric dyspepsia. The gastric juice is inodorless *per se*. The acetic acid is produced by the decomposition of starch and the nitrogenous elements of the food, while the fermentation of the fats produces butyric acid.

Gastric headache usually begins at night. The headache of Bright's disease, due to gastritis and to the fermentation of food, comes on very soon after its ingestion, so that patients have a headache and sour stomach within an hour or two after eating. Patients with dyspeptic headache wake up with a dull sensation in the head, or "sick headache." This variety of headache is ordinarily frontal, involving also the eyes. The head feels hot all over,—in the occiput vertex and forehead. The headache increases during the day, becoming very violent, and with it the face turns pale. The patients frequently suffer from nausea and vomiting. The tears run and the nose, mouth and throat feel as if burned, from the exceedingly caustic or acrid nature of the fermented contents of the stomach. By thorough emesis, the patient is relieved.

Lime-water allays the irritability of the stomach. A glass of vichy or a little alkali for the time being will counteract the acidity, but the use of alkaline drinks should be reserved until after the patient has vomited. They are of no use before vomiting, as the food in the stomach is not fit to be digested, and, if attempted, will only cause more suffering and inconvenience.

This headache may be habitual, and might be mistaken for migraine. Such patients are uniformly dyspeptic. They have weak stomachs, and are subject to heartburn, and complain of a sensation of soreness at the sternum. You notice in the case before us redness of the pharynx, which is one of the signs tending to sour stomach. Palpitation and intermittent action of the heart are exceedingly common with these patients.

Pepsin and muriatic acid are the best preventives of sick headaches arising from dyspepsia. Vegetable bitters, such as

Ammonii carb.,
Tinct. gent.,
Tinct. quass.,

And a little iron, should be taken regularly for about two or three weeks. Pepsin and muriatic acid are frequently serviceable in preventing these headaches. Fatty food is most likely to cause headaches, and beer among the drinks. Smoking tobacco at night should be avoided by dyspeptics. Should the sufferer be one who is obliged to eat his meals by railroad time, he must stop this mode of life if he wishes to be relieved of his headaches.

Uterine headaches are to be divided into those which

belong to the early menstrual period, and those which belong to the menopause. We have, then, chlorotic or amenorrheal headaches, including hysterical headaches and the headaches of the menopause. Chlorotic headaches are very common. The headaches of the menopause are violent, but there is a tendency at this time on the part of patients to exaggerate their trouble. They are full of all sorts of fears. If you listen to such a patient, you will hear a catalogue of symptoms which will puzzle you and lead you to suppose that you have an exceedingly serious case.

The chlorotic form of headache is peculiar. The eyes become affected and are weak. The pain is at first frontal, accompanied with throbbing of the temporal arteries and with some flushing of the forehead and face, while the hands and feet are ice-cold. The bones ache, and there is severe pain in the small of the back and very frequently at the nape of the neck. Where there is curvature of the spine, the headache is always worse. Curvature of the spine, due to general debility of the muscular system, of itself causes pain in the occiput.

This form of headache is relieved by treatment by aloetic purgatives. You can prescribe, with advantage, the following :

Saponis, grv.,
Pulv. nux vom., gr.j.,
Pulv. alois, gr.j.

This can be made up into a capsule. Aloin and strychnine make a very good pill. But I prefer the above, as the soap neutralizes the griping effect of the aloes. Then give iron. The feet may be kept warm by applying to them a bag of hot salt or bottles of hot water.

The headaches of the menopause are characterized by a flushed face and excited pulse. The patients complain of buzzing in the ear. Warm water applications relieve these headaches. Febrile headaches are relieved, on the other hand, by cold water. The patients should be given 30 grain doses of sodium bromide. Gentle laxatives, as the compound liquorice powder, should also be administered. Diuretics are good agents in the treatment of the manifold troubles of the menopause. There is, at this time of life, a considerable vaso motor disturbance, as the system is adjusting itself to an entire change in the vascular balance. The condition of a woman at the menopause is very much like the condition of a man who has had an habitual discharge suddenly healed up. Sometimes there is derangement of the functions of the kidneys. Should you ask the question, "Are you passing the same quantity of water that you usually do?" they will say "no." The specific gravity of the urine is rather low, and here we have an explanation of a good deal of the derangement of the head. Diuretics have often, in my hands, relieved the headaches that resisted every other kind of treatment. Sweet spirits of nitre, 3 j., mixed with a little tincture of nux vomica, taken three times a day, will make a good diuretic.

Ergot is indicated where there is throbbing when the ear is laid on the pillow. This remedy has a special control over the innervation of the sympathetic of the neck. The artery that supplies the middle ear is supplied by the sympathetic. The artery that supplies the cochlea and the labyrinth comes from the vertebral and not from the carotid. The ergot may be given in drachm doses of the fluid extract.

BOOK NOTICES.

Physiological Cruelty; or, Fact v. Fancy—An Inquiry into the Vivisection Question, by Philanthropos—John Wiley & Sons, New York, 1883. Price \$1.25.

This book purports to be a short compendium of the principal established facts and most obvious reasonings on the question of experiment upon living animals.

It is written in a semi-professional, semi-popular style and in an informal manner discusses the question considered in all its aspects with an exhaustiveness and accuracy that gives evidence of thorough familiarity with the subject and careful consideration of the points involved.

Such questions as "What is Pain?" "What is Cruelty?" "What is Vivisection?" are analyzed with the skill of a master, and the important legislative relations of the subject are not ignored but thoroughly reviewed.

The book is not, as so many monographs on this subject have been, barren of practical suggestion or originality. To those of the profession, whose views on this subject are already well settled on this point in harmony with common sense, its perusal would perhaps be superfluous, but to those whose pseudo-humanity obscures the clearness of their vision, it will dispel the fallacies that sentimentalism rears. To Henry Bergh and his ilk, it would be most edifying reading.

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK.

FRACTURE OF BASE AND VERTEX OF SKULL CEREBRAL HEMORRAGE—FRACTURE OF SPINE.

SERVICE OF
GEO. A. PETERS, M. D.

CASE I. E. W., Scotland, æt 48. Single. Sailor. Admitted October 30th.

Patient while intoxicated fell from the second story to the ground, striking on the head. Brought to the hospital in an ambulance.

On admission—Patient unconscious, but could be aroused sufficiently by pricking to move all the limbs, except the right arm. No facial paralysis. Pupils moderately dilated, lower lid of right eye swollen and ecchymosed. Pulse slow and full. Respiration rapid and shallow. Surface warm. No vomiting. No epistaxis. Examination of head shows lacerated wound of scalp, about two and a-half inches long, running down and out from frontal eminence, to within one and a-half inches of superciliary ridge, running in same direction as the wound. An incision being made in the soft parts the fracture was found to extend downward to center of supraorbital ridge, widening at its lower part. There was no depression of the bone. Wound dressed with carbolyzed dressing, and patient sent to ward. The condition of coma became more pronounced vomiting and bleeding from the nose and ears came on. Respiration became stertorous. Pulse rapid and feeble, and œdema of lungs was developed to which patient succumbed at 9.15 P. M.

CASE II. W. M., N. Y., æt. 22. Single. Clerk. Patient fell from the third story, twelve hours before admission. Was brought to hospital in an ambulance.

On admission—Was suffering from cerebral concus-

sion. Patient drowsy. Pupils dilated and responsive to light. Pulse slow and full. Vomiting present. Patient rallied in a short time.

Examination—There is complete paraplegia. Complete anæsthesia up to middle of thighs. There is considerable posterior curvature of the dorsal region of the spine from fifth dorsal to second lumbar vertebra. The ribs of the right side between the above mentioned points are abnormally prominent at the angles. The spinal column from the fifth dorsal vertebra down is very tender and sensitive to pressure. Can not pass urine or feces voluntarily.

Patient was placed on a water bed and urine drawn t. i. d.

October 30th—Is delirious most of the time, suffers from constant hiccough and vomiting. No extension of the paralysis. Urine and feces passed involuntarily. Temperature normal. Nourished by nutritive enema.

October 31st—Patient rapidly growing weaker, constantly delirious. Vomiting continues. Enemas not retained. Pulse feeble. Temperature, 102. Patient died at 10 P. M.

CASE III. A. W., N. Y. æt. 24. Single. Painter.

Patient fell forty feet this A. M., was brought to the hospital in ambulance.

On admission—Had some symptoms of cerebral concussion, no vomiting. Pupils dilated and responsive. There was present slight incoherence of speech, but patient could answer questions. Examination showed abrasion on left side of forehead, a transverse fracture of middle third of clavicle with the usual deformity. Rupture of external lateral ligament of ankle joint. Patient completely paralyzed below third dorsal vertebra. No anæsthesia.

October 15th—Two days after admission, complains of much pain and tenderness over dorsal vertebra, spine of first dorsal vertebra very prominent. Complete anæsthesia of leg and thigh is now present. Urine drawn. Bowels constipated. Takes but little nourishment.

October 18th—Patient very drowsy, anæsthesia extending. Feces and urine passed involuntarily.

October 20th—Patient failing. Paralysis has now extended to upper extremities. Complete anæsthesia to level of first dorsal vertebra. T. 100°, P. 66. Patient vomits all nourishment. Is delirious most of the time, but when aroused answers questions intelligently.

October 26th—Since last note, patient has been in about same condition, constantly delirious, unable to take nourishment. Died comatose at 4.30 A. M.

ABSTRACTS AND SELECTIONS.

OBSTRUCTION OF THE BOWELS; FÆCAL VOMITING: RECOVERY. MR. GEORGE R. FRASER, L. R. C. P. E., of Wark-on-Tyne, Northumberland, writes:

"On April 11th, at 10 P. M., I was hurriedly sent for to visit a lady, aged about 45, who was said to be suffering from "cramps of the stomach." She was in bed, vomiting frequently, and complained of intense pain of the stomach and bowels. Her pulse was little affected, her tongue clean, her temperature normal, and her bowels had been freely moved twenty-four hours previously, after the use of aperient medicine. I prescribed bismuth with hydrocyanic acid, and also a full dose of tincture of opium, under the impression of having to deal with a case of acute

gastralgia. The treatment had no marked effect; for, upon visiting her five hours after, I found she had passed a restless and sleepless night. The pain was sometimes acute, and the nausea and vomiting recurred frequently. I was shown a hand-basin containing upwards of a pint of distinctly faecal material which she had just vomited, and her breath had also a strong faecal odor. The real nature of the case was now apparent. On careful examination, I could ascertain no cause of strangulation; no external hernia, nothing abnormal within reach by the rectum, and no abdominal tumor existed, and faecal impaction could not be looked upon as probable. Copious injections failed to bring a trace of faecal matter from the bowels, and only served to show that obstruction was complete. The abdomen was distended, and the pain, as already noticed, often most severe. The early appearance of faecal vomit was remarkable. In all the circumstances I ascribed the symptoms to a twist, or to an intussusception at some point in the course of the small intestines. If due to intussusception, might not the purgative taken by the patient have had something to do with its production? We know that invagination is apt to arise from causes that produce increased irritability of the bowel. The stercoraceous vomit enabled me to form an early diagnosis, a point of the greatest moment in these cases, as it enables us to adopt a rational course of treatment. Better leave such cases entirely to nature, than administer a single dose of drastic medicine. No time was lost in placing the patient under the influence of opium. The drug was given as tincture, but generally in the form of powder, frequently repeated and continued throughout the attack; and no food of any kind was taken, for which, indeed, the patient expressed no desire. Ice was not procurable, but cold spring-water and soda-water were enjoyed in small quantities, frequently repeated to allay thirst. The effect of the opiate was soon apparent. Vomiting became less frequent, no doubt from the influence of the drug in controlling intestinal peristalsis; and the patient became comparatively easy, and had some rest. The characteristic vomit continued to recur at much longer intervals. Occasionally the rejected material was merely a greenish fluid, consisting, no doubt, of the water swallowed mixed with bile. The symptoms were now less acute, but distension increased. Warm fomentations were constantly applied, and injections given occasionally. On the third day she was seen in consultation by Dr. Ridley of Gateshead, who suggested operative means, or at least tapping, for the purpose of relieving the tympanites, which was now becoming extreme, and that possibly the bowel might right itself. Her friends, however, were averse to any form of surgical interference; and the treatment was continued as hitherto, with the addition of nutritive enemata, and the free use of belladonna liniment to the abdomen, as recommended by Dr. Ridley. The opiate maintained its soothing influence, but the symptoms became more urgent. Hiccough was constant in the evening; tongue red and dry; pulse 134; temperature not taken. She had another good night, and in the morning looked decidedly better than on the previous evening. She had two attacks of faecal vomiting during the day, but rested well. It was now the fifth morning, and the last upon which sickness and stercoraceous vomit appeared. Her pulse was good, and her expression cheerful. In the afternoon she informed me that "something had liberated itself in her inside," and that she was passing wind since I saw her last. A liquid motion followed soon after

from the bowels, which contained a few firmer pieces of faeces of the size of hazel-nuts. From this date, her improvement was uninterrupted. She soon regained her usual health, and has since remained perfectly well.

Invaginations are said to be of frequent occurrence, giving rise to temporary derangement of the bowel, and they are also believed to become soon disentangled by the normal peristaltic movements. If this were a case in point, the favourable result was probably due to the free use of opium. Had purgatives been used, fatal strangulation would, I think, have inevitably supervened. A timely diagnosis would render the purely medical treatment of these cases more successful than it has hitherto been."—*British Medical Journal*.

ON THE USE OF JABORANDI OR PILOCARPINE IN THE COLLAPSE OF SCARLATINA MALIGNA. BY ROBERT PARK, M.D., &c., PHYSICIAN FOR DISEASES OF WOMEN AND CHILDREN AT ANDERSON'S COLLEGE DISPENSARY, ETC.

On March 3d I was sent for to see A. S—, aged five years, who had been seized suddenly, early on the morning of the previous day, with violent vomiting and purging. Nothing would "lie on his stomach," even water, the mother said. When I saw him he exhibited all the objective symptoms of collapse. He moaned occasionally, "Oh, my belly." There was also the characteristic smell which exhales from the body of many patients with enteric or scarlet fevers. In the present case diagnosis was impossible. I inclined, however, to the belief that it was a case of scarlatina maligna, the season of the year and the history putting cholera out of the question, and such a sudden onset being very unusual for enteric. Moreover, the abdomen was flaccid and flabby. Temperature in axilla 101.5°; pulse 160. I ordered half a teaspoonful of brandy every hour, and the following mixture: Liquid extract of jaborandi, three drachms (Richardson's); solution of acetate of ammonia, two ounces; syrup of poppies, four drachms; chloroform water to four ounces. A teaspoonful every two hours.

March 4th.—This day the child was very much *in statu quo*. However, purging had ceased, though he was sick, and vomited occasionally. He had scarcely passed any water during the last twenty-four hours. Eyes half opened and glazed. Temperature in flexure of thigh, 96°. Dose of jaborandi doubled, and to be given every hour. Enema of turpentine and beef-tea; milk and soup and brandy *ad libitum*. Hot mustard applications were ordered also to the calves of the legs and feet, and to the abdomen. After a few hours, there being no signs of the physiological action of the jaborandi, unless, perhaps, a slight increase of strength in pulse, I gave him a few drops of amyl nitrite to sniff. This gave a temporary fillip to the heart, but he soon relapsed into a semi-comatose condition, and it seemed as if death was going to be the issue. Thoroughly satisfied, however, that jaborandi was the remedy if it could only be got into circulation, I had some fresh solution of the active principle (pilocarpine) prepared and injected hypodermically, one-thirtieth of a grain, into the inner surface of the thigh, and this failing to produce any characteristic phenomena, I injected another one-thirtieth into the arm about twenty minutes afterwards. This produced an imme-

diate improvement in the pulse, and he became more restless, and in a short time asked to be lifted, when a copious flow of clear urine was passed, together with a watery stool, dark brown in color. None of the characteristic phenomena of pilocarpine were produced.—5th: The child has neither vomited nor purged during the night, but has passed water. There is a slight flush on the face; no sweating; no ptalism; extremities not so cold; respiration no longer sighing; pulse 140, and of better tone; ears warm; eyes no longer glazed; and upon the whole reaction, though faint, may be said to be fairly established. Treatment continued.—6th: Reaction complete, but not excessive. Pulse 140; temperature 102°.—7th: None of the symptoms peculiar to either enteric or scarlet fevers have made their appearance, but the strong fever smell is no longer obtrusive.—10th and 11th: The pulse still keeps quick, 140; temperature from 101° to 102°. The very thick creamy fur which has completely hidden the tongue for the last two days completely exfoliated to-day (11th), and has left the tongue raw and clean, and so tender that hardly anything can be borne by it. The same thing seems also to have happened with the stomach, as the little fellow positively screams when food enters it.—12th: The child is comparatively well to-day, but his pulse still keeps to 140, and he is very weak. He has also had, in answer to a small dose of castor oil, two stools of a tarry description. The urine examined on the 15th was normal in all respects, there being neither albumen nor tube casts present.

Remarks.—This case offers some special features for consideration—namely, the completeness and prolonged duration of the collapse, the exfoliation of the gastro-intestinal mucus, and the limited duration of the entire illness (eight days). The only case at all parallel with it that I have met with was at Stewarton, Ayrshire. It occurred in a boy, about six years old, the last of a family of four to take the fever. The vomiting, purging, and collapse, however, were of short duration, and a faint rash did appear on the skin, and recovery followed. The etiology of this case is very obscure, as no scarlet fever is known of in this neighborhood, I am informed by favor of Dr. Russell. This fact, taken with that of recovery, makes me almost think it may have been an acute gastro-bilious attack, or acute gastro-intestinal catarrh; but then the sudden onset, peculiar odor, pyrexia even during collapse, suppression of urine, and desquamation of gastro-intestinal mucus, appear to negative this idea. My theory is of course that the exanthem was determined to the gastro-intestinal surface, there causing complete suspension of all alimentation and rejection of the contents of the alimentary canal, and subsequent desquamation of the mucous membrane. In fact it became an endanthem, and in this connection it may be mentioned that the winds have been unusually bitterly cold and piercing here since March came in. The urine was not examined till the 16th, when it was found to be in all respects normal, and at this date the child is slowly gaining strength, though not yet able to walk.—*The London Lancet.*

Dr. Caroline S. Pease, a member of the Rensselaer County Medical Society, has been appointed a member of the staff of the Troy Hospital, Troy, N. Y., taking the department of obstetrics and diseases of women and children.

MEDICAL NOTES AND NEWS.

The Faculty of the Polyclinic Entertain the Assistant Clinical Staff.—About seventy doctors met Saturday evening, June 23, at Delmonico's, at a dinner given by the Faculty to the assistant clinical staff of the New York Polyclinic. The majority consisted of the younger members of the profession, but among those invited and present were the Rev. Dr. Thomas Armitage, Julius Hammerslough and Charles Coudert, directors of the institution, and Drs. J. R. Leaming, E. Darwin Hudson, J. H. Ripley, John A. Wyeth, Paul F. Mundé, W. G. Wylie, E. B. Bronson, Landon Gray, R. C. Brandeis, A. R. Robinson, A. G. Gerster, J. B. Hunter, D. Webster, V. P. Gibney, W. R. Gillette and G. B. Fowler.

About 10 o'clock, when coffee and cigars had been served, Dr. J. R. Leaming, the president, called on the secretary, Dr. Wyeth, to read his report. Dr. Wyeth said that though the New York Polyclinic had only been in existence a little more than half a year, the question put to the medical profession as to whether they were ready to add a clinical session of practical study of disease to their three years' didactic course had been answered in the affirmative, and the Polyclinic system had become a feature of medical education. Referring to the results, Dr. Wyeth stated that 101 practitioners had taken advantage of the course, coming from every State in the Union. About thirty had been refused for want of facilities. At the Polyclinic Building 5,117 poor patients had been gratuitously treated. He concluded with a word of praise to the assistant clinical staff, in whose honor the dinner was given, for their patient and faithful labor. The Rev. Dr. Armitage then congratulated the college on the work it had done during its short term of existence, and drew a parallel between its work of tenderness, wisdom and benevolence, and the duties of the ministerial profession. He cautioned his hearers against any tendency to the pauperization of their patients. Remarks were then made by Charles Coudert, president of the dispensary; Dr. Frank P. Foster, Dr. Wesley M. Carpenter, and Dr. Paul F. Mundé. The health of Dr. Wyeth was then drunk, and thanks to the faculty were returned by Dr. Jacobus in behalf of the assistants.

Average Health of Miners.—The opinion is expressed by Dr. Carpenter, of Pottsville, Penn., formed from long personal acquaintance with the subject, and sustained by the almost unanimous testimony of practicing physicians, mining engineers, colliery owners, and miners themselves, that were it not for accidental injuries and deaths, the mining class would show as good average health, as fair a percentage of longevity, and as low a death-rate as any other class of manual laborers; and that the hygienic condition of American mines are receiving more attention and consequent improvement year by year. No comparative statistics of the average length of miners' lives, or of their liability to disease, have officially appeared, but old men are common among them, and are still hale and hearty for their age. Their principal diseases, according to a statement in *The Scientific Press*, are miners' asthma, consumption, and rheumatism, and, among those who have worked long in badly ventilated places, dyspepsia, tremors, vertigo, and other ailments arising from blood-poisoning. The two principal causes are dampness and bad air-pumps and precaution obviating the one, and proper ventilation the other.

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NINTH CONVERSATION BETWEEN DRs. WARREN AND PUTNAM.

Dr. Warren.—Allow me to read to you an editorial paragraph which I found this morning in one of our city papers.

"The doctors are still quarreling over the abstract question of old code, new code or no code. It is essentially a question of consultation between Allopathists, Homœopathists and certain other sects in medicine, upon which the combatants have formally arranged themselves upon opposite sides, and have commenced to throw stones at each other. In which contest the old code men have for the present numerically the advantage, while the more liberal and progressive members of the profession, now temporarily in the minority, are driven to the wall. The latter have, however, the sympathy of the public, which, in this country, always inclines toward those who are contending for liberty, and who are making war upon narrow-minded bigotry."

In a similar tone a majority of the newspapers of this city have from time to time discussed this subject; and it seems to me very unwise for the medical profession to put itself in a position of antagonism to the public press.

Dr. Putnam.—In what respect is it unwise?

Dr. Warren.—In this respect, that it deprives us of the moral support of a very influential class of men.

Dr. Putnam.—Not because they are right in their views, but because our failure to acquiesce in them ensures their displeasure.

Dr. Warren.—Partly both; for I hold that an intelligent independent press, such as we justly boast in this country, is generally right in its estimate of public questions; and whether right or wrong, its open hostility is dangerous to our interests as a craft.

Dr. Putnam.—I will answer your several points in the inverse order of their statement. Our interest as a craft, in the sense of the term as it is employed by you, is a commercial one, and in no wise connected with our interest as the representatives of a science. This latter interest, and this is the only one, we have to consider, cannot be affected by their displeasure. Moreover, this is not in any proper sense a public question, or one which the press is especially fitted to discuss. The editors of most of our city newspapers are men of culture and intelligence; and so far as they undertake to speak of matters which come habitually and closely under their special observation, they may generally be regarded as authority; but in reference to the matter now under consideration by us, I would much prefer the opinions of an equal number of equally intelligent medical men. Indeed the paragraph to which you have called my attention, and which, as you say, is in the same tone with many other newspaper editorials upon this subject, shows that they do not understand the question now being discussed by medical men.

Dr. Warren.—The press is generally regarded with us as a representative of public opinion; and what the people think is, in most cases, very near the truth, "*Vox populi vox Dei.*"

Dr. Putnam.—If this be so, then the voice of God gives a very uncertain sound; for nothing can be more capricious, according to my observation, than popular opinion. It is seldom the same through two consecutive years, and is almost never the same in different countries, or in different districts of the same country. It is very often the case, also, that the press does not know what public opinion is. Its principal or only sources of knowledge are in what people say publicly, or in private conversation, and in what they write in the daily newspapers and journals. They have no means of knowing the opinions of those who neither write nor speak, but only think. The unexpected results of some of our recent elections ought to be considered conclusive upon this point.

Dr. Warren.—When you were enumerating the various forms of medical quackery in this country, you spoke of the immense number of proprietary medicines with which the manufacturers have lately flooded the country; and you said they were only substitutes for the patent medicines, which they had in a great measure driven out of the market; and that they were practically as much secret remedies as the nostrums they had supplanted. I am convinced that you are correct upon this point.

We may be informed in the accompanying circular, with much confiding frankness that "blisterine" and "listerine" are fluid extracts from the Spanish fly and Mr. Lister, respectively, obtained by ingenious chemists through very complicated chemical processes; which processes are carefully described; but it becomes at once apparent to the reader that no one except the manufacturer's trained employee, could obtain the extracts from the same sources in a pure, harmless, unadulterated state.

Yet, Doctor, these nostrums are sustained chiefly by the endorsements and certificates of medical men; in most cases by men of the highest standing in the profession, and who have subscribed to that article of the code which reads: "It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them." It is true that some of these medicines thus advertised and endorsed are not nostrums, but simple and useful medicinal agents, well

known to the profession. Such, for example, as mineral waters, wines, articles of diet and certain drugs; but the certificates are uniformly attached only to those which are brought into the market exclusively by a particular firm, or their firm claims to be the only one which furnishes them in the most useful form and in the greatest purity.

The endorsements are given therefore to those who claim a monopoly of the remedy. They are given to what are practically proprietary medicines.

I observe also that the men whose names are most used, probably because they are most sought, are such as hold professorships in the medical colleges, and whose titles are never omitted.

Of what use is a code of ethics which is thus openly violated in its spirit and letter by the most distinguished men in our profession?

Dr. Putnam.—I agree with you entirely that this is a manifest violation of the spirit of the code; but it is not so plain that it is a violation of the letter. When the code was constructed the class of proprietary medicines now so common and so freely endorsed by medical men, did not exist, and the framers of the code, therefore, had no occasion to allude to them. They are not "patent or secret remedies," as the term secret was then understood.

It is probable that most of these certificates have been given under a conviction that it was not a violation of the code; or because the writers had persuaded themselves that, to say the least, it was not a violation of the letter of the code. But I fail to see in this any reason for casting discredit upon the code, or for questioning its salutary influence. It may be a reason why it should be modified and made to meet the exigencies of this new development of empirical art. It is a reason for rendering the code more specific and stringent upon this particular point, but not a reason for its abolition. It demonstrates most conclusively how prone medical men are to go astray in this country on such matters of sound ethics as have, by accident, been omitted from the code, or in which the code is not sufficiently explicit.

There are some other violations of the spirit of the code on the part of medical men, which are equally reprehensible with those you have named.

The trustees, or the ostensible managers of medical colleges, with the consent at least of the medical faculties, often announce in their circulars the special and extraordinary qualifications of their several professors for the chair, which they have been called upon to occupy. These certificates of qualification are sometimes given to the medical men employed in dispensaries devoted to the treatment of special diseases; but I cannot say, presumably without the knowledge of the medical attendant himself. This is an evasion of the spirit but not the letter of the code, which needs to be met by a new clause.

Dr. Warren.—How can you reach those men who write long articles for medical societies, or for medical journals, and then, under the cover of a scientific paper, press the claims of a proprietary medicine?

Dr. Putnam.—I don't think they can be reached. They will have to be left to suffer the penalty which a just suspicion of their motives may impose; but if our code cannot reach them, suppose, Doctor, you try to discipline them under the gentleman's code, and advise me of the result.

Dr. Warren.—In order that you may understand fully that neither myself nor any of my friends who have rejected the National Code, are in any sense disloyal to the profession, I wish to call your attention to

the fact, that at the stated meeting of the County Medical Society, May 28, 1883, we proposed the following amendment to the by laws:

"No member of this society shall assume any sectarian designation indicating that his practice is based on any special doctrine, or dogma, or specified method of treatment."

Dr. Putnam.—You will not permit "moonshiners" to join your society, organized for the advancement of medical science, but you will consult with them professionally.

Dr. Warren.—Yes.

Dr. Putnam.—You refuse to labor in the same vineyard with them, and thus deny yourselves and them the benefit of your mutual skill in the culture of the vine, but when the season arrives you go arm and arm with them to gather the grapes.

Dr. Warren.—Your remarks reflect on our motives.

Dr. Putnam.—No, Doctor. I have stated only facts, or an unavoidable corollary from existing facts. You have given me your reasons, or the motives of your action, and I have no reason to question your sincerity. Nor will my intimate personal knowledge of many of the gentlemen associated with you in this movement, permit the inference that their motives are not as pure as my own; and I beg of you, as this is the second time you have intimated that my remarks were capable of an opposite construction, to accept of my statement that I have never intended to reflect injuriously upon your motives, nor do I justify any one else in doing so.

Dr. Warren.—We have also in another matter relating to ethics, gone at least one step beyond the limits of the old code.

We have declared that it is unprofessional for medical men to address the public through newspaper correspondents.

Dr. Putnam.—You have voluntarily put yourselves under this restraint; and have, in doing so, deprived yourselves of one of your rights as free citizens. I don't think I would have done it.

Dr. Warren.—You forget that there is a section in the National Code which declares that "it is derogatory to the dignity of the profession to resort to public advertisements," etc. Speaking to the public through newspaper correspondents or "interviewers," is, we think, resorting to public advertisements, and we seek by our recent action to enforce what is evidently the spirit if not the letter of this section.

Dr. Putnam.—You have overlooked also another section of the code, which may be considered explanatory of, or supplementary to the one you have just quoted.

"As good citizens, it is the duty of physicians to be ever vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens. They should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene and legal medicine. It is their province to enlighten the public in regard to quarantine regulations; the location, arrangement and dietaries of hospitals, asylums, schools, prisons and similar institutions; in relation to the medical police of towns, as drainage, ventilation, etc.; and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives."

Notwithstanding the explicit authority given to

medical men in this clause to enlighten the public in certain matters pertaining to medical service, and in spite of the fact that it is enjoined upon physicians as an imperative duty, which as good citizens they could not neglect, its excellent precepts have remained until recently a dead letter.

Dr. Warren.—The precept contained in the last clause has not remained a dead letter.

Dr. Putnam.—No, Doctor, and I thank you for reminding me of that. Thousands of medical men have sacrificed their lives in their unwavering allegiance to this precept enjoined by the code. They have not, however, shown equal respect for those portions of the section I have quoted, which declare it to be the duty of medical men to instruct the public in matters relating to health; a fact which finds its explanation in their reluctance to obtrude their opinions where they are not asked. They have shown courage in volunteering their services to arrest the progress of pestilence; but they have not shown that they have courage to volunteer their medical opinions for the purpose of instructing the public.

It has often been a source of serious regret among medical men, that they had no suitable channel of communication between themselves and the public. The precepts of religion are taught from infancy to the grave, in the nursery, from the pulpit and in a thousand other ways; the principles of law are expounded daily in the courts, by judges and expert counsel; and their opinions are published everywhere for the instruction of the people.

But to medical men no avenues of direct communication with the public at large have seemed to be open.

At length, however, there has been developed another peculiarly American institution, or perhaps I ought to designate it as a profession; for I think it has by its wonderful growth and achievements acquired a right to this distinction—I refer to the interviewers profession.

The American newspaper interviewer, or correspondent, as he is sometimes called, interrogates lawyers, doctors, clergymen, bishops, cardinals, statesmen, soldiers, politicians, railroad kings, brokers, actors, singers, stage managers, merchants, tailors, shoemakers, manufacturers and all distinguished travelers from abroad.

All, or nearly all, who have been subjected to this inquisition, have courteously and without protest replied to his questions as they were able to do, or as they thought proper. Emboldened by conquests at home, he is now sailing around the world in his own yacht, interviewing successfully either directly or indirectly the Czar—Emperor of all the Russias—the Sultan, the Khedive, the Emperor of China and the Pope, and yet you think that doctors should shut the door in the faces of all interviewers.

Dr. Warren.—Yes, but courteously.

Dr. Putnam.—To my mind there are several reasons why they should not.

First. It is an established custom of our country, and neither our own most respectable citizens, nor distinguished foreigners living temporarily with us, refuse to comply with the custom.

Second. It furnishes precisely that avenue to the public which is so much needed by us, while it is not obtrusive. Medical opinions are given only in response to the invitation of the people, who, you say, are represented by the press. It enables us therefore to comply with that clause in the code of ethics, to which I have just referred you, and which has hitherto been a dead letter.

Third.—If we do not answer the questions of the interviewer, he will answer them himself. An expert interviewer is able often to determine precisely what a man would have said if he had spoken, by a cursory inspection of his office, by the color of his hair, and the cut of his whiskers,—all of which “interview” he will give carefully and in detail to the public, and then draw his conclusions as to what the sphinx must necessarily have said if he had opened his mouth.

In the case of the late President Garfield, day by day, from the moment he was wounded until his death, the nation demanded to know his condition and the prospect of his recovery; and it was the plain duty of his physicians, who were, of all others, most competent to speak intelligently upon these matters, to give such information as they possessed.

Dr. Warren.—But Mr. Garfield was the chief magistrate of the nation, and his was, therefore, an exceptional case; and consider, also, how, in this case, the privilege was abused by some physicians who were in no way connected with the treatment of the case.

Dr. Putnam.—I recognize the right of any man to give to the public his opinion in regard to a case like this, provided he is, by virtue of his superior talents, learning, experience, or opportunity, qualified to give a sound opinion; and especially if his qualifications are notoriously superior to the qualifications of those who are in immediate attendance.

If, for example, the men chosen by the President were men of no practical experience,—possibly young men who had just come from their apprenticeship,—and the progress of the case did not appear satisfactory to the public; then I think it would be the plain duty of physicians of large experience to endorse the conduct of the gentlemen in attendance, in case it met their approval, and thus relieve the public anxiety; or, in case it did not meet their approval, to say so frankly, and thus enable the friends to correct the evil before it was too late.

Dr. Warren.—It would seem hardly just to impose upon medical men the latter duty, as it would probably expose them to the suspicion of having been actuated by improper motives.

Dr. Putnam.—I think not, if the circumstances and the relative standing of the attendants and critics were such as I have supposed. If, however, they were reversed, then the public might be so uncharitable as to question the motives of the critics.

You call this an exceptional case; but every town and county has its important man, in whose life and welfare the people have a great interest. If you permit yourself to be interviewed in reference to the chief magistrate of the nation, you are equally bound to speak, if requested to do so, in reference to the chief magnate of the village.

There is another and more important class of cases included in your recent act of personal restraint; more important, because it affects personally and practically a much larger number of people. You decline to give information, through interviewers, to the daily press even upon matters relating to general or special hygiene. But let me recall to your mind a recent case in which a medical opinion thus obtained and published was productive of great public good.

A serious disaster having occurred on one of our railroads, in consequence of the color-blindness of the engineer, an interviewer called upon one of our most distinguished specialists in diseases of the eye,—a gentleman of skill and authority in these matters, and who has a well-deserved national reputation,—and obtained from him a full and intelligent account of what he knew

upon this subject. I read it myself with interest and instruction. This interview has led to efforts, on the part of those interested in steamboats and railroads, to protect their property and their passengers from this source of danger. Plainly this doctor did his duty.

Dr. Warren.—I do not recognize myself in your picture, if it is intended for me. The coloring is too high; but in the circumstance you relate I recognize my own somewhat inconsiderate act in conversing with a reporter.

Dr. Putnam.—You have no cause to regret your conduct, and I am sorry that you sought to reprove yourself, by voting that such acts shall hereafter be deemed derogatory to professional dignity.

You have emancipated yourself from what you consider a troublesome and humiliating bondage, only to put your neck under a heavier yoke. Why do you not reserve the right to exercise your own judgment in these cases, as you have declared your intention of doing in regard to consultations with charlatans?

Dr. Warren.—Because in the latter case the interest of the suffering patient demands it, while in the former case it does not.

Dr. Putnam.—I deny that the interest of the patient demands your consultation with a charlatan. It may demand your *actual services* in a case of emergency, but not a *consultation*, and this, I have said before, is the letter and spirit of the code. It is your duty, if called upon to do so, to arrest a dangerous hæmorrhage, or to do anything else which may be necessary, when delay would be attended with fatal or serious results. These services being rendered to the patient only, and not to the charlatan who may be present; and who, whether present or absent, should be treated with the courtesy due to any other citizen or friend; but not as one professionally in charge of the patient.

But suppose the code were to teach, as you certainly know it does not, that we could not go, when summoned, to the relief of a man who was in distress, because an empiric was in attendance, why should you insist upon your right to minister to the sufferings of one man when requested to do so, and deny yourself the right to minister to the sufferings of ten thousand, through the public press, when requested to do so?

BOOK NOTICES.

A Practical Treatise on Diseases of the Skin, for the Use of Students and Practitioners, by James Nevin Hyde, A.M., M.D., Professor of Skin and Venereal Diseases, Rush Medical College, Chicago: Dermatologist to the Michael Reese Hospital, Chicago: and one of the Physicians to the Infirmary of the Chicago Home for the Friendless. Published by Henry C. Lea's Son & Co. Philadelphia. 1883.

There have been few departments of medical research of recent years in which observers have apparently made greater haste to record the results of their observations and the deductions both practical and theoretical derived from them, than in the department of diseases of the skin. From the valuable and comprehensive treatise of Duhring to the prolix monographs on special skin diseases which have appeared, we have every variety of book, some fairly good, others wholly bad. There has been in this, as in other branches of medicine, a tendency among writers to simplify and render practical, to get rid of the bugbears of abstruse theories that have condemned so many books and to state clearly only what was known

and indicate the most likely paths for the acquirement of further practical knowledge. In striving to do this many authors have erred in presenting only skeletons without flesh, and left the reader to search in vain for the substance that would furnish excuse for writing. In looking through Dr. Hyde's book we get the impression that he has cleverly managed to avoid both Scylla and Charybdis, and though not presenting any strikingly original views, he has gathered from Hebra, Kaposi, Wilson, Tilbury, Fox, Duhring and others well known to readers of this subject, much that is worthy presentation. The arrangement of the matter thus gleaned is for the most part admirable as regards classification and convenience for study, but the literary merit of this mosaic is often marred by abruptness and want of harmony. This latter may however be inseparable from a work covering so much ground in which the object sought is conciseness and terseness of statement rather than elegance of diction.

The author has prefaced his systematic consideration of disease of the skin by some remarks of varying merit on its anatomy and physiology, general symptomatology, general etiology, general diagnosis, prognosis, and general therapeutics. The classification adopted is that of Hebra, which is termed the "most satisfactory of all the systems thus far proposed." While adopting this he states that "it is probable that no perfectly satisfactory classification of cutaneous diseases can be generally accepted till the knowledge of diseases of the skin has been greatly enlarged."

In considering the much discussed subject of eczema he is content with general statements as to its nature, not espousing either side of the question as to its local or constitutional nature, though inclining to the former view. Thus he says: "In many cases no cause of eczema can be discovered beyond those which operate exclusively within the skin organ and are proper to itself. These are necessarily obscure, and will remain so until we are in possession of far more knowledge as to the complex and inscrutably delicate processes by which innervation, nutrition and new formation of the living matter of the skin are both conserved and impaired. The autonomy must be conceded to the extent recognized in other organs of the body, etc."

This is of course a graceful statement of the fact that the cause of eczema is unknown, and that whether it be local or constitutional is a matter upon which dermatologists disagree. He does not, however, go to the length that an eminent dermatologist did recently in a discussion of this question before the New York Academy of Medicine, in which he termed the constitutional theory "a myth, a vagary, a lucubration of too active imaginations."

In the chapter on anatomy much has been drawn from Dr. Heitzmann's recent work on Microscopic Morphology, some of the illustrations from which have been reproduced.

The illustrations, with the exception of those indicating the microscopical appearance of the skin, are next to useless and had as well been left out. Indeed, we doubt not that they would rather tend to confuse the student than to aid him in diagnosis and in gaining a clear perception of the appearance of the disease described.

The formulæ which in Duhring form such an attractive feature of the book, do not appear in this book sufficiently often for a designedly practical treatise.

Comparisons are always odious, and it would be invidious to compare this less pretentious work with

that of Duhring, especially since much or it is so excellent, but we must fail to be convinced of the necessity for the publication of even works of merit on this subject which cannot vie in any desirable feature with such an one as Duhring's.

The Curability of Opium Addiction. By J. B. Mattison, M.D. Read before the King's County Medical Society. Reprint from *Quarterly Journal of Inebriety* July, 1883.

The author of this paper, which has been reprinted, is a firm believer in the curability of the opium habit. He very justly maintains, however, that certain conditions must be rigidly adhered to, in order to secure permanent results. In the majority of instances the degree of conformity of these will represent the amount of improvement or actual cure.

The paper is of interest as pointing out in what direction alone, viz.—removal of the causes leading to the formation of the habit—we are to look for certain and lasting cure.

ORIGINAL ARTICLES.

OPIMUM SMOKING.

BY

F. M. HAMLIN, M.D.

At the last meeting of this Association, I had the pleasure of reading a paper on the Opium Habit. I propose to call your attention to-day to a phase of this habit, which is novel, at least as an actual experience, to us Americans. I refer to opium smoking.

It is not probable that many of those present have ever seen any of the effects of this form of its use, and my own experience is comparatively limited; but from the rapidity with which the habit has spread in our country, and the already large number of confirmed habitués, it is of such importance as to induce me to gather such information for your consideration as the limits of a paper of this kind will admit.

The popular idea of opium smoking is absurdly erroneous, not only as to the method of smoking, but as to its effects. Most of the knowledge we have had till recently of the habit has been imparted by travelers and missionaries, men evidently not trained to habits of careful observation, or so blinded by prejudice as to be unable to give a truthful and accurate account of what they saw.

A writer in *Blackwood's Magazine*, in 1853, gives the following curiously inaccurate account of the method: "The Chinese extract from the Indian opium all that water will dissolve, generally from $\frac{1}{2}$ to $\frac{3}{4}$ of its weight, dry the dissolved extract and make it into pills the size of a pea; one of these pills they put into a short, tiny pipe, often made of silver; inhale a few puffs at a time, or one single, long puff, and return the smoke through the nostrils and ears until the necessary dose is taken." In another place the same writer states that adepts in the practice blow the smoke out through the eyes, ears and nose.

We have always been taught the Chinese were a peculiar people, but probably none of us supposed they were gotten up with such an evident disregard of the general principles of anatomy.

J. F. Davis, in his book, "The Chinese," published in 1836, gives a cut of a Chinese mandarin smoking. The representation of the pipe is quite correct, but the manner of using it is that of the common tobacco pipe, and the smoke is represented as curling up gracefully

from the bowl. With such absurd misstatements by those who claim to know, or to have seen that which they describe, it is not surprising our ideas have been so incorrect.

The absurdity of all this is shown by the fact that the opium, when it comes to the smoker, appears like, and is of the consistency of, thick molasses. It is, in fact, a carefully prepared watery extract of the drug.

I condense from William's work, "The Middle Kingdom," an account of its preparation.

The ball of opium is cut in two, and the part adhering to the leafy covering is separated from the middle portion, treated to repeated simmerings and strainings, and in the liquid thus obtained the interior portion of the ball is boiled for about an hour, until all is reduced to a paste. It is then spread out in pans and held before the fire till all the water is driven off. Then it is made into one cake, covered with water and allowed to stand several hours for digestion. Afterward it is permitted to drain away through a rag filter into a basket lined with coarse bamboo paper from which it falls into a pan. The dregs are again soaked and filtered till nearly tasteless. The various filtrates are boiled, the strongest first, and the weaker ones added till all are mixed together, and strained. The whole is then placed over a slow fire and boiled to the proper consistency. The dregs, with the scum and washings of the pans, etc., are made into an inferior quality and sold to the poor.

There are two qualities, or grades, of No. 1 smoking opium brought to this country—the Li Yun and Fuk Lung—varying in price from \$7.75 to \$8.20 per can. The duty on this is \$6 per pound.

The opium pipe, or "opium pistol," as it is sometimes called, consists of a stem of bamboo about 24 inches long and 4 inches in diameter, the end which is applied to the lips being tipped with ivory, and a bowl of hard red earthenware. The bowl is hollow with the top flat or rounded, with a perforation in the center large enough to admit an ordinary knitting-needle.

The other articles of a smoker's outfit are, a box of buffalo horn (*hop toy*) to contain the opium, a needle (*yen hauck*) upon which the opium is taken up, "cooked," and placed upon the bowl, a small oil lamp, a pair of scissors, a curved knife for clearing from the surface of the bowl the ash which rapidly collects, and a saucer to hold this ash.

The outfit, or "lay-out," as it is termed, being complete, it remains to describe the manner of using. A portion of the semi-fluid opium, about the size of a pea, is taken up on the end of the needle, or *yen hauck*, and held over the flame of the lamp. It swells up under the heat, drops down in golden brown festoons which are caught up on the end of the needle, rolled up on the surface of the bowl, held over the flame again and "cooked" till of the proper consistency, when it is again rolled upon the bowl into a compact little mass. The smoker then takes the pipe with the bowl in his left hand, thrusts the end of the needle down through the hole in the center of the bowl, and withdrawing it with a twisting motion leaves the mass of opium in the form of a little cone surrounding the hole. Then reclining upon his left side, he turns the bowl directly over the lamp with the flame against the opium. As it burns, he applies his lips to the end of the pipe and draws the smoke directly into his lungs, and emits it, dense and white, from his mouth and nostrils. The smoke has a rich, nutty odor which is not at all disagreeable. The smoker practices either the "long draw" or the "short draw," the former meaning to exhaust the mass with

one long inhalation, the latter is more like ordinary smoking. The "long draw" is much the more injurious practice. The process is repeated again and again till the smoker is satisfied. The "cooking" requires considerable skill, and apparently affords adepts a great deal of pleasure. Frequently two persons, or a party, smoke together, one "cooking" for the others to smoke, changing about till all are satisfied. There are certain technical terms used by smokers which are curious. The place where the opium is sold and smoked is called a "den" or "joint," the outfit of implements is a "lay-out," the excessive smoker is a "fiend," the man who smokes once a day has the "single habit," if twice, the "double habit," and if early in the day the "early habit."

The "joint" is generally some basement or rear part of a laundry kept by a Chinaman. A bench or platform about two feet high is built around three sides of the room, which is generally low, filthy and saturated with the fumes of the drug. It is a curious fact that even wealthy habitués, who own superb "lay-outs" at home, will resort to these filthy dens from preference, perhaps, in part for the company they meet, but mostly because the satisfaction seems greater when everything is saturated with the opium.

When a smoker intends going on a journey, or to a place where he cannot get the pipe, he will cook up a number of pellets and carry sufficient of them with him to last, when taken by the mouth, till he can return to the pipe again. Dr. Kane says, a single pellet taken by the mouth has ten times the effect produced by smoking.

One of the popular errors in regard to this practice is that habitués persist in smoking till they fall into a stupor or deep sleep, which is filled with delightful dreams. In fact, sleep is seldom produced. The sensations of a beginner in the practice are graphically described by Dr. Kane, who gives a history of his experience. He says :

"The first effect was nausea, dizziness, accompanied by a pleasant sense of exhilaration, and followed by a quiet, easy contentment. This was after deeply inhaling four 'pipes.' There was an increase in the force and frequency of the pulse, hot flashes over the body and face. After a few more pipes, came a soft pulse, lessened in frequency, a fall in temperature, giddiness, a slight nausea, with some staggering on rising or walking; then profuse perspiration, ringing in the ears, intense itching of the nose, eyelids, face, scrotum, and back. Profuse perspiration and nausea continued, followed shortly by abundant but easy vomiting. There was also a feeling of uncertainty in putting down the feet in walking, dazing of the mind, sleepiness, heaviness of the eyelids, contraction of the pupils, dryness of the throat, and a fear to cross the street if a wagon or car was approaching. There seemed to be some trouble with the ears, for I found myself talking very loud. The sexual appetite was increased. This was followed by intense sleepiness, the daze, however, lasting but a moment, and the awakening being sudden. There were no dreams. The nausea, which was a prominent and distressing symptom in my case, lasted for the next twenty-four hours, as also did the itching."

If the practice is followed up regularly, as in all the other forms, a habit is more or less quickly acquired, and especially is the habit most rapidly gained when the indulgence is followed up at a certain hour each day. With repeated indulgences the disagreeable symptoms disappear, and only the pleasures remain. These are, almost universally, a calm, contented dreamy frame of mind, a sort of drowsy, physical,

bliss, which banishes bodily pain, and mental inquietude; obstacles vanish, success is easy and assured in all the dreamy plans of the votary: he seems to himself a very king among men, instead of the abject slave of a degrading habit; and when the effect of the drug passes off, he arises without the disagreeable sensations of the novice.

Dr. Kane asserts, from his observation and the testimony of intelligent Chinamen, that the smoker does not fall into a deep sleep, which is full of gorgeous dreams, after inhaling a few pipes; and he says, "it is not for the sleep that these people smoke, but for the condition of dreamy wakefulness that follows the smoking of their given amount."

As in the use of all the other forms of the drug, the smoker has to increase the quantity, or the frequency, of his indulgences, to secure the desired satisfaction, and ultimately, when all the pleasure has fled, as it surely will, he only smokes to keep from suffering. Now the habit which was only a pleasure becomes the most galling bondage. He has lost interest in his business and forsakes it; he has lost capacity for any other enjoyment; he haunts the wretched dens, and amid loathsome surroundings and degraded companions, he strives in vain to satisfy his demon appetite. The satisfaction he once obtained in a half hour or so, cannot now be reached without hours of devotion to the pipe. It is no unusual thing for a confirmed habitué to spend the afternoon and night in the opium "joint." The amount of opium consumed by some is enormous, the range being anywhere from sixteen to 1,600 grains, although any amount over 200 grains is regarded as excessive, and the smoker is entitled to be considered a regular "fiend." Some consume as much as \$2.00 worth regularly each day.

PHYSICAL EFFECTS.

The effects upon the individual may be briefly summed up as follows: The appetite is at first greatly disturbed, becomes natural as the habit is established, and is impaired again as it progresses. Nutrition is generally interfered with, and the victim loses flesh. The bowels become obstinately constipated, more so than in any other form of addiction. The skin becomes sallow, or pallid, the sclerotic jaundiced, a peculiar form of intermittent fever occurs, with cold sweats and irregular, chilly sensations. A catarrhal condition of all the air passages results from the direct contact of the smoke probably, and singers and actors often lose power over the vocal cords. Upon the eyes the effects are marked, conjunctivitis and near-sightedness almost always exist. The itching of the skin is more intolerable than in any other form of using opium. Upon the urinary organs it produces irritability of the bladder, with spasmodic stoppage of the flow of urine, which is much diminished in quantity, and always contains morphia. The sexual organs are profoundly affected. In the beginning of the habit, desire and power of gratification are very much increased; especially is this true of women, there being, in some cases, such an erethism as to amount almost to nymphomania. Designing villains have taken advantage of this fact, enticed young girls to smoke, and seduced them while under its influence. As the habit progresses this appetite is impaired, but is not so completely abolished as in other forms of the habit, nor, among females, is there that complete suppression of the menses, nor are they so likely to abort.

EFFECTS UPON THE MIND AND MORALS.

The effects upon the mind and morals show this to be the most pernicious form of using the drug. All

though insanity cannot be called a frequent result, any more than in morphia addiction, there is a weakening and lowering of the whole mental and moral tone and force which is most disastrous. There is a disinclination for, and an inability to sustain, mental or physical exertion. There is indecision and weakening of the will, with loss of memory. The degrading tendencies of the habit are shown by the love of low associations, and a strange desire on the part of many victims to initiate others into the practice, hence nearly every smoker becomes a source of danger to his friends.

The missionary, Doolittle, in his "Social Life of the Chinese," says the Chinese, in describing the effects of the habit, "dwell with peculiar emphasis on the *weakness* and *indolence* it induces;" and also speaks of a curious change, or habit of the body, produced in some smokers. The shoulders are elevated, as in shrugging them, and the head is drawn downward. "Such an opium smoker is expressively described as 'having three heads,' from the high and unnatural elevation of the shoulders."

Compared with other forms of opium addiction, it may be regarded as the least injurious to the individual physically, and the most disastrous mentally and morally; and to society the most dangerous of them all. This form of the habit is pre-eminently a *vice*, with all the degrading tendencies the term implies. The smoker knows he has no justification for his habit. He formed it solely for sensual pleasure, and like all other forms of vice causes loss of self-respect, and self abasement. On the other hand, the vast majority of opium habitues, in our country at least, formed the habit because of physical pain or distress. Such people are to be regarded as unfortunate rather than vicious. The opium-eater practices his habit in secret, and is his own worst enemy, but the smoker seeks the company of those who are also idle and dissolute, and many a crime has been planned over the opium pipe.

The physical evils of this habit have been, undoubtedly, greatly exaggerated. It is the testimony of competent observers in China that many of the wealthy class smoke many years and live long lives. This is probably because they have good food and the comforts of life. But it works great harm to the poor who are illy housed and fed. Doolittle says, "it is estimated their lives are shortened from five to fifty years."

Abstinence from smoking is followed by symptoms like those from other forms nearly. First there is a dull, painful sensation about the pharynx and larynx; then all the secretions, which have been so long checked, seems unlocked, and there are profuse watery discharges from the eyes and nose, accompanied with much sneezing and yawning, vomiting and diarrhoea; intense nervousness and restlessness supervene; wandering neuralgic pains come on; the vomiting and diarrhoea continue with great prostration, delirium often occurs, and if opium is not used the patient passes into a condition of collapse, and death often closes the scene.

While the demand for opium is as strong in this as in other forms of habit, if, indeed, it is not more urgent, it would seem from Dr. Kane's experience the easiest to break and the most amenable to treatment of them all, for he reports cases cured in one week.

The plan of treatment he adopts is that of rapid reduction, and an endeavor to supplant the narcotic with sedatives and stimulants. The treatment, in brief is as follows: It consists in the use of capsicum, digitalis, and tinct. cannabis indica in large doses, often repeated. The bromides of potassium and sodium may be given if there is much reflex nervous trouble.

They should be administered in 100 grain doses twice daily, well diluted. Bismuth and catechu in large doses for the diarrhoea and vomiting. Hot baths and fluid ext. gelsemium for the pains in the limbs and restlessness. Stimulants free for the first day or two, and then carefully withheld. Electricity, rubbing, etc., are of use to relieve pain and nervousness. Chloral and hyoscyamus to relieve insomnia. Some light occupation should be devised to engage the mind, and such restraint as will prevent the patient from gaining access to the pipe or opium in any form. Although the cure is generally affected in a week, it is not advisable to trust a patient so soon without supervision and restraint. As in all the other forms, treatment is best carried out in specially prepared "Homes," or hospitals, where complete control of the patient can be maintained.

As to liability to relapse, I should suppose the smoker the most so of all the habitues of opium. Not because of any inherent tendency in this form over the others, perhaps, but because of the manner of life of the victim and his associations. The man who has smoked any length of time has deserted, probably, all of his real friends, and now has only his companions in the vice. The probabilities are that he will gravitate to his old haunts for companionship, and where the odor of the cooking drug and the enticements of his friends will overcome the powers of resistance of his weakened will.

A CASE OF CYSTOCELE.

BY

W. A. MCCOY, M.D.

The report of a case of cystocele in the *Gazette* of June 9th recalls a case that came under my observation and of which I made notes at the time.

February 9, 1880, between 4 and 5 o'clock P. M. I was called to Mrs. G., a strong, healthy woman, who was in labor with her fourth child. She had been in labor all day, attended by a mid-wife, who informed me something was wrong, but did not know what. On digital examination I discovered a smooth elastic tumor about the size of an orange protruding from the vulva. It was attached to the anterior vaginal wall and became very tense and firm with each pain. With considerable difficulty I reached around behind it and felt the os dilated, and the child pressing down upon the tumor. On inquiry I learned that she had passed no urine all day, although the desire was pressing, and had made numerous attempts to do so.

This, with the absence of any previous tumor and its location, convinced me it was a cystocele. But how to get rid of it was not an easy question, as the pains were vigorous and the head pressing down upon it, threatened to rupture it any moment. To evacuate it, I attempted to pass a soft catheter, but on account of the distortion of the parts was unable to do so. I then tried a silver male catheter, and by turning the point downward and backward, I succeeded with difficulty in passing it and evacuating the larger part of the tumor, but not at all, as the bladder seemed paralyzed, and refused to contract well; but this permitted labor to proceed, and in about four hours she was delivered of a living female child. The pelvic outlet was roomy, or I do not think it possible to have delivered her without serious damage, as the bladder lay just under the pubic arch, and was subjected to severe pressure, and there was no possible way to avoid it.

After delivery the bladder hung loose and pendulous in the vagina, but gradually assumed its normal position I was apprehensive of post-partum troubles, but she made a good recovery, with the trifling exception that her urine had to be drawn for a few days.

LECTURES.

CIRRHOSIS OF THE LIVER—DELIRIUM TREMENS.

A CLINICAL LECTURE.

BY

AUSTIN FLINT, M. D.,

Professor of Practice of Medicine, Bellevue Hospital Medical College, etc., etc.

This patient, gentlemen, is at present under considerable mental aberration. She has jaundice, as you see. What I wanted her especially for was as an example of ascites or hydroperitoneum. The abdomen is only moderately enlarged. I wish to illustrate the method of determining by physical exploration the existence of fluid in the abdominal cavity. [Patient becomes delirious and has to be removed]. This patient has been a drinker, and of late drank very heavily. She has evidence of disease of the kidney. She has delirium tremens and is unmanageable. My impression is that women who suffer from delirium tremens are not so manageable as men. She has attempted to assault her medical attendants. I will read her history, and comment as we go along.

Catherine S., æt. 50, native of England, admitted May 23. Patient has been a moderate drinker for years, but for the last six months she has been drinking harder. Has been in the habit of drinking whiskey for several months. For the past seven months she has been troubled with vomiting of stringy mucus in the morning and with anorexia. Here we have the evidence of gastritis, such as persons have who are addicted to the use of alcohol. This form of gastritis is rather rare except in this connection. She has vomited blood several times during the last year. This event should be taken in connection with the cirrhosis of the liver which undoubtedly exists here. Hemorrhage from the stomach and from the intestinal canal are events occurring next in frequency to dropsy in cirrhosis of the liver. She has had considerable pain at times in the right side, when the abdomen has been swollen. For the last three weeks she has been drinking very heavy. During this time she has had a watery diarrhœa, having as many as six passages during the night alone. Here is another event which occurs in cases of cirrhosis of the liver. These three indications, peritoneal dropsy, diarrhea and hemorrhage are all dependent upon the same causative condition, namely, obstruction to the circulation of the portal blood through the liver as incident to the cirrhotic condition. Tremor of the muscles of the upper extremities has been quite marked. Three days ago patient noticed that her eyes were very yellow. This yellowness has now become apparent in the face and upper part of the body. This is an occasional symptom of cirrhosis, not constant, however. I presume the explanation here is this: she has a gastritis or gastro-duodenitis and the jaundice is due to the condition which most frequently gives rise to it, viz.: an obstruction met at the opening of the ductus communis-choledicus in consequence of a swelling of the mem-

branes opening into duodenum or as an extension of the inflammation along the duct. The cirrhotic condition of the liver does not in itself involve conditions giving rise to jaundice. Patient was quite weak on admission. On examination a slight œdema of the feet and abdomen was observed.

The liver here is enlarged and not contracted as is usually the case in cirrhosis. The presumption is that the enlargement of the liver involves both cirrhosis and fatty liver. The spleen is also enlarged, as is generally the case in cirrhosis of the liver. The urine is clear, acid, specific gravity 1014, contains bile and a moderate quantity of albumen.

This case, gentlemen, affords room for remark in several particulars. First, as to the delirium tremens: This is due to a sudden suspension of her habit of drinking stimulants. The treatment for this is to keep her quiet and to use bromides, or perhaps opium, and to administer some form of stimulant, perhaps moderately. The ascites was the subject that I meant to dilate upon in connection with this case. The point in practice which I have for more than twenty years inculcated by oral teaching and in writing, is to resort to tapping, early and repeatedly, in cases of ascites. Most practitioners in this country and in other countries, in England, Germany and France, still inculcate the employment of tapping only as a last resort after other remedies have been employed unsuccessfully, viz: when the accumulation of liquid is so great as by interference with respiration to occasion suffocation and endanger life. This is the view taken by prominent physicians in these different countries. I believe this to be wrong. I can cite illustrations pretty abundantly which go to show that when in connection with cirrhosis of the liver ascites commences, the liquid is apt to increase very rapidly, so that the abdomen becomes distended within a short period. My practice is, the moment the abdomen becomes distended sufficiently to occasion any considerable inconvenience, to take out the liquid by tapping. It may be taken out in the ordinary way by a trocar of considerable size or by aspiration. Now in what consists the objection raised against this method by those who advocate delaying tapping as long as possible? In the first place, they say that if the patient is pretty weak there is danger in removing so much fluid rapidly from the abdomen—that the patient will fall into a condition of collapse and perhaps die. In the experience of all the cases that have come under my observation, I have noticed not only no fatal result but not even an alarming symptom. If there be any danger in the operation it can be avoided probably entirely by aspiration. Another objection is that it produces peritonitis. I can recall but one instance where peritonitis followed tapping. That patient had general dropsy dependent in some measure upon kidney disease, so that there was an inflammation of a serous membrane in that case which started the peritonitis. The objection to aspiration is that the amount of liquid is large. It is considered a tedious operation to remove twenty to fifty pounds of liquid by suction. However the aspirating instrument which we employ can be managed by anybody so that the physician need not do the whole of it himself. The only objection which can be brought against it is the loss of time. These then are the objections to paracentesis and they seem to me to have no weight whatever. Now what is the treatment pursued by those advocate postponement of the operation as long as possible? They diminish the liquid by three methods: diaphoresis, diuresis and hydrocatharsis. You may throw sudorifics at once out of the

question. I have lived long enough to see their entire inefficiency. Sometimes something is accomplished by diuretic medicine. As a rule very little and often not any improvement follows. Sometimes they will succeed but not as a rule. If they do succeed the hydragogues have to be continued for a considerable length of time. These are at present the predominating remedies for the relief of hydropertoneum and the patient has to suffer from the effect. Even if we accomplish anything we accomplish it slowly. It is desirable to get rid of the liquid. Now why not get rid of it in a few minutes by an operation which is harmless and almost painless, viz., the introduction of a trocar? I have had considerable experience in quite a number of cases which illustrated the benefit of tapping early and often. I have one case particularly in mind where I was called to see a patient about forty-five years of age, of good habits, some eleven years ago. The previous history of the patient was this as given by his wife. He had been ill for some time with symptoms which were considered as denoting what was called portal phlebitis, more properly thrombosis of the portal vein, so far as I am able to judge from the history given me by his wife; the patient had perspiration, chill and great prostration and he was considered in immediate danger of life. He first had very copious evacuations of the bowels of a sero-sanguineous liquid. This was arrested by opium and this was followed by very alarming symptoms. Then he had vomiting and purging of pure blood and peritonitis. Then his abdomen began to enlarge and he had ascites with great accumulation of fluid. He had three very eminent physicians of this city in attendance upon him. The question was asked whether it would not be judicious to resort to tapping. Each one decided that it would be dangerous and therefore advised against the operation. The distress of the patient from the pressure of the liquid was extremely great. It was thought that he would not live many days. I may mention that his wife had taken to endeavoring to study the case by reading medical works and she got hold of my work on Practice. She found there that I recommended tapping and therefore suggested my being called in consultation for that reason. The attending physician, now deceased, readily assented to my suggestion that the patient should be tapped and he was tapped. The patient was relieved and made comfortable and his symptoms improved. However the liquid recurred and in the course of three months he was tapped ten times, losing in all 350 pounds. After the tenth tapping there was a slight re-accumulation. This did not accumulate sufficiently to require an operation and after a time disappeared. The patient is to day in good health. I saw him only yesterday. He told me he had not the strength and endurance which he had before his illness but he can walk from one to six miles every day which he does for exercise. Here is a very interesting case then illustrative of the value of tapping and its importance.

A curious feature connected with this case is the fact that during the illness of this patient he adopted a diet of ginger bread and milk which he has continued for eighteen months. He consumes four quarts of milk every day. What is remarkable is that he has kept up that diet essentially ever since for ten years. The staple of his diet has been milk and ginger bread. He has had occasionally, oysters, rice, eggs, and asparagus. During all this time he has not tasted of fish, fowl or any kind of flesh. Another point of interest is that some two or three years ago some one suggested to him to eat green corn. Being fond of this article of diet he tried it when he had a recurrence of the dropsy

and the fluid re-accumulated so that it was thought he would be tapped again. Under the influence of diuretics, however, the fluid disappeared. During the last winter we had a case in the hospital which also illustrated the value of tapping. The patient held out pretty well but finally succumbed. In that case post-mortem examination revealed a mechanical obstruction to the portal-vein and an increase in its serous structure to such an extent as to encroach upon the vein and to produce very considerable obstruction. Life, however, was prolonged and the patient was rendered more comfortable than he otherwise would have been by tapping early and repeatedly.

CHRONIC ALCOHOLISM—LEUCOCYTHÆMIA —PHTHISIS.

A CLINICAL LECTURE.

BY

FRANCIS DELAFIELD, M. D.,

Professor of Practice of Medicine College of Physicians and Surgeons, New York, etc., etc.

CASE I.—CHRONIC ALCOHOLISM, CIRRHOSIS OF THE LIVER, ENLARGED SPLEEN AND CHRONIC DIFFUSE NEPHRITIS.

History.—This patient, gentlemen, is a carpenter by trade, and works during the day, indulging freely in intoxicating draughts at night. He complains of unilateral sweating, and on this account he comes to the clinic to-day. There are cases in which one-half of the body is entirely dry and the other half will have a good deal of perspiration.

As I examine the patient I find that his liver has already decreased in size. Of course he is earning a cirrhotic liver as fast as he can. He has already succeeded in acquiring it to some extent. The spleen is already becoming enlarged in size along with the cirrhosis of the liver. The next thing for him to develop would be a chronic diffuse nephritis. [A specimen of the patient's urine had been just examined in the waiting-room and was found to contain albumen.] There is now a little albumen in his urine, so he has fairly started on that part of his trouble. The man apparently is a very good example of the straightforward effects of chronic alcoholic poisoning. He is perfectly frank about it himself.

In consequence of his protracted debauches he has developed chronic gastritis. He vomits from time to time, and with the vomited matter there is occasionally the production of blood.

Diagnosis.—This man then has developed cirrhosis of the liver and secondary to this the spleen has begun to enlarge. He has likewise developed a chronic diffuse nephritis, probably of the atrophied form, and there is now albumen in his urine. You could hardly have a more straightforward example of what steady alcohol poisoning can do in a proper subject.

Prognosis.—There is only one thing that gives this man any chance of recovery, and that is to stop his alcohol at once. His chances would be better if he were thirty instead of thirty-eight. However, even at thirty-eight there would be a chance of the mischief which has begun stopping. If he goes on he will probably be in the hospital in a couple of years. He will begin to have more marked conditions of dropsy and want of nutrition, and he will become a well-marked invalid. There is no use of attempting to leave off the use of alcohol gradually. The only thing to do is to leave it off altogether.

So far as treatment is concerned, the only indication for treatment is to do something for the chronic gastritis. The best thing for that is an alkali in bitter infusion. Let him take a tablespoon of the infusion of quassia with five grains of the bicarbonate of soda three times a day, before meals. This is really all the medicine that he needs.

CASE II.—LEUCOCYTHÆMIA.

Male, aged 24. Patient complains of lumps in his neck. He has pain across the back and in the right shoulder. He is a paper-box maker by occupation. Was well up to two years ago, when he first began to be sick with a lump in the neck.

There are now several lymphatic glands in the neck which are all enlarged, and which make up together a lump on the left side. On the right side at the root of the neck likewise the tumor is made up of a large number of smaller rounded tumors, and it is also composed of a number of lymphatic glands. The glands in the axilla and in the inter-axillary spaces are enlarged. The resonance is good over the whole chest, and there seems to be no extension of the enlarged glands over the clavicle or over the sternum. The heart beats a little faster than usual, but there is no murmur although there is a little change in the first sound at the base of the heart, and it is of natural size. The resonance posteriorly is good and the breathing is good.

The man had a chancre a month ago, and he has now a syphilitic eruption. This is, however, an accident.

Physical examination of the heart and lungs, then, is negative. There is no evidence of disease *there*. The two main facts that we have in this case so far are: the existence of enlarged lymphatic glands in the neck affecting both sides, which has now reached over a considerable degree on the left side; and to this for several months past we have added a loss of flesh and strength. Simply with that amount of information we might suppose the man to have been suffering from one of several diseases. [Some one suggests Leucocythæmia.] If that is the case with this history, the glandular enlargement came first and the leucocythæmia has been developed more recently. If we examine his blood and do not find any increase of white blood globules, then he might be suffering from Hodgkin's disease or pseudo-leukæmia. In pseudo-leukæmia we would get an enlarged spleen or enlarged liver. It might be a sarcoma which sometimes occurs in lymphatic glands; more properly called a lymphosarcoma. These tumors usually grow with considerable rapidity. They infiltrate the surrounding tissue so that you are not able to feel the outline of each particular gland so distinctly as you can here. There is another condition not spoken of, and that is a simple glandular hypertrophy. That is more probable. I should think really the diagnosis lay between a simple hypertrophy of lymphatic glands and an hypertrophy accompanied with leukæmia. [Some blood was withdrawn from the patient's finger for microscopic examination.] Suppose it is a simple hypertrophy of the lymphatic glands, what would be the proper treatment? The patient should then take 5-15 m. of Lugol's solution three times a day after meals, and to be gradually increased as the patient bears it. Iodine is very apt to derange the stomach, because of the loss of appetite and vomiting. The anæmia is another indication for treatment in this man's case. The skin is pale, and even the lips are paler than they should be.

Microscopic examination of this patient's blood

shows that the white blood globules are increased in number, so that there is about one red globule to every fifty or sixty white. Bleeding of the nose, which this patient complains of, is an accompaniment of leucocythæmia.

Treatment.—The indications for treatment then are here altered. There would be no object in putting him upon the use of iodine. It is much more important to treat his general condition than the condition of the lymphatic glands. In addition to this let him take fat in such quantities as to be absorbed. The loss of flesh and strength he dates back three months. Of course in such a case as this it would be manifestly improper to adopt any surgical procedure, although it is sometimes done. The results of such operations are usually not satisfactory. A patient who has leucocythæmia is a bad person to touch in any surgical way.

CASE III.—PHTHISIS.

History.—This little girl, gentlemen, is brought here because she spits blood and is run down in general health. She has been sick only six weeks, and her first symptoms were a slight cough. She is twelve years of age and still goes to school.

As I examine her chest I can detect a few râles over the lower part of the left lung posteriorly and anteriorly.

Diagnosis.—The girl is suffering from phthisis pulmonalis which has been developing during the last few weeks, and which has now produced a consolidation of part of the lower lobe of the left lung. The disease is still in its incipency, but is apparently running a somewhat rapid course. It is that form of phthisis in which the pneumonic element takes a considerable share. Of course the child should not go to school. She should be kept in the house while the weather is bad. She wants counter-irritation over the affected side of the chest, and the use of tonics, viz.: iron, quinine, cod-liver oil, etc., etc.

HOSPITAL RECORDS.

NEW YORK HOSPITAL—NEW YORK— STRANGULATED FEMORAL HERNIA.

SERVICE OF

GEO. A. PETERS, M.D.

M. F. Native of Ireland. Age 56. Married. Liv-
ery-man. Admitted to Hospital Sept. 29th.

Pt. has been an habitual drinker and has suffered from water brash for a number of years. Two years ago while lifting a carriage he ruptured himself in the left femoral region. The hernia was reduced and no further trouble was experienced till one year ago when after a fit of coughing rupture again took place and the mass could not be returned. It has remained down ever since, causing no inconvenience. It is about the size of a pigeon's egg.

Three days ago a sudden increase in the size of the tumor took place, according to the patient's account, spontaneously. Vomiting came on and has continued up to date. Vomited matter is mucus and dark grumous material not fecal. Bowels have not moved since this occurrence. He has not been able to keep anything on his stomach. Persistent singultus is also present.

Admission.—Poorly nourished. Examination shows an oval tumor size of a hen's egg situated in left femoral region, 1½ inches below Poupart's ligament and on

a line external to spine of pubes. Tumor tense and not lymphatic, not freely movable, somewhat pedunculated. Inguinal canal found empty. Examination of urine negative.

Taxis tried on admission and failed. Pt. sent to ward and ice cap applied. Two hours later taxis again tried, the mass being reduced without difficulty, a small portion only being left outside the saphenous opening. This could not be replaced. Hot applications ordered.

Sept. 28th.—Pt. passed a comfortable night, no pain, no vomiting. Last P. M., ordered pulv. bismuthi et morphia and tr. opii. This A. M. p. 84, t. 97.6 Some more gut came down into the sac last night. This together with the part previously irreducible was returned this A. M.

Sept. 29th.—Had a number of fluid movements last P. M., although pills lead and opium were given. The mass remains reduced. Appetite good.

Oct. 1st.—Pad and spica applied. Pt. is sitting up.

Oct. 4th.—Hernia has not come down. Pt. discharged cured.

ABSTRACTS AND SELECTIONS.

CONDENSED MILK AS FOOD FOR INFANTS

BY

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Assistant Physician to the Victoria Hospital for Children, and to the West London Hospital, etc.

A true Englishman's natural dislike of everything which has even the appearance of being unnecessarily artificial has caused a good deal of prejudice against condensed milk, and just now there seems to be such a marked exacerbation of that prejudice that a very valuable modern discovery is in danger of falling into disrepute. Every one who has had anything to do with the crowds of sickly, ill-fed children with which London abounds must be aware that not only during the prevalence of that most fatal illness, summer diarrhœa, but through every month in the year, a large amount of infantile life is continually being saved by its use, and it would be a matter for regret if condensed milk should be condemned by those who have not yet attempted to give it a fair trial. The commonest objection to it is that it is too sweet. Of course it is very sweet; and in spite of our instinctive liking for sweet things, whether ripe fruit or raisins, chocolate or sugar-plums, an instinct which is so marked in childhood, few persons would think of giving a baby condensed milk when the mother had milk enough of her own, and was able to suckle the child. But, on the other hand, cow's milk is not sweet enough, and when compared with human milk very indigestible. It can only be made at all a possible food for babies by adding to it sugar and water and so making it more like condensed milk, but even then it is not so digestible as condensed milk; and it is not difficult too see the reason. Place some cow's milk with its added sugar and water in a wineglass, mix in another glass some condensed milk with water till it has, as far as one can judge by eye, about the same consistence and opacity; stand the two glasses side by side, and add to each, as the stomach does, a few drops of dilute nitro-hydrochloric acid and watch the result. They both curdle, but the curd formed in the wineglass of condensed milk is distinctly more friable, more mixed with the

watery part than the curd in the cow's milk, and after standing for some time this is still more evident, for the curd in the fresh milk separates completely from the fluid into a firm clot, while in the condensed milk it remains more granular, more broken up, and more mixed with the fluid. And, except among the very poor, who cannot afford to buy cow's milk, it is this hard clot of cow's milk which is more than anything else the *fons et origo* of that only too well-known incessant cry of dyspeptic hand-fed babies, and of all the vomiting and diarrhœa which so often carry them off—that hard indigestible clot, of which there is so little in human milk, and of which the analytical reports say with precise truth, as they might of a dinner of cheese, that it is so “nutritious,” so full of “nitrogenous matter.” And it is actually because of the small proportion of clot or casein which condensed milk contains that the second objection to it is made by the analysts. This clot or casein, which is so much the bane of hand-fed infants that the addition of oatmeal-water or gruel to cow's milk, even before the child is able to digest any starchy food at all, often makes the milk more digestible, for the simple reason that the suspended particles in the oatmeal-water are interspersed through the coagulum which is formed when the milk enters the stomach, and so help to make it soft and friable, just as water-weeds frozen into ice make the ice brittle and dangerous to skate on.

Condensed milk, of course, varies in quality, and it is important not to use any of the common cheap kinds. Of those which are generally seen in the shop windows, the out-patient mothers at our children's hospitals generally prefer the original Anglo-Swiss milk the “one with the milkmaid on the tin,” as they call it, and it seems to me as good as any. And lately some unsweetened Swiss milk has been prepared, which has the appearance of being good, and certainly deserves a trial.

Then as to condensed milk causing rickets, I can only say that I have found it very difficult to trace rickets to condensed milk properly given. Most hand-fed children are delicate, a very large proportion die, and a still larger proportion have some tendency to rickets. Oatmeal and other gruels seem to be directly concerned in bring it about; but though I have seen very many children who have had to change their diet to condensed milk, I have seen none who have thereupon become rickety. One case I do remember among the out-patients at the Victoria Hospital for Children, of a child a year old who had advanced rickets. It had been fed on condensed milk, the mother said, from birth, and yet it had never thriven. She had done her best for the child; the milk was of the best brand, and she never spared it. She spread it thick on slices of bread, and gave it to the child whenever it cried, “And yet,” the poor woman said, “the child doesn't get on.” That condensed milk given in that form to babies, even without the bread, may cause rickets I do not attempt to deny. It appears to me to be rather to the credit of condensed milk that the baby survived.

Everything depends upon how condensed milk is given. It ought to be diluted with ten or twelve times its bulk of water, or with more than that if the child is thirsty; and if any tendency to sickness remains, about one-sixth of the water ought to be lime-water, which still further neutralizes the action of the acid of the stomach and delays the formation of the clot. The water should be boiling when added to the milk, especially in the summer. It gets rid of the infusoria in bad water or in a long-opened tin. Once a day a teaspoonful of Mellin's food may be given with the milk.

It is one of the best of the semi-digested foods, and children like it. With such a diet infants who at once vomit cow's milk, who keep their knees drawn up in pain, who are wasted and wretched-looking, or in danger of dying from diarrhoea, become contented and happy, rapidly gain flesh, and are able after a time to begin a little weak cow's milk and water or whey. And it is thus as a bridge across a bad time that I consider condensed milk to be of the greatest importance; but the bridge may extend over some months, and in the meantime the irritability of the intestinal tract subsides, and other forms of nourishment can be gradually administered.

Three or four years ago when I was a resident medical officer at the Children's Hospital in Great Ormond street, where good cow's milk could always be procured, and where it was given with care and discretion, condensed milk formed nevertheless a valuable article of diet, and was and probably is still used in all the medical wards; but among the poor in their own homes, where the milk is often bad throughout the year, and sour for at least three months of it, condensed milk is simply an inestimable boon.—*The Lancet*.

Brook street, W.

AN OPERATION FOR THE RADICAL CURE OF FEMORAL HERNIA.

BY

WALTER H. BROWN, M.R.C.S.

Surgeon to the Leeds Public Dispensary; Demonstrator of Anatomy, Leeds School of Medicine; late House-Surgeon Leeds General Infirmary.

A female, aged sixty, had for years been troubled with a large femoral hernia. Many varieties of truss had been tried, but all failed to afford relief, and the hernia had been strangulated two or three times for short periods. For reasons which I will give below I deemed it desirable to make an attempt to effect a radical cure, to which end I performed the following operation.

I made an incision as for strangulated bowel, and opened the sac. I reduced the bowel, and then found that the crural ring was large enough to admit three fingers; lying at the posterior part of the sac was a large portion of omentum, which was adherent to the sac, and, as in separating these adhesions the omentum was freely handled, I removed the portion which had been in the sac, and tied the stump with a stout silk ligature, leaving the end of the ligature long. I then dissected out the sac, and, after ligaturing the neck, removed the entire sac. I had next a large piece of omentum removed by a ligature within the abdominal cavity just opposite the crural ring, the ligature being brought out through a small opening I had made in the peritoneum close to the ligatured neck of the sac. It now occurred to me that I might use this omentum as a plug to close the crural ring, I therefore drew the omentum down until it was in contact with the neck of the sac, and found that it remained in its new position without much tension. I thus had the ligatured neck of the sac and the ligatured stump of the omentum to resist the return of the hernia. The wound was closed in the ordinary way, the two silk ligatures being brought out at the lower end.

It is unnecessary to give further details of the progress of the case, as the woman made a good recovery.

There was no disturbance of temperature, the wound healed by first intention save at the point through which the ligatures came; the ligature on the neck of the sac came away on the tenth day, but the one on the omentum remaining firm at the end of the sixteenth day, it was cut short and the wound healed in two days.

The operation was performed in accordance with Professor Lister's system of antiseptics, and the wound dressed with salicylic silk, as introduced by Mr. McGill of Leeds. It is now five months since the operation, and the result so far has been perfectly satisfactory. There is no hernia, the woman is enabled to perform her household and other duties in comfort; she wears a pad similar to that of an ordinary truss over the scar in order to support the necessarily weak ring. I am fully aware that an operation such as I have described is open to criticism, and I therefore wish before closing to draw attention to my reasons for operating. First, the patient being weary and discomforted by her ailment was willing to accept the risks of operation and possible failure after they had been fully explained. Secondly, a fair trial had been given to mechanical support, and the results had been entirely unsuccessful. Thirdly, I deemed it right to attempt a cure by operation, bearing in mind the fact that of late we have been in the habit of dealing more freely with cases which involve interference with the peritoneum. The brilliant results obtained by Mr. Banks of Liverpool, and Mr. Spanton of Hanley, in dealing with inguinal hernia, led me to undertake the operation just described, and Mr. Spencer of York has performed a similar operation with like success.

Of course the number of cases in which one would operate would be limited to those in which mechanical support had failed to give relief.—*The Lancet*.

MEDICAL NEWS AND NOTES.

The Poisons in Tobacco-Smoke.—Herr Kissling of Bremen, has published a useful paper on the poisonous constituents of tobacco-smoke, among which he specifies as strong in quality, carbonic oxide, sulphuretted hydrogen, prussic acid, picoline bases, and nicotine. The three first substances, however, occur in such small proportions, and their volatility is so great, that their share in the action of tobacco-smoke on the system may be neglected. The picoline bases, too, are present in comparatively small quantity; so that the poisonous character of the smoke may be almost exclusively attributed to the large proportion of nicotine present. Only a small part of the nicotine in a cigar is destroyed by the process of smoking, and a relatively large proportion passes off with the smoke. The proportion of nicotine in the smoke depends, of course, essentially on the kind of tobacco; but the relative amount of nicotine which passes from a cigar into smoke depends chiefly on how far the cigar has been smoked, as the nicotine-content of the unsmoked part of a cigar is in inverse ratio to the size of this part—that is, more nicotine the shorter the part. Evidently in a burning cigar, the slowly advancing zone of glow drives before it the distillable matters, so that in the yet unburned portion a constant accumulation of them takes place. More, relatively, of this substance passes into smoke in the case of cigars that are poor in nicotine than in the case of cigars with much of that substance. Nicotine, notwithstanding its high boiling-point, has remarkable volatility.

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THE POLITICAL POWERLESSNESS OF THE MEDICAL PROFESSION.

The attention of the profession has often been directed to its lack of interest in political matters, its disposition to keep aloof from those things which may lay it open to the criticism of seeking public notoriety as a means of self-advertisement.

Perhaps with the many examples among the profession, who have been and are political powers in this country, it would be superfluous to suggest that there is a happy medium between the extremes of the Charlatan trickster, who has by his wiles arrogated to himself the powers rightfully belonging to the more honorable and competent physician, and the medical man of culture and experience, whose voice and influence, if exerted in political matters, especially those affecting medical interests, and these are numerous, would speed a sound reform or kill a political job.

Perhaps the majority of the profession will, however, agree with the views maintained by Dr. Foster, of England, which are summarized in the columns of the *Lancet* and commented on as follows:

It is the fact that, apart from all special considerations, there is a feeling—be it right or wrong, well or ill founded—that practitioners ought not to obtrude themselves too prominently on public notice. While this feeling lasts we shall not have any great political influence, except that which may be acquired and exercised indirectly. The position as well as the political status of the profession are sacrificed to this idea. It is consciously sacrificed. Medical men keep in the background lest they should be suspected of seeking to parade their talents, and, being in the shade both socially and politically, the profession does not, cannot, will not, attract into its ranks the class of men who are born to shine in public. We are each year becoming less social and more exclusive. We specialize technical knowledge, and in its pursuit we form professional habits. Our lives, our views of life, our

very natures are special and technical. We must accept the consequences of these characteristics of our mental development. It would take more than three generations to place matters on a new footing. What some one said about a finely timbered estate, and somebody else has applied to the growth of a family of gentlemen, and Darwin has taught of the evolution of species, is true of the medical profession in this country. Before we can hope to obtain political influence we must change the direction of the educational and other forces at work in our midst, and set out on a new route. The change is not to be effected by the passing of more stringent protective laws for the profession. The change needed is a radical one, going right down to the roots of our professional organization, and laying the bases of a new growth. There is much of sound truth in Dr. Foster's argument, but it cuts both ways, and we must count the cost before we make the change recommended and desired.

THE INFLUENCE OF CALOMEL ON DIGESTION.

Dr. Vassilieff has found, from experiment, that the presence of calomel, at least up to the amount of five grammes, in the alimentary canal, does not interfere with the gastric juice, or affect the triple influence of the pancreatic fluid on albumen, fat, and starch; on mixing the latter fluid with fibrin and calomel, the formation of certain products, indol, etc., always appearing as a result of prolonged digestion under normal circumstances, is prevented. The gases generated in the process of pancreatic digestion contain none of the usual products of fermentation and decomposition when calomel is present; sulphuretted hydrogen and pure hydrogen are absent, carbonic acid is diminished to from two to ten per cent.; whilst, under natural circumstances, from fourteen to fifty-four per cent. is found in the gases evolved by the action of the pancreatic fluid. In fact, calomel prevents all other changes in nutritious substances, save those produced entirely by the digestive secretions, decomposition and retrogressive processes in albumens being entirely checked. Calomel also prevents butyric acid fermentation, as Vassilieff found by experiments on cheese. The action of calomel readily explains the cause of the green color of feces passed by patients to whom that drug has been administered. Hoppe-Seyler rightly attributed this coloration to the presence of unaltered bile. Now, under normal conditions, bilirubin and biliverdin are changed, by a process of decomposition, into hydrobilirubin, and thus become no longer recognizable in the excretion; but this process is arrested by calomel, and the coloring agents, unaltered, give the feces their peculiar bright green hue.

These researches are described at length by Dr. Vassilieff, in the *Zeitschrift für Physiologische Chemie*, vol. vi, page 112. He has found that this action of calomel is due to its power over the micro-organisms intimately associated with the process of decomposition which takes place in food during digestion. The drug prevents the development of micro-organisms in the digestive fluids, and also destroys any bacteriz and micrococci already developed. This fact was proved first by artificial digestion. Vassilieff then made a series of experiments to find whether calomel had the same influence in natural digestion. Thirty grains of calomel were administered to a dog, in two doses, and the animal was killed a few hours later. Under all

precautions, the contents of the intestines were then carefully analyzed. Neither indol nor phenol could be found; and it will not be forgotten by those who study contemporaneous physiological research, that other agents—such as salicylic acid—prevent the formation of indol; and that pancreatic mixtures, formed from natural pancreatic juice, or infusions of pancreatic glandular tissue, undergo septic changes with very great rapidity, in spite of all precautions. None of these changes, nor any formation of indol, occurred in the food taken by dogs to which Vassilieff administered calomel. On the other hand, leucin and tyrosin were found in abundance. Under natural circumstances, these products of pancreatic digestion are so rapidly decomposed, that they cannot be detected in semi-digested food. Hence calomel has no influence on the action of the digestive fluids, but entirely prevents those true retrogressive and putrefactive changes whereby the highly unstable products of these fluids are rapidly decomposed, and micro-organisms quickly developed in great numbers. When calomel enters the alimentary canal, leucin, tyrosin, bilirubin, and other substances, remain unchanged, and bacteria are checked and killed.

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK CO. MEDICAL SOCIETY, MAY 28, 1883.

The President, Dr. David Webster, presided. The minutes of the preceding meeting were read and approved.

The scientific paper for the evening entitled, "THE USE OF ANTISEPTICS AFTER ABORTIONS AND LABOR," was read by its author, Dr. W. Gill Wylie.

The following is a résumé of the suggestions embraced in Dr. Wylie's paper and the discussion it evoked:—

Examine locally every case some weeks before labor; have a trained nurse several days before confinement is expected; if lochia are present, warm vaginal douches of carbolic solution, 1 to 40, are given twice a day, and in all cases, as soon as the first symptoms of labor begin the vagina and vulva are thoroughly washed with the same solution.

Remove all useless and old stuffed furniture from the room; disinfect with the spray of carbolic acid everything that remains in the room; see that a large supply of napkins and bed linen are on hand, all of which are carbolized with the spray immediately before being used; change the linen every day; also have two sets of blankets; air them and use them alternately; wash the hands and all instruments in a solution of carbolic acid, 1 to 20.

When labor begins commence the production of the carbolic spray, and after labor every napkin is carbolized, or carbolized muslin or oakum is used to catch the lochia, and changed according to the discharge ever hour or two, night and day.

Immediately after labor wash the external parts thoroughly with the 1 to 30 solution of carbolic acid, and give vaginal douches from two to four times a day. This is kept up faithfully for six or ten days, as may be required.

The test for the thoroughness of this method is that at no time should one be able to recognize by the smell the odor such as usually characterizes the lying-in woman.

For cases of abortion endeavor to carry out the same line of practice. Dr. Wylie then read the history of several cases.

He had reached the conclusion that it was best to consider the uterus after an abortion precisely as surgeons of to-day regard a punctured wound, and just as likely to be poisoned and beset with dangers when neglected or badly treated. He proceeded, therefore, upon the following plan: First, that septic matter must be excluded with great care, and that antiseptics are of great service in preventing infection; second, that perfect drainage is just as essential as in a severe contused and punctured wound; that not only versions, and especially flexions, may cause retention of lochia, but contraction and swelling of the os internum very frequently is an active cause in preventing a constant and free discharge; third, that when septicæmia has begun within a reasonable time, say within ten or twelve hours after the first chill or high temperature, in almost all cases the patient may be saved by perfecting the drainage and by washing out the cavity either of the vagina or the uterus, as the case may be, by frequent douches of a solution of carbolic acid of a strength of from 1 to 40 to 1 to 20; fourth, that medication, except so far as it keeps up the strength of the patient, has little or no direct effect, and that the washing out with the carbolic acid not only removes or renders inert the organisms on the surface of the wound or cavity, but in all probability sufficient carbolic acid is absorbed locally into the surrounding tissues to weaken if not to stop the active reproduction of the organisms on the generation of poison associated with them.

He was fully aware that many cases very soon reached a stage where neither local nor any other treatment could arrest the disease, such as those where the poison has extended rapidly into the connective tissue, or has been carried a distance from the surface by the lymphatics or the veins, and started a new center of local poisoning. But he believed that most of these hopeless cases began as simple ones, and if treated in time would never reach such a dangerous stage.

He did not advise intra-uterine injections in all cases. If the disease is confined to the vagina, apply antiseptics to that canal, but do it often enough to keep up their influence for at least twelve consecutive hours. Usually, if puerperal fever has lasted for several days, or if the symptoms are dangerous, it would be better not to delay washing out both the uterus and vagina, and do it vigorously and faithfully, and do not be satisfied with the uterine injection twice or three times a day, or even every three hours. He favored intermittent irrigation instead of continuous irrigation, for the following reasons: First, it is more readily and with greater safety carried out; second, it gives the parts, if not the patient, a little rest; third, douching at short intervals, we can use stronger solutions with less risk of poisoning with the antiseptic than when the continuous stream is employed.

What should guide us in the use of antiseptics after abortion? The first symptom is usually a chill, or chilly sensation, arrest of the lochia, and then a rapid rise of temperature. If in such a case an extensive laceration of the perineum, or cervix, or wound of the vagina were found, he would wash out the vagina with a solution of carbolic acid 1 to 20 at first; after this give douches regularly, every fifteen minutes or half an hour, for three or four hours, of a solution 1 to 40. If the temperature then fell gradually, he would continue the douches in the same manner every twelve hours or more; but if, notwithstanding these vaginal douches, the temperature should continue to rise, or go up rapidly after lessening for several hours, he would at

once begin intra-uterine douches, giving one of 1 to 20 ; and after this douches every half hour of 1 to 40, until the temperature fell to normal.

When the injection returns clear and remains so for several injections, almost invariably the temperature is found normal.

It is especially important, in giving the intra-uterine douche, to be certain that the carbolic acid is pure, and he insists upon having Calvert's No. 1.

The histories of several cases were given which he had seen in consultation. Dr. Wylie also referred to the histories of nine cases which he had treated successfully in Bellevue Hospital.

His experience with the dangers of intra-uterine injections was limited. In one case shock was produced, and it was afterward found that the solution had entered the peritoneal cavity through the Fallopian tube. The patient, however, recovered. In some cases shock was produced without any apparent explanation. If a large tube, such as Chamberlain's, is used after the os internum is well contracted, the instrument may be hugged so closely that the uterine cavity will be filled with the fluid injected. Under these and similar circumstances, of course, the solution might be forced through the Fallopian tube into the peritoneal cavity, or a clot might be forced through a vein or sinus and do harm. But if a gum-elastic catheter was used of sufficiently small size to pass very readily, with a thread tied around it two and a half inches from the fenestrated extremity, indicating the distance to which it should be introduced into the uterus, not only would the fluid escape, but very frequently large threads of debris, clots, etc., would be brought away.

In those cases where the uterus was flexed, or the os firmly contracted, and where there is imperfect drainage, the tube can be left in the uterus, cut off close to the vulva, and a piece of soft rubber tubing attached when the injection is given. When left in this way it served as a drainage-tube, and the lochia should be caught by a carbolic napkin or dressing at the vulva.

One special object which the author had in reading the paper was to advocate the frequent and long-continued use of antiseptic dressings, when once begun, in cases of puerperal septicæmia, and to make it plain that three or four vaginal or intra-uterine injections given in twenty four hours is not sufficient to do much good, and was likely to result in the disuse of the best, and in many cases the only, means of preventing death from septicæmia ; that vaginal and intra-uterine injections of carbolic acid of a strength of from 1 to 40 to 1 to 20, will save almost all cases when begun early, and that it will often save apparently hopeless cases.

Dr. Mundé said that he had attained very positive convictions upon the subject of Dr. Wylie's paper, and that he had employed, with very satisfactory results, the use of antiseptics after abortions and labor. He had thought, however, where there was no offensive discharge from the uterine cavity or vagina, that intra-uterine injections were not useful. Since the introduction of Dr. Chamberlain's tube, however, he had, in every case in which the vaginal temperature reached 102°F., used the intra-uterine injections, and had generally found it sufficient to use them three or four times a day. He was very firmly convinced where there is a rise of temperature due to septic endometritis, where there are decomposing substances within the uterus, giving rise to that condition commonly known as puerperal septicæmia, that intra-uterine injection, repeated as often as the temperature may rise, and continued until the temperature comes down and remains, is perhaps the only proper local treatment to be

employed. But the time arrived when such injections could no longer be of use. He had used them in cases where the temperature went up and down, and finally discovered that the rise took place very soon after the injection had been given, and the patient also complained of some pain. He had thought that in such cases the injections did not do any more good, but, on the contrary, developed a traumatic influence which was kept up, and which had better be avoided. He believed, if the temperature was substantially unaffected after using the injections for twenty-four or forty-eight hours, that they would no longer do any good, and in those cases he had given ten grains of salicylate of soda every two hours, which had produced lasting reduction of temperature, even after quinine, administered in large doses, had failed. He thought there was a certain danger in the use of intra-uterine injections, a certain amount of risk of washing away too much of the accumulation in the uterine cavity, and there was also a possibility of laying open some sinuses. He did not favor continuous irrigation of the uterine cavity. If there was no offensive discharge he did not see the utility of washing out the uterus. However, it might do some good, but he thought salicylic acid or quinine, to prevent rise of the temperature in these cases, would be better than injections.

Dr. Malcolm McLean had seen two cases in which air had been introduced into the cavity of the uterus with almost fatal consequences while intra-uterine injections were given. At the same time, notwithstanding this objection, he regarded the recommendations in the paper as most excellent, and worthy of being commended. He believed that the temperature, which in many instances was the active agent in destroying the patient, could be reduced by this plan. He objected to leaving the catheter in the uterus during the intervals while the injection is not being made. He thought it a dangerous precedent to establish, because it was almost impossible not to have some air in the tube which might subsequently be driven into the uterine cavity. In cases of abortion he thought that swabbing the uterine cavity with a strong solution of carbolic acid answered a most excellent purpose. There is sufficient room for this, but scarcely enough, in many cases, to carry out the plan of irrigating the uterus by means of a tube. There were certain old cases of septicæmia, to which Dr. Mundé had referred, which had not seemed to be benefited by the intra-uterine injection. He thought it well in all such cases to be sure, if called in consultation, to find out as to whether the uterine cavity had been injected thoroughly. It may be reported that it has been irrigated thoroughly, whereas it may not have been irrigated at all, but the injection has been simply vaginal. He believed that the soft, flexible catheter was about as good an instrument as any which can be used in giving intra-uterine injections, and he thought it a good plan to keep one finger in close contact with the cervix, to determine whether or not the return flow from the uterus was actually taking place.

Dr. H. J. Garrigues thought that we should distinguish between prophylactic and curative measures. He had been favorably impressed with the antiseptic plan as a prophylactic measure, but less favorably impressed with it as a curative measure in private practice. In hospital practice he had not obtained the results which he had expected from it as a prophylactic measure, notwithstanding very thorough antiseptic precautions had been observed. As a curative measure, however, in hospital practice, it had seemed to him to be very valuable, especially the intra-

uterine injections. These injections, according to his experience in the New York Maternity Hospital, had invariably brought the temperature down, and they had been repeated as soon as it rose again, and to the best of his recollection they had not been required oftener than once in three hours. He had also used a concentrated solution of boracic acid and a solution of iodine with excellent results in the cases in which he wished to avoid the depressing effects of carbolic acid. In gangrenous cases he had used a ten per cent. solution of camphor, and also iodoform with very satisfactory results. In diphtheritic cases he had employed an eight per cent. solution of chloride of zinc, besides the intra-uterine injections of carbolized water, repeated once a day for seven or eight days, with excellent results. At the same time, if the parts affected with the diphtheritic exudation could be seen, a solution of chloride of zinc, 1 to 1, might be applied locally, and repeated if necessary. He agreed entirely with the author of the paper, that intra-uterine antiseptic injections were of the greatest value after abortion and labor. He preferred to use the gum-elastic catheter in their administration. He did not think that the entrance of air did much harm, for it would be immediately carried out of the uterus by the injection.

Dr. Wylie, in closing the discussion, said that most of the points referred to by those who had participated in the discussion, and the objections mentioned, had been considered and answered in the histories of cases, which he did not read an account of lack of time. He had not seen any trouble from the entrance of air into the uterine cavity. He usually employed the gum-elastic catheter No. 12.

With regard to waiting for the offensive discharge, he thought that that was just the point where fatal mistakes were made, for the reason that the uterus might become poisoned in consequence of imperfect drainage without the appearance of any offensive vaginal discharge. He believed that the severe cases were those which had been neglected too long, or those in which perhaps one injection had been given and not repeated until after the lapse of six or eight hours. With regard to swabbing the uterine cavity, he thought it doubtful, in very many cases at least, that every little recess among the tissues could be thoroughly reached by this method. He was unable to understand why poisoned wounds of the uterus should be considered and treated differently from any other poisoned wounds.

The Society then adjourned, to meet on the fourth Monday in September.

ORIGINAL ARTICLES.

* THE EXCRETION OF THE PHOSPHATES AND PHOSPHORUS AS CONNECTED WITH MENTAL LABOR.

BY

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Gentlemen:—There is a strong semi-popular and even professional idea that the excretion of phosphorus is decidedly increased by mental labor. The precipitation of the phosphates after mental work has been taken as corroborative of this idea. It was supposed that this deposit of the earthy phosphates was due to

bodily exertion and anxiety. With a view of settling this question I have made a series of experiments upon myself.

It is not easy to make a distinction between mental labor and mental rest. Thus in one of the hospitals a girl claimed that she worried her brain very greatly, and on being asked her occupation she replied "pasting labels on shoes."

It is plain that we cannot measure mental work as we do mechanical work, and estimate the amount of labor by foot pounds, etc. In fact the human mind cannot entirely abstract itself from absolute mental activity. The greatest fatigue to the mind seems to be when we are trying to do nothing.

On this account I have been very careful in describing in what I supposed mental occupation consisted. Thus after a certain lecture I felt tired because I stood during its delivery. It is impossible to make the mind a perfect vacuum. A certain admixture of bodily and mental labor is unavoidable if anything like speaking or writing is attempted. There are few sorts of bodily exertion unattended by some sort of intellectual activity except the most monotonous employment. If the employment demands no reflection, it is impossible to make sure in the case even of the most stolid, that the thoughts are not employed in some other direction. Consequently all observation with regard to this point must be made with reference only to *greater* and *less* mental activity, and not to the *absence* or *presence* of intellectual processes.

The observations on myself were confined to the latter part of the day. My earlier observations embraced only the time of delivering lectures and a few hours afterwards. I do not intend to inflict upon the Association all the figures, but merely wish to state the results of my first series of experiments, which covered about two hours. I divided my experiments into two sets—those made on work days and leisure days. By a curious coincidence the average of the two sets is almost absolutely the same. There were 252 milligrams of phosphoric acid in two hours, and 126 in one hour. Two observations I did not know where to class, for one was taken at the time of an emergency lecture which was delivered at an hour different from that of the others. The quantity of urine and phosphates was in this instance diminished. A second was taken from a time occupied in reading and attending a reception.

In the next series of experiments, which extended over a longer period, the excretion of phosphates was distinctly less during the working afternoon and evening than during the succeeding time, when as little as possible was done. It will be seen by these figures exhibited to you, showing the proportions of phosphorus excreted, that so far from phosphates being increased in the urine by mental exertion, they have, in some of my experiments, rather diminished during the time that I was actively engaged in mental work. Would it be fair to infer from these figures that no phosphorus is used up in the process of cerebration? Certainly not. But there is enough proof to show that the amount of phosphates derived from the metamorphosis of brain-tissue in a condition of physiological activity is so small in proportion to the amount in the system generally that its excretion has no effect on the urine. In a condition of concentrated attention, it is important that the brain should receive a larger supply of blood. I have noticed on other, not recorded, occasions that the amount of urine has been quite scanty. The last two experiments which I conducted seemed to give results opposed to those previously obtained.

Summing up all the experiments in the form of an average of phosphoric acid secreted by the hour, there is a difference between the work and leisure hours of only a very few milligrams. I detected 115.7 milligrams per hour, on the hours of work, and during the succeeding night and hours of leisure, there were 115.3 milligrams of phosphates.

Now I am well aware that these experiments were but imperfectly conducted. Unless a person retires to bed so as to get rid of bodily labor and puts himself upon a special diet, it is impossible to get accurate results. The hardest part of the work is done during the time that one is trying to do nothing. Absolutely refraining from mental labor is more irksome than doing work which is agreeable.

Dr. Holmes says that clergymen's urine contains more phosphates on Monday morning, after the delivery of the sermon, than on other occasions. But then the deposit of the earthy phosphates depends on the alkalinity of the urine and not upon the quantity of phosphates. Dr. Holmes knew that he had authority for his statement but did not know where to find it. I looked through a series of papers for the purpose of finding any statement about it, and I found statements in regard to the difference of phosphates between flesh-eaters and vegetable-eaters, and the effect of meals and bodily work on the secretion of the phosphates. In text-books we find described changes in the excretion of the phosphates in different diseases. Thus phosphates may be increased in amount in certain nervous disorders and in many diseases, but there is nothing distinct and definite about this increase so far as I could find.

LECTURES.

CLINICAL REMARKS ON HOUSEMAID'S KNEE AND SUBLUXATION OF THE KNEE-JOINT.

BY

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CASE I.—Female æt. 45, complains of a sore knee. She struck her knee in falling last August. Two months later she discovered a swelling in the front of the knee, which has been large, but has subsided under the influence of iodine. There is not constant pain; when she walks she experiences no pain.

As I examine the joint, I find that it moves freely and its motion does not give rise to any pain. There are positive signs indicating the presence of another disease than that of the joint. In synovitis or arthritis the swelling is almost uniform, and where it occurs it is on either side of the ligamentum patellæ. Here the sides of the joint are not affected. There is neither tenderness nor swelling. The swelling and pain are confined to a very limited region in front of the joint. Here is a hemispherical projection very well marked rising above the plane of the knee. What is this swelling? On examination it fluctuates; on tapping we get distinct evidences of fluctuation. It therefore contains fluid. Is it in the interior part of the joint? When fluid accumulates in the interior of the knee-joint it causes bulging of the capsule by the side of the ligamentum patellæ; also anterior projection of the ligamentum patellæ of the quadriceps tendon

above the patella and of the patella itself. There is not the slightest difficulty in recognizing the situation of the patella. It can be felt distinctly above the skin. Here, however, the fluid is in front of the patella and the patella cannot be felt. A considerable portion of the bone lies behind this swelling.

We have then an example of "housemaid's knee," or enlarged bursa over the patella. It is not very infrequent. It receives its name of "housemaid's knee" because women who are on their knees in scrubbing set up an irritation in the bursa patellæ, which produces inflammation. Here the condition has been caused by an injury. This bursa has secreted a considerable amount of fluid, and there has been a large amount of inflammation without suppuration. It has left a large accumulation here which is not likely to disappear under the iodine treatment, and should therefore be removed by operation. If not treated, the sac will inflame some day or other, and it will then have to be opened under adverse circumstances. In these days of antiseptic surgery we can perform such a simple operation without any danger; with a simple spray this bursa can be opened and a drainage-tube inserted. Antiseptic dressings should then be applied, the air being excluded, and the chances are that under this treatment in a very short time the part will heal without suppuration, and the woman will be permanently cured. A cure takes place by adhesion of the closed surfaces of the serous sac. There was supposed effusion into the knee-joint, but it is nothing more than an effusion into the bursa patellæ. In effusions into the knee-joint, the patella lies directly beneath the skin, whereas in this case the patellæ cannot be distinctly felt. Antiseptic precautions should be very strictly observed, and therefore the case had better be operated upon at the hospital.

CASE II.—This is a case which I have just seen. This patient seeks advice for trouble of the knee-joint. The man states that he was picking up something from the floor, being perfectly well at the time, when suddenly he became disabled in the left knee and could not stand. He had excruciating pain and swelling in the knee. This accident has happened five times within four months. This is a curious history. Now, gentlemen, we have seen cases of inflammation of the joint and bursa patellæ, but here is something different from anything that you have seen this winter. The man is strong and healthy; suddenly he gets a pain in the knee-joint, which passes off on extension of the joint. Has had five attacks of this kind coming on suddenly. After the last attack he had swelling of the joint and disability, which compelled him to abstain from his work for a period of five weeks. This is not the history of arthritis. Arthritis comes on gradually; the pain is slight at first, and is usually greater at night. Gradually the limb swells and shows sensation. Synovitis comes on as a rule by sudden pain, followed by swelling owing to effusion in the interior of the joint. After each of the four attacks this patient got immediately well, but after the fifth attack he seems to have had an inflammation set up, and is now unable to work. The cases of disability thus produced attended with pain are easily interpreted.

In the interior of the joint there sometimes occur floating cartilages—substances believed to be developed from the fringes of the synovial membrane, which hang by a pedicle for a while and are liable to be separated from the interior of the joint, and in the movement of the joint to be caught between the joint surfaces and occasion pain. Floating cartilages occur

frequently in the knee. In such a case, examine and ascertain the presence of such a body, and adopt means either for placing it in a safe part of the joint or remove it. There is another set of cases the pathology of which is more obscure, carefully described in books upon "Dislocations," under several names. "Internal Derangement of the Knee-Joint" is the name sometimes given, and this simply indicates the obscurity hanging over the pathology of this affection. Sometimes it is called subluxation of one of the inter-articular cartilages of the knee-joint, introduced between the condyles and articular surfaces of the head of the tibia. In these cases of subluxation the patient has symptoms of floating cartilage. In a case of floating cartilage, however, examination will rarely fail to discover the cartilage as indicated by some swelling in the parts of the joint where it is situated. It will come sufficiently near the surface where it can be detected, and can commonly be moved from one part of the joint to the other. These bodies are sometimes small and sometimes as large as an almond; sometimes they are still larger, and can be easily discovered. The diagnosis of subluxation or internal derangement depends partly upon the negative and partly upon the positive signs. First exclude the diagnosis of foreign bodies or floating cartilages by examination. Like stone in the bladder, you may miss the foreign body on a single examination, and you must make another. The positive signs of subluxation of the knee-joint are few. The internal cartilage is commonly luxated, and after it is luxated it often happens that it slips back into its place. When an accident occurs by which the cartilage is luxated it is squeezed pretty forcibly in the movements of the bones, and pain is experienced by the patient in consequence of this, and it is displaced inwards or outwards according to the cartilage affected. When the limb is extended this cartilage is apt to go back into its place, and usually the restoration of the parts to their normal position has occurred before the surgeon is consulted. Sometimes it happens that when you make pressure in the plane of the joint surfaces, you will find that the cartilage is displaced. You must examine these cases for these two morbid conditions. I have found these floating cartilages on either side of the ligamentum patellæ in the upper part of the joint.

On moving the patella on the condyles of the femur, I find that the movements are perfectly normal, not indicating roughness of the cartilage. I fail to discover any floating cartilage. The patient has pain often in the inside of the joint. I cannot make any certain diagnosis. I suspect that it is one of those cases of subluxation of the inter-articular fibro-cartilage, and I should treat him on that assumption. A physician treated him for inflammation, which occurred after one of these accidents. The treatment is not altogether satisfactory for subluxation of the inter-articular cartilage. In many cases the trouble does not recur. In a great many it does, if you do not treat it. What should be done here is to fix the joint in one position so as not to allow movements to take place for some time, in the hope that by putting the parts completely at rest the cartilage will become more firm in its attachments. I have in many instances caused patients to wear a plaster of paris bandage. In some instances I have had a little contrivance made consisting of a hook of metal round the thigh and one around the leg, which could be locked, and thus avoid bending the knee in the act of locomotion. Cures have resulted by this treatment. I should advise that a man be provided with a splint, which will keep his

leg from being bent. He should wear this splint from three to six months, when the parts will have recovered their strength.

CLINICAL REMARKS ON HYDATID TUMOR OF THE ABDOMEN.

BY

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The patient is twenty years old. Occupation stone-cutter. He was first taken sick last November. Had chills and fever and pain in the back and sides, mostly on the left side.

His pulse is 134, small, soft, and easily compressible. The pain is sharp and runs through the back. The umbilicus is prominent. Emaciation is very well marked in this patient. There is marked depression under the clavicle. The abdomen is quite prominent on the left side. By inspection we notice an irregular enlargement of the abdomen, especially on the left side. There is a great prominence in the left iliac fossa. On percussing the chest, I find flatness in the axillary region and also in the left scapular region.

I get flatness on forcible percussion underneath tympanitic resonance. There is a peculiar tympanitic resonance on the left side. I find a solid mass which is tympanitic and flat on percussion. There is no fluctuation on percussion, but on palpation I get fluctuation over the mass. The heart is displaced, although there are no evidences of the tumor extending to the mass around the heart. There are some peculiar sensitive points over the surface of the abdomen. This occurs in connection with a history of malarial poisoning. He may give no history of enlarged spleen. Enlarged spleens are painless. Pain has been the prominent symptom here since he first noticed the enlargement in the lower portion of the abdomen. The creaking which I get on palpation is the hydatid fremitus, the most prominent evidence that leads me to the diagnosis of an hydatid tumor, although there are many other points that lead me to that diagnosis. There is only one way in this case in which we can make a positive diagnosis. If this were an enlarged spleen we would have flatness on percussion over the extent of the enlargement. The border of the spleen in the median direction would be distinctly marked out. It seems as if this were a continuous tumor extending round to the left iliac and lumbar region. This mass extends to the right side, which would not be the case if it were an enlarged spleen. If this were an aneurism we would get pulsation and a bruit. The most frequent symptom of abdominal aneurism is the sharp grinding lancinating pain running through the back. The tumor has been steadily increasing and pain is pretty constant. If the tumor were the spleen, it would commence to enlarge from above downward. If it were the liver the swelling would commence at the right and extend to the left. If it were an aneurism there would not be such a diffuse tumor and we would have pulsation. If it were a cancer of the liver extending to the left there would be marked ascites. This is not present. It is very difficult indeed to get fluctuation. Remember, gentlemen, that the insertion of a hypodermic needle can do no harm whether it be cancer, aneurism, or enlarged spleen. If it were leucocythemia in connection with enlarged spleen, we would have other enlarged lymphatic glands, especially

in the inguinal and cervical regions. I do not find any. The reason I ask the patient if he had diarrhœa, and if the tumor had diminished in size with the diarrhœa, is the fact that oftentimes hydatid tumors ulcerate through the large intestine, and after a profuse diarrhœa the tumor disappears. I had a patient here a few years ago whom I aspirated, and in whom I had made the diagnosis of hydatid tumor. I removed over a water-bucketful of bloody fluid. Within a month or six weeks the tumor filled up rapidly and was as large again as before. I made an appointment for the following week for another aspiration, when suddenly the tumor disappeared and the patient had an attack of profuse diarrhœa with discharge of bloody fluid. I have a patient now under my care with hydatid tumor which is pointing into the bladder and rectum. Though the running into the bladder has seemed to remain constant for a year the discharge into the rectum is permanently stopped. After the tumor in the left iliac fossa has filled up to a certain height it empties itself into the rectum and the patient becomes quite comfortable for six months. About once a year she has this hydatid tumor filled.

It seems to me, gentlemen, that we can throw out the question of aneurism entirely. For the situation of the tumor—(though of course aneurisms are possible in any situation of the abdomen)—the history of its growth, the size of the tumor, and the entire absence of pulsation in any direction, all point against aneurism. There is not even a heaving impulse. Besides, we have the absence of the characteristic pain and of any history which would lead us to think that the patient was predisposed to aneurism. He has been actively employed up to six months ago, when this thing came on.

Now, in regard to his chills and fever: It is a question to me how much this has to do with the chills and fever. Often we find marked febrile symptoms with hydatid, especially when the tumors are large. There are very few diseases in New York that are not mixed up more or less with malaria. That is, when a person becomes sick the disease has a malarial form. The liver, I think, is slightly enlarged. I am not positive about this on account of there being the same character of percussion note here that we get all over. It would not be surprising if the spleen and liver were pushed up by the tumor.

Treatment.—Now comes the question of treatment. Before we can go any further it is absolutely necessary to make a positive diagnosis. Upon that rests the treatment. The only way to make a positive diagnosis is to explore. There is unquestionably fluid in this portion of the tumor, directly under the abdominal wall. You may not be able to find the rootlets of the hydatid in the first examination, therefore you ought to examine two or three times. I should have the patient lie on his belly for a while before the exploration was made. In case the rootlets should have settled down in the descending portion of the tumor shake him up a little so as to have the fluid wash out the cysts and get the rootlets mixed as thoroughly with the fluid as possible. Because I have seen many cases of hydatid fluids where examinations have been made several times and no fluid found; but on shaking the tumor several times the microscope would detect the rootlets. Aspiration, I think, is better than using the ordinary trocar. This boy's nutrition and general condition are very bad. There is not any special line of treatment for him. To relieve him of his pain give him a frequent anodyne. I would put him on iron and quinine. After we get the cyst emptied, I should put

him upon cod liver oil and where he can be out of doors.

The prognosis is a very delicate subject in these cases, because the cysts are so apt to fill up, and fill up rapidly, that they discourage the patient very much. You must never promise a cure in cases of hydatid tumor. The first aspiration may not be followed by any recurrence; then again it may recur half a dozen times, and then never come back again. I do not know any way in which we can make a certain prognosis. As far as danger of death is concerned I do not think that this boy is in any immediate danger, and I think that his life could be prolonged unquestionably whether he gets entirely rid of his hydatids or not. But certainly in the condition that he is now he is going down very rapidly. It is affecting his general health very severely.

The question of abdominal tumors, gentlemen, is always interesting because no two tumors are alike in their situation, or in their rational signs. I have seen hydatid tumors mistaken for almost every variety of tumor.

ABSTRACTS AND SELECTIONS.

ON THE TREATMENT OF SPINAL CURVATURE BY RECLINATION IN ITS EARLY STAGES.

Mr. Edward Lund, F.R.C.S., Professor of Surgery in the Owen's College, Victoria University, Manchester, writes:

"I hope to exhibit, at the forthcoming meeting of the British Medical Association at Liverpool, a form of couch for the treatment, by reclination, of spinal curvature in its early stage, and weakness of the muscles of the spine, which embodies in its action a principle of treatment for such cases too frequently overlooked.

"The couch which I have to recommend, and which will be shown at Liverpool, is designed to carry out by reclination the same principle of treatment as operates in the method of vertical suspension, only in a more gradual and prolonged manner. I have called my couch a 'slippery couch,' and I think the construction and mode of action will justify the term. I have used it with marked benefit during the last few years, in more than thirty cases, in private practice. It is made in this way. A piece of wood is prepared, of suitable thickness, and about six feet long and eighteen inches wide. At about four inches from one end, a hole is cut through the wood, of circular form and six inches in diameter, with its margin on one surface of the wood slightly bevelled inwards. This end of the piece of wood is to be the upper or higher part, when it is fixed at such an inclination by means of a block or cross-piece as to raise it about one foot at the higher end. It is well to have four wooden legs screwed on, one at each corner, the upper pair being longer than the lower in the same proportion; and to still further influence the angle at which the couch is to be used, by means of extra screw holes in the wood; the longer pair of legs being brought nearer to the foot of the couch, a greater elevation can be secured. The flat piece of wood being so prepared, is covered with several folds of soft thick blanket to about two inches in thickness, the blanket being just the size of the wood on one surface only; over this a piece of well polished black horse-hair cloth is stretched, and being turned

tightly over the edges of the board, is nailed underneath, so as to produce a smooth, somewhat soft, but yet slippery, almost polished surface. Where the blanket crosses over the hole already described, it must be cut across in two directions, longitudinally and transversely, and the horse-hair cloth should be left loose over the same spot, so that, if pressure be here applied, an indentation will be quickly made.

"Now, if a couch be prepared in this way, and placed at such an angle of elevation as I have here described, about one part in six of its length, a person lying upon it on his back will soon find, unless he make some effort to resist, that he will quietly slide down towards the lower end of the couch; and if his attention is otherwise absorbed, he will have his feet over the end of the board, as he is sliding beyond it. By a very simple device, this tendency to slide or slip downwards may be very beneficially utilized for the object we have in view.

"A small, firm, cylindrical pillow is prepared, about the diameter of the wrist, and a foot in length, and this is attached by strong tapes, one at each end of the pillow, and fixed to each upper corner of the couch, the length of the tapes being such as to place the pillow transversely on the board immediately below the lower edge of the hole in the wood. With this pillow in position, and the patient so placed that the pillow may be received into the recess of the nape of the neck, the projection of the occiput falling into the depression made by the hole in the wood, the body is retained in position, and the sliding down is prevented, but yet there is a constant gentle dragging action on the spinal joints from the weight of the pelvis and lower limbs, which will act most favorably in the required direction.

"It is desirable, when a patient uses this couch for the first time, that he should try it without the pillow; and, if needful, the elevation of the couch should be adjusted until the peculiar sliding movement is experienced. Then, with the help of the pillow, and the back of the head falling into the recess prepared for it, the patient will be aware of the principle upon which the couch is intended to act, and be more likely to continue its use.

"All other couches, such as the Ilkley couch, and couches with a double angular bend to support the knees, or with a foot-piece against which the feet can rest, are entirely opposed in principle to the plan of this 'slippery couch.' Using them, the patient may feel rested, and experience some temporary relief; but I know of no way, by reclamation, to secure a certain degree of spinal extension, better than to fix the upper segment of the vertebro-cranial axis at one spot, and allow the weight of the lower part to induce direct 'self-extension.'"—*British Medical Journal*.

COMPLETE SUPPRESSION OF SALIVA AFTER MUMPS.

BY

A. ST. C. BUXTON.

Complete suppression of saliva in both parotids and both submaxillaries is of extremely rare occurrence. A case has, however, quite recently come under my care, the features of which were as follows:

A lady of over middle age, while in the country, contracted mumps. As soon as the acute inflammation of the salivary glands had subsided, and all pain and swelling had disappeared, she returned to town, and I was called in to see her. She spoke with great

difficulty, and was forced to sip water at very short intervals in order to be able to speak at all. She told me that ever since the pain in the parotids and submaxillaries had vanished her mouth had remained persistently quite dry.

On examination I found her tongue, gums, cheeks, palate, and pharynx—in fact, as much as it was possible to see of the mouth and throat—in a fearfully dried up state. The tongue was thickly coated with a tough brown fur, which was horn-like. So hard was it that on striking it gently with a metal probe a distinct sound as of tapping the cover of a book with a cedar pencil was produced. The rest of the interior of the mouth was also extremely hard, and she experienced great stiffness in opening and closing the jaws. No swelling or tenderness on pressure existed about the salivary glands, and the orifices of Stenson's and Wharton's ducts were plainly seen. It is needless to say that she retained no sense of taste. She complained of the heat felt in the mouth, but the temperature was quite normal. Her sleep was greatly disturbed at night, and she awoke at short intervals with the most intense longing for cold water; but drinking afforded no relief. It is worthy of notice that for some three or four years she has been affected with paralysis agitans, both limbs of the right side being very shaky. She enjoys otherwise excellent general health, and, notwithstanding the trembling in the right leg, is able to walk well, and takes plenty of exercise out of doors. There was a great deal of difficulty in feeding her, for she absolutely refused milk and beef-tea, and the effort necessary to swallow jelly and other semi-solid food was very great. I prescribed gargles of potassic chlorate, and ordered glycerine to be applied locally to the interior of the mouth and surface of the tongue. I ordered also an infusion of fifty grains of jaborandi to be taken daily for four days. Although the glycerine afforded some slight relief to the mouth by its mechanical effect as a lubricator, there was positively no effect produced on the salivary glands. Copious perspiration (from the jaborandi) took place, and left her feeling very weak. I therefore abandoned that drug, and substituted mercuric iodide dissolved in excess of potassic iodide. I gave large doses for ten days with no result beyond the production of a feeling of malaise. It was evident that something must be done soon to excite the flow of saliva, for the patient had been in this condition for nearly three weeks, and was in the lowest depths of despair and misery. The next step which I took therefore was the application of a continuous current of electricity generated by a 30-cell battery (pint cells) of the Leclanché type. I introduced a very fine silver probe into Stenson's duct on one side, and pushed it gently on until I met with obstinate resistance to further entrance. The probe had then entered the duct about an inch. My assistant held the positive electrode firmly to the nape of the neck, while I cautiously applied the negative pole to the free end of the probe. I instantly noticed a contraction of the fibres of the buccinator, but as no pain resulted I fixed the wire to the probe and allowed the passage of the current to continue for ten minutes. While the probe was in the duct a thick white liquid oozed from the orifice. It looked something like pus. On removal of the probe a single drop of clear saliva followed it. Thinking that it was just within the bounds of possibility that a small abscess had existed somewhere about the duct and had been overlooked, and the probe had simply opened it, and so cleared the obstruction to the flow of saliva into the mouth, I determined to thoroughly

explore the other Stenson's duct and both Wharton's ducts before applying the current again. I passed the probe into all three remaining ducts as far as possible, removed it, compressed and squeezed the parts, but no pus followed. I repeated this again, but without finding a trace of pus. I then applied the current as before, with precisely the same result as in the first instance. I had the satisfaction of seeing four drops of saliva, one at the orifice of each duct. I visited my patient an hour afterwards, and a gentle flow of saliva was discernible from each duct. For three days the quantity steadily increased, without any further use of the current, and at the end of that time almost the normal amount was being poured out. The mucous membrane lining the mouth and the tongue was rapidly resuming its natural appearance. I have not seen my patient since, but I received a letter two days later stating that she had greatly improved; that the tongue was feeling quite comfortable, and that she was able to taste. A somewhat similar case is mentioned in the *London Medical Record*, 1877. The suppression of saliva on that occasion resulted from tonsillitis, and the flow was restored by stimulation by continuous current "frequently reversed." I did not reverse my current, preferring to submit the glands to the continued action of the negative pole. I find no mention of the condition in any medical work in which I have searched, including Quain's Dictionary of Medicine. —*The Lancet*.

THE RISKS OF "MASSAGE."

Dr. Julius Althaus, M.D., Senior Physician to the Hospital for Epilepsy and Paralysis, Regent's Park, deprecates the abuse of massage, a practice often now employed where it can be of no service. "It is well known that at various times epilepsy, idiocy, and some forms of insanity, have been treated by massage and gymnastics; but, fortunately, we now hear very little of such therapeutical aberrations.

"It appears to me that diseases of the brain and spinal cord must, on account of the anatomical situation of these organs, be inaccessible to the influence of massage, which can only be applicable to more superficial parts of the body. Apart from this, however, it is important to consider that many of the most important diseases of these organs are of an inflammatory or irritant character, either primarily or secondarily; and this should make it self-evident that massage should not be used for their treatment, even if the suffering parts could be reached by it. I will here only allude to many forms of cerebral paralysis from hemorrhage, embolism, and thrombosis, which are followed by sclerosing myelitis of the pyramidal strands; and most forms of primary lateral, posterior, or insular sclerosis of the spinal cord.

"That which may be good for developing and strengthening healthy muscles, or muscles which have been enfeebled by disuse or certain local morbid conditions, etc., is not for that reason suitable for the treatment of muscular paralysis owing to central disease. In most cases of lateral and insular sclerosis, which are, unfortunately, now much treated with massage and exercises, rest is indicated rather than active exertion; and overstraining of the enfeebled muscles acts prejudicially on the state of the nervous centers. I have recently seen quite a number of instances in which the central disease had been rendered palpably worse by procedures of this kind; and, in case of

cerebral paralysis which was some time ago under my care, the patient had, after four such sittings, been seized with collapse, which nearly carried him off." —*British Medical Journal*.

STRYCHNIA IN ALCOHOLISM.

In his *thèse* on this subject, M. Lecuyé, who is a pupil of Dr. Luton, is desirous of proving that strychnia is to alcoholism what mercury and the iodide of potassium are to syphilis. It cures delirium tremens, diminishes the gravity of wounds and inflammations occurring in drunkards, and wards off epilepsy and alcoholic insanity. Alcoholism should not be treated symptomatically by various remedies, but as a general disease: and the agent for so treating it is strychnia, which will remedy all, nervous or cardiac, cerebral or gastric disturbances. M. Lecuyé prefers the sulphate and administers this by subcutaneous injection on account of the usual indolence of these patients and the necessity of acting upon them rapidly. He dissolves thirty centigrammes in thirty grammes of water; and, according to the gravity of the case, injects the whole or one-half of a Pravaz syringe full. Not more than a centigramme should be injected at once, and this may be repeated, under watchful guidance, every two hours. In some cases one centigramme per diem suffices, while in others seven may be injected in fifteen hours without inducing symptoms of strychnism. —*Journal de Thérapeutique*, April 25.

Dr. Balthazar Foster in a Presidential Address entitled: "The Political Powerlessness of the Medical Profession: its Causes and its Remedies" (delivered at the last annual meeting of the Birmingham and Midland Counties Branch of the British Medical Association), concludes as follows:

We, as a profession, know the woes and the wants, the sufferings and the sorrows of the people more intimately than any other class, and by our daily work in the homes of the poor, we are trained to observe their social and sanitary needs. All modern sanitary legislation is an honorable record of the self-devotion and self-denial of a profession that has constantly striven to destroy the seeds of disease and death; a profession that has allowed no sordid selfishness to interfere with the full recognition that the prevention of suffering is a nobler office than its cure.

It is always a calamity to a state when any learned and respectable class of its citizens abstains from the exercise of political functions. It is a greater calamity when they do so in the face of law making on which they are capable of wise counsel. Recent parliamentary history, as illustrated by the slow progress of medical reform, the efforts of the anti-vivisectionists, the fate of the Contagious Diseases Acts, and the hitherto happily futile agitation of the anti-vaccinationists, should warn us against the danger of this attitude, and of the desirability of seeking to attain a juster influence in the councils of the nation. Our present political abstention inflicts a double loss; the failure to guide general legislation in right directions, and the lost opportunities of obtaining such purely medical reforms as may be beneficial to the community and just to ourselves. As a class, we stand almost alone in extent and thoroughness of scientific training. We are the only body wise in all the myste-

ries of the new knowledge. As the power of other learned callings wanes, as the proud predominance of wealth is lessened, it is the scientific intelligence that must gain in power. But power will not come to those who stand aside and look on, either cyclically or timidly, at the strife of parties. We must hold ourselves like men, willing to take our share in the struggle. We must remodel our institutions, we must organize and consolidate our profession, and infuse into our ranks the self respect and dignity that come from discipline. I have tried to sketch out the modes in which this may be done, and I have endeavored to show how the present political impotence of the profession may be converted, under wise guidance, into the leadership of public thought on all great social and sanitary questions.

The progress of civilization makes these questions every day more pressing, and successive governments are more and more forced to abandon the *laissez faire* principle, and to recognize their responsibilities as the guardians of public health. The people themselves demand this with increasing strength. The legislative era of the trader and mill-owner must pass away, and the time of the laborer and artisan must come. To help in these great social changes, to guide them into safe channels, is a high and noble task; it is one for which the medical profession is specially fitted, by its knowledge, by its sympathy, and, above all, by its sincere unselfishness. The fertile fields of this new land of loving labor lie before us in all their fruitful freshness; let us have the courage to claim possession in the name of a high and holy cause—the health and happiness of mankind.—*British Medical Journal*.

NOTE ON DISINFECTANTS.

Dr. W. E. Buck writes: Most practitioners must have often realized the inefficiency of disinfectants in allaying the fetor of cancerous ulcers, an annoyance which sometimes troubles patients even more than the pain, or the thought of death. I have used the whole round of disinfectants for cancerous ulcers, but all have failed in allaying the fetor, and keeping the ulcer clean. The disinfectants tried were carbolic acid, sanitas, terebene, resorcin, creasote, boroglyceride, chloride of zinc, charcoal, etc. After failure with these, I tried a saturated solution of hyposulphite of soda added to an equal quantity of water, and found it exceedingly efficacious. The ulcerating surface was well syringed and washed with the solution, and was then covered with rags steeped in the solution. The granulations were kept clean, and the fetor was well kept under. Most disinfectants seem to lose their virtue after a few days' application, but I have used this one for months in the same patient with continuous good effects. It is cleanly, has no smell, does not stain, and is very cheap.—*British Medical Journal*.

THE PRESENCE OF BACILUS TUBERCULIS IN AN ABSCESS NEAR THE ANUS.

Dr. Robert C. Smith writes: Six months ago, a young clerk, aged 21, came under treatment for hæmoptysis and other signs of phthisis. After about three months' treatment, he became strong enough to resume his employment, at which he continued up to the commencement of this month. I saw him on the

fifth, when he was suffering acutely from an abscess in the neighborhood of the anus; and, fearing that it might burst into the bowel and give rise to a painful blind internal fistula, I opened the abscess at once and let out a quantity of thin, curdy, foetid pus. A microscopic examination of this fluid by a half-inch object-glass, after the usual process of staining, revealed the presence of great quantities of well-marked typical tubercle-bacillus. Now, the presence of these organisms in this situation is interesting, as they tend to throw some light on the well-known connection between fistula and phthisis.—*British Medical Journal*.

ON THE FORCED FEEDING OF CHILDREN.

BY

J. SCOTT BATTAMS, M.R.C.S.

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CHILDREN, SHADWELL.

This last method of feeding—viz., by a catheter passed through the nose into the stomach—is exceedingly useful in cases of tracheotomy for diphtheria, in which a few days after the operation food enters the larynx, and is coughed up by the wound. Whatever the etiology of this condition may be, it is, I think, quite distinct from diphtheritic paralysis, though I have seen a case in which it was followed after an interval of three weeks by such paralysis.

Out of twenty-five children on whom I performed tracheotomy, three had this complication. They were fed in this manner, one for nearly a month, another for three weeks, and one for a week; the last only recovered. Such a condition is generally transitory, and feeding by pulped or thickened food suffices. Where it persists, forced feeding by some method is obviously the only way to prolong or save life. In such cases in my experience there is considerable prostration, often a great tendency to diarrhoea and vomiting, and the wound shows little inclination to heal. There is therefore the greater need not only for food and stimulants, but also for remedies. Much gentleness in passing the tube and judgment in the matter of food are required in such cases. The tube is especially apt to pass into the larynx, and is seen through the wound. In two of my cases "watering" at the mouth occurred when the tube had reached the stomach; and in one child the saliva was swallowed, passed into the larynx, and appeared at the wound. To avoid vomiting, the food should be bland, easily digested, and not too much in quantity. The children objected very little to this method of being fed, no local disturbance was caused, and the nurse passed the tube as easily as, or more so, than I did.

The conditions in which Forced Feeding may be useful.—I am unable to indicate very precisely all the conditions in which some method of forced feeding may be either optional, justifiable, or imperative. I can only say that in the East London Hospital, where children are admitted from birth to puberty, we have found more suitable cases than one might imagine. Take, for instance, a child with diphtheria in whom the throat and mouth are extensively implicated; such a child swallows with great pain and difficulty, and may even refuse to swallow, though great thirst be a concomitant symptom. The more or less routine treatment of such a case consists in the application to the throat at intervals of remedies more or less irritating. The child is also expected to swallow remedies that are at least unpleasant. The great importance of a due

supply of food and stimulants is not lost sight of; hence the child is not only disturbed by the forced application of remedies, but at frequent intervals a minimum of food has also to be supplied. In such a case if I were compelled to adopt any routine plan of treatment, it would be something as follows:—The application to the throat, every two or three hours during the day, of glycerine and boracic acid, the brush being first moistened. This is not unpleasant, and the child soon allows it to be applied without much opposition. No harm comes from swallowing this application, and, as far as my experience goes; I prefer it to any other. As the local condition improves, the number of applications can be diminished. Then, as to food and stimulants, one must be apt in resource both as regards the quality and quantity of the former and not too fearful in one's administration of the latter. Should the difficulty of giving it be great, then I would feed by the nose. If medicines are given, then those I think should be chosen that can be administered with the food. Quinine, ammonia, and Fellows' syrup I have found generally well taken and retained in this manner. Quinine or liquid extract of bark in coffee and milk might also be tried. Large doses of iron and chlorate of potash often cause vomiting. But in the presence of a grave disease the remedies for which are so numerous and diverse as to shake one's faith in any of them, one's trust, I think, should be mainly placed in a judicious administration of food and stimulants.

There are many other conditions in which we might be glad to avail ourselves of the nasal route to the stomach either for the administration of food or remedies. I have roughly enumerated some of them as follows:—

1. In conditions of the throat and mouth in which, either from mechanical causes or from great pain, it is difficult or impossible to administer food by the mouth—viz., in severe tonsillitis or ulceration; in anginose and malignant forms of scarlet fever; in severe cases of thrush and those horrible cases of cancrum oris; in injuries to the throat and mouth from corrosives and boiling water, or after injuries from violence or serious operations.

2. In convulsive and allied states this is the method by which we can administer both potent remedies and food. In uræmic convulsions I have once or twice given bromide of potassium by the nasal tube. In infantile convulsions, from whatever cause arising, we can thus quickly give an emetic, purge, chloral, or food. In tetanus and hydrophobia medicines and food can seldom be given by the mouth, but when given per nares the patient has no control over the administration. In one case of trismus neonatorum I fed the child in this manner with its mother's milk every few hours for two days, giving chloral at the same time.

3. In cases of insensibility more or less pronounced. Thus in the later stages of tubercular meningitis, all hopeless though the case has then become, we may still prolong life a little by forced feeding. In cases of cerebral hemorrhage or great shock, we might be glad under certain conditions to administer a diffusible stimulant and food. In any child where insensibility is sufficiently deep to abolish all reflex action, of course the tube should be passed into the stomach either by the nose or mouth. The passage of fluids into the glottis might under such conditions be instantly fatal.

4. In cases of narcotic or other poisoning in children I have only once had occasion to use the nasal route to the stomach. It is certainly no easy matter in the majority of cases of poisoning in adults to apply the stomach pump, on account of their struggles. And

there would be the same difficulty in passing an œsophageal tube in some strong children, even though their resistance be more easily overcome. In such a case one might more easily pass a tube through the nose into the stomach, draw off by syphon action or by suction its fluid contents, wash out the stomach if necessary, and inject some antidote or remedy. One drawback to such a method would arise from the blocking of the tube by solids too large to pass. In some cases of poisoning, where emetics are indicated, they can be administered per nares, with a rapidity and certainty that are not always obtained when they are given by the mouth.

5. In cases of paralysis, as after diphtheria or from brain disease, where the child cannot swallow, the œsophageal tube is often the only way to administer food and avert starvation.

6. In cases marked by extreme prostration, as in enteric fever and typhus. In the "typhoid state," from whatever cause arising, there will sometimes occur a case in which the demand for food and stimulant is urgent, the difficulty of administering it is very great, and the necessity for not distressing the patient most important. During the late epidemic of typhoid, a girl of four years was under Dr. Donkin's care at the East London Hospital. High temperature and much diarrhœa were present, and her voice became hoarse soon after admission. She was a perfect fury in the violence of her resistance to all attempts to feed her, and the end was only attained as she became exhausted. During the last week of her life I fed her almost entirely by the nose with only the slightest show of resistance, though she still battled violently against attempts to feed her by the mouth. Urgent dyspnoea came on, and she dropped back dead just as I was about to perform tracheotomy. In infants in a state of collapse I have frequently used the tube either by the nose or mouth to inject stimulants or food. The spark of life is too feeble in such cases to run the risk of quenching it by fluids passing into the glottis. The number of infants admitted into this hospital too feeble to suck is very large. As a rule, spoon feeding is sufficient, only a very little food being given at a time, and that carried well to the pharynx. I have found a syringe and small piece of drain-tube used in the same manner very convenient. The food may also be trickled down the nostril as before described.

I may perhaps seem to over-estimate the importance of the subject on which I have written, and to under-rate the difficulties attending the application of the methods I have mentioned; but looking back through only a short experience I know I have seen many a child's life prolonged, and some lives I honestly believe, saved by a timely resort to forced feeding. To add a few hours to the ebbing life of some poor child is no great achievement I know, but more than once I have thus been enabled to give the parents a chance of seeing the last of their little ones, a matter of no small moment in a children's hospital; and apart from all considerations for the friends and our own deep responsibility in the matter, it is thus we help to serve the highest and best interests of our hospitals. The silence of most of our standard authorities on the subject of forced feeding, and the fact that scores of practitioners during a long professional life have had no practical experience of it, seem sufficient excuse for my imperfect remarks.

Note.—The glass syringe with a piece of rubber tubing slipped over its nozzle is a very useful apparatus for administering food by the mouth. In the infants' ward in the East London Hospital there are al-

ways five or six children being fed by this means since I first introduced it. The sister of the ward, whose skill and devotion make her opinion valuable, says it is one of the simplest and most useful little devices for feeding the sick with which she is acquainted. After operation for harelip all our infants are now fed by this means. It may in many cases with advantage be substituted for the feeding-bottle, spoon, glass, feeding-cup, and other sick room utensils. The tube should be lightly placed between the lips and the fluid very slowly syringed into the mouth. With a syringe in each hand and two babies placed side by side, I have fed them in this manner simultaneously. It is equally useful in the case of adults. A patient can thus be fed without the least change in his position, whatever that may be. Take, for instance, a heavy man prostrated by some painful illness; in such a case any movement may be as injurious to the patient as it is painful. What is the not uncommon process of feeding in such cases? A heavy, helpless patient is raised by some fragile nurse, with pain to the one and discomfort to both, to a more or less constrained position; beef-tea is presented to him in a feeding-cup or open glass; he gulps down a portion, and the remainder probably runs over him; he falls back, thankful the operation is over, and neither party looks forward to its repetition with pleasure. Now, with a syringe and tube the same amount of fluid may be gently syringed into the patient's mouth without the least change of position on his part; he need not even trouble himself to suck. The child may feed the man; it becomes the very poetry of sick feeding.—*The Lancet*.

ALBUMINURIC RETINITIS OF PREGNANCY

DR. RYERSON, of Toronto, writes:

"Mrs. E., aged 22, was referred to me by Dr. Temple on June 1, 1881, with the statement that the urine contained a large amount of albumen. The patient stated that her sight had been failing for about a month. She said she could see the sides of an object, but not the center; and she complained of flashes of light in the dark. She had frontal headache, sometimes severely. She had no pain in the eyes. There was a great deal of nausea and vomiting. She was in the fourth month of her first pregnancy. With the right eye, she saw fingers at five feet, and read 16 Jäger; with the left, she saw fingers at three feet, and read 20 Jäger. With the ophthalmoscope, I observed, in the right eye, a well marked stellate arrangement of deposits about the yellow spot, with numerous patches scattered about the retina. The optic disc was somewhat swollen and indistinct in its outline. The appearances in the left eye were very similar, with the addition of numerous small hæmorrhages in the lower half of the fundus.

Dr. Temple informs me that, shortly after this, she was seized with convulsions, and had a miscarriage. She made a good recovery; and, when I saw her again, on August 4th, the swelling of the optic disc had greatly diminished, the scattered patches were less marked, but stellate patches in the region of the macula were about the same as when first seen. In the right eye, two veins apparently contained thrombi. The vision was, with the right eye, 20.50, 16 Jäger; with the left eye, 20.50, 16 Jäger. She could manage to write a letter. From Dr. Temple, I learn that she regained good vision, but did not myself see her again. In a few months the unfortunate woman became pregnant again, al-

though warned of the danger; convulsions supervened, and in one of them she died.

REMARKS.—It would be of considerable interest to learn in what proportion, and in what class of cases of albuminuria of pregnancy, retinitis occurs. That it does not necessarily occur, I know, having attended, some years ago, two cases in which there was no complaint of trouble of vision. One case, a woman of about thirty years, in her fourth pregnancy, made a good recovery. The other had uræmic convulsions, and died. I did not use the ophthalmoscope, but relied upon the patient's statements, the cases having occurred in my pre-ophthalmoscopic days.—*British Medical Journal*.

MEDICAL NEWS AND NOTES.

A Novel Crutch.—Dr. James R. Taylor of New York City, while reading a paper before the "American Medical Association" at its recent meeting in Cleveland, exhibited a novel device of his own invention for use in combination with the ordinary crutch used by convalescents from fractures of the leg, and other causes of lameness of the lower extremities. The doctor's invention consists of a neat well constructed little saddle so arranged that it is worn without inconvenience inside of the clothing. Attached to it are a small pair of adjustable suspenders on each side which terminate in steel hooks for fitting upon the tops of the crutches.

When the suspenders are fitted to the patient these hooks reach up to about two inches below the axillæ, their ends alone coming out under the arms and outside of the clothing. These ends are the only parts of the device which are visible. The saddle is well padded to fit the perineum, and is of such form that the patient rests upon it without discomfort while sitting on a chair; its temporary removal is also nicely provided for, and when he places the crutches in the suspender hooks for the purpose of walking, the weight of his body is carried entirely upon the saddle without having them reach up to the axillæ, so that no discomfort is experienced by him even in taking long walks, as he swings easily between his crutches taking long steps, and is he otherwise strong, weakness of his leg will not prevent his taking plenty of exercise.

This apparatus has been thoroughly tested by Dr. Taylor on quite a number of his patients, both male and female, with great satisfaction both to himself and them.

Inhalation of Air Exhaled by Consumptives.—Fresh proof of the danger of inhaling air exhaled by persons having lung diseases has been given by a characteristic French experiment. M. Gibeux took four young, healthy rabbits from the same litter, and kept them for one hundred and five days in cages, as follows: Two were placed in a cage where they were obliged to breathe the air exhaled from animals with consumption, twice a day for two hours; in a short time they became sickly, and on killing them they were found to have tubercles in the lungs. The other two breathed twice a day the same air, but disinfected by being passed through cotton wadding impregnated with carbolic acid; these rabbits remained in good health, and were finally eaten by the experimenter.

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SCHOOL INFLUENCE AND THE SPREAD OF DIPHThERIA.

Few points have received more attention in connection with the spread of diphtheria than school attendance. It has long been known that children at the school age—namely, from three to fifteen years—were especially susceptible to the disease, but it has been most difficult to ascertain how far this has been due to age predisposition alone, or to special facilities for contracting the affection during school attendance.

At an early stage of the investigation which has been recently conducted and reported by W. H. Power, and which is noticed at length in the *London Lancet*, it became evident that, in addition to definite diphtheria, there had been a large prevalence of sore throat, some of it being of a very trivial character, and a house-to-house inquiry was hence instituted with a view of ascertaining the whole circumstances of the throat illness throughout the parish. During this portion of the investigation it transpired that diphtheria had prevailed in the vicinity at the end of 1881 and the beginning of 1882, and that the recent outbreak was in all probability connected in some obscure way with the former one. For seven weeks during the earlier portion of the outbreak now under investigation, the school remained open and the disease extended. It was then closed and there ensued a lull in the disease, the decline being limited to children under fifteen years of age. The school was then reopened for three weeks, and in that period the attacks again become more numerous, the increase being solely amongst children under fifteen years. The school was once more closed, the disease almost disappearing amongst the children, whereas new cases occurred among older persons. The incidence of the throat illness upon children under fifteen years of age on each occasion that the schools were in working is striking, and, as Mr. Power says, schools have ere now upon very similar evidence been believed to be the sole propagators of diphtheria. But since children at the school-going ages are more prone to this disease than other persons, this evidence

taken by itself cannot be regarded as actually proving school influence as the main factor in the dissemination of the disease, and Mr. Power therefore set himself to differentiate, if possible, between mere age influence at ages of three to twelve years, and any influence that may have been special to the school. The materials thus collected are embodied in a series of instructive tables; and amongst other things it was ascertained not only that children at ages from three to twelve years suffered three or four times more than others in families who were actually invaded with the disease, but also that children of that age not exposed to infection in their own households were in a large proportion of cases those who introduced the disease into their respective families; and Mr. Power arrives at the conclusion that, apart from its age, the child of three to twelve years has, for some reason or other, been the child to get the disease, and to take it to houses heretofore free from infection. This special influence, he says, must almost necessarily have had to do with the process of school-going. Another table goes to show that in uninfected families children of this special age who were attending school became affected, on the occasion of each school opening, five or six times as numerous as children of the same age who at the same period were not attending school. "While the school remained open in the early months of the year the rate of attack in children from three to twelve years, presumably susceptible of diphtheria, but not having the disease at home, was 16.6 per cent. of those who were at school, and 3.8 per cent. of those who were not." The next time the school was open the respective rates were 4.8 and 0.0, the third time 7.1 and 2.5, and the fourth time 4.1 and 0.0. The subject being further investigated, the same facts are brought out in a different form—namely, in a table which shows what was the occurrence of throat illness amongst this particular class of the community who had no infection in their homes both during periods of school work and school closure, and a comparison of the several periods shows conclusively that the conditions of school attendance must of themselves "have played an important part in the speciality of the incidence of grave illness on children of three to twelve years."

Mr. Power then inquires what this special school influence was. The sanitary circumstances of the school are discussed in detail; they were of exceptional excellence, and must be dismissed accordingly. Special cleansing measures were adopted on each school closure; hence it is hardly likely that the poison was retained about the school premises. The question of personal infectiveness is next dealt with, and Mr. Power is inclined to think that this was not the cause of the remarkable difference in the incidence of the disease whenever the school was opened. He refers in this connection to the extreme care that was taken to exclude scholars from infected houses; he feels convinced that no persons suffering from diphtheria itself or from "notable throat illness," did attend school within five or six weeks of their seizure; and he says that unless persons afflicted with diphtheritic neuroses are to be regarded as infective, it may be doubted whether the infection was on each occasion reintroduced by convalescents. He also fails to find the special influence operating through the schools, in the occurrence of what has been termed the "progressive infectiveness" of the diphtheritic poison; indeed he alleges that each time the school opened multiple cases of diphtheria appeared in startling suddenness and in an aggravated form, without the intervention of cases of a graduated severity.

There, are, however, several considerations which prevent us from so readily setting aside this question of personal infection as the principal factor in producing the so-called school influence. Mr. Power admits that during the course of his inquiry he heard of many cases of very trivial throat affections; he explains how many of these were regarded as mere "colds," the occurrence of which only transpired as the result of close questioning; he says that in regard to families comprising many young children there was noticed a special capacity "of mere sore-throat for breeding malignant diphtheria," and he adds that "in such families severe or fatal cases of diphtheria tended to occupy a position midway in a series of attacks that began as sore throat and ended in a similar fashion." Now, one has only to regard the children collected at the school as a large family—a simile used by Mr. Power himself—to conceive that some of the throat attacks which occurred during periods of school closure were so mild as to be absolutely unrecognized, and to accept the inference that the mere sore-throat which bred malignant diphtheria in the smaller families at home produced the same effect in the larger school family when the individuals composing it, once again had opportunity of coming together in a manner and with such nearness of contact as had been impossible during periods of school closure; and then the possibility that personal infectiveness was really the cause which on each school opening came into operation becomes so strong that it can hardly be set aside. The subject is, however, still involved in some obscurity, and we are willing to admit with Mr. Power that as yet no completely satisfactory explanation of all the occurrences is forthcoming.

THE BACILLUS OF TYPHOID FEVER.

In view of the increasing interest in the study of the relation of bacilli to disease, the following report of cases of typhoid which were specially observed for the discovery of bacilli, will be of interest.

The alleged discovery of the bacillus of typhoid fever made during the year 1881 by Klebs and Eberth, independently one of the other, although at first received with incredulity, has been since confirmed by several observers so far as is possible in the absence of the *crucial test*, viz., the production of the disease by inoculation with the pure and cultivated bacillus, for as yet no disease among the lower animals has been identified with human typhoid.

W. Mayer (*Untersuchungen über die Bacillen der Abdominaltyphus*, Berlin, 1882) demonstrated its presence in the intestinal mucous membrane, the spleen, and the lymphatic glands in eighteen out of twenty-four fatal cases of typhoid; Koch (*Mittheilungen des Reichsgesundheitsamtes*, Band i.) found it in half of the cases examined by him. Klebs met with bacilli or micrococci in twenty-four cases; and Wernich (*Studien und Erfahrungen über den Typhus abdominalis*. *Zeitschrift für Klin. Med.*, Band iv. und v.) concludes from his own researches, compared with those of others, "that the essential phenomena of the course of the disease and the most serious symptoms depend primarily on the numbers of the bacilli or on repeated invasions of the digestive organs." The subsidence of special symptoms on the eleventh to the fifteenth day corresponds with the dying off of the nests of the bacilli, after which time, unless there have been a fresh invasion, it is often impossible to prove the presence of the bacilli. According to Eberth (*Die Typhusbacillen und die intestinale Injection* in *Volkmann's Sammlung Klin. Vor-*

träge, No. 226) the number of the bacilli is greatest about the twelfth day of the disease, after which it steadily declines to the end of the third week; only exceptionally are they found up to the fifth and sixth weeks. Eberth found them always most abundantly in the lymphatic glands of the cæcum. In this part they appeared as masses of micrococci; in others, where they were less densely packed, they could be recognized as short plump rods, with rounded ends, forming in the fluids of the lymphatic glands chains of two or three links. Unlike the bacilli of putrefaction, they displayed in prepared sections a very small power of absorbing aniline colors.

In twenty-four other cases of suppurative processes in the intestine, not of a typhoid character, among which were twelve of tubercle, only once could the existence of such bacilli be detected. Eberth believes that the mucous membrane of the intestine is the regular path of access of the typhoid bacillus into the human body, "whence the fungus makes its way to the mesenteric glands, and passes from them into the circulation, to accumulate finally in the spleen."

LECTURES.

CHRONIC ENDARTERITIS.

A CLINICAL LECTURE

BY

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CASE I.—Male æt. 48. Was admitted to the hospital September 29th. Occupation, truck-driver. He has been exposed to all sorts of weather. Has been a hard workingman and a regular drinker, but still not an intemperate man. He has been, as you can still see, a man of unusually large frame and of great muscular development. He has always been in good health, until last March. Then he took a severe cold, which was followed by dyspnœa, cyanosis, edema of the feet and legs, pain in the left side. His heart's action was feeble, rapid and irregular. His urine was passed frequently and in small quantities, but he had no headache and no vomiting. He came into the hospital for this attack and remained there three weeks. The symptoms all disappeared and he went out feeling quite well and returned to his hard work again. He continued well until last July. Then he had another attack similar to the first. There was the same dyspnœa cyanosis, edema, and the same irregular heart's action. This attack lasted for two weeks. Then he again recovered and, regaining his health completely, he again went out of the hospital feeling well and returned to his work again. He continued well until the 29th of September, when he had his third attack. He again came into the hospital and was again under observation for the third time. During this third attack the symptoms were the same as in the previous attacks. The dyspnœa was exceedingly intense. The man breathed with very great difficulty and the dyspnœa was accompanied with marked disturbance of the venous circulation. The skin of the whole body, especially the extremities, was livid and purple, and it was cold to the touch. There was evidence not only of great dyspnœa, but, of very marked disturbance of the venous circulation. His pulse was very feeble and irregular. The heart's action was also feeble, rapid and irregular, but there was no murmur and no change in the sounds of the heart. There was

œdema of the feet and legs. His urine had a specific gravity of 1011 and contained a good deal of albumen and hyaline casts. He passed thirty ounces of urine in the twenty-four hours. This third attack began on the 20th of September. After a few days he began to improve and the dyspnœa, cyanosis and œdema went away. By the end of the first week of October the man was doing very well indeed and was apparently likely to recover as he recovered before, and go out again and work as on the two previous occasions. But on the 15th of October another new symptom was added which had not existed in his previous attacks. This symptom was the existence of pain in the right leg. It was found to be œdematous from the knee downwards and there was a distinct line of tenderness and induration along the course of one of the superficial veins in the calf of the right leg for about two inches. In other words, the man had acquired something new. He had acquired a thrombosis with phlebitis of the veins of the right leg. At this time the urine had returned to a natural condition. The man was passing about sixty ounces of urine in the twenty-four hours with a specific gravity of 1020. It contained no albumen. This has been the condition of his urine since then. His urine now remains normal. This thrombosis has lasted for about two weeks and then the pain and swelling gradually disappeared and the man has had no more trouble. At the present time the man is in a very fair condition indeed. He feels well and would be able to go to work if it were not that his right leg has still not entirely returned to the right condition. His urine is normal, he has no œdema, no disturbance of digestive functions, but his heart's action is still not as strong and regular as it should be. There is no change in the size of the heart. There are no murmurs, but the heart's action is still feeble and irregular. When we feel the man's arteries, especially the radial arteries, we find that they are somewhat harder than they should be and somewhat tortuous.

You observe what has been the course of affairs in this man. In the first place you will notice his age. The man is over forty years. His health has been good. He has been in the habit of drinking freely and yet has not been intemperate. He has now suffered from three distinct attacks, each of the same kind. In each attack the prominent symptoms were dyspnœa, cyanosis, œdema, and the changes in the urine, but in each attack these symptoms only lasted for a short time—two or three weeks—and then disappeared, and then the man was apparently well, but after the last attack he had the other symptom added, viz., thrombosis of the veins of the right leg. His heart action is feeble and there is a change in the arteries.

CASE II.—This man is thirty-four years old. He was admitted to the hospital on the 8th of November. The man's mental condition when admitted was not altogether satisfactory, so that the history is perhaps not as accurate as it might be. But the man said at the time he came in that he had been taken sick three weeks before his admission to the hospital and then he first noticed pain in his upper and lower limbs and abdomen. He noticed that he was losing power in his arms and legs, especially in his legs, and he also complained of pain. When he entered the hospital, both his arms and legs were weak. There was not absolute paralysis, but some loss of muscular power, and this loss of power was more marked on the right side than on the left. There was also a little change in sensation. There was no pulsation that could be felt at the time of his admission in either of the posterior tibial

arteries, and the pulse in the popliteal and radial regions was feeble. The superficial arteries were hard and tortuous. He passed his urine and feces involuntarily in bed and his mental condition was dull. The toes of both feet showed the condition of commencing dry gangrene more on the right side than on the left. He continued in this condition until the 20th of November, and then it was found in the morning that the patient had a complete loss of power on the right side of the body. He had a complete right hemiplegia. This hemiplegia had come on during the previous night without anybody knowing about it, and it was discovered on the 20th of November when the house-physician went around.

These have been the symptoms up to the present time except now he no longer passes his feces and urine involuntarily. He has some control over the bladder and rectum. The loss of power in the right arm and leg were complete. The heart's action is now tolerably regular and forcible.

In this man then we have, so far as the history goes, these facts: the man had been sick for three weeks before he came into the hospital. When he entered the hospital he was dull and stupid and there was a sort of general loss of muscular power in both his arms and legs without loss of sensation, and at that time there was commencing gangrene of the toes in both feet. There was a change in the arteries of the body and there was this mental condition. After the man had been in the hospital for a little while he became hemiplegic on the right side, at first complete, now not as complete because he can move the right leg a little. The gangrene has gone on. At the time he came in there was a very marked absence of pulsation in the arteries of the leg. The pulsation in these arteries is now better.

Now, gentlemen, here we have two cases—the case of the man whom you saw before and this man, which, although they seem somewhat different from each other, really belong to a set of cases which are quite common, both in hospital and private practice; and as these cases are comparatively little spoken of in textbooks, I think it will be well enough for me to take a few minutes and tell you about them. These cases occur for the most part in men. They are not common in women. They occur regularly in persons in adult life—over thirty years of age—usually between the ages of thirty and sixty—more commonly after forty than after thirty. The patients are those who have usually been in the habit of drinking to some extent, but with this habit of using alcohol there may have been the habit of taking plenty of good food, or, on the contrary, the patients may have been insufficiently nourished. We find this condition both in persons in good circumstances, and in those of bad circumstances. We get the clinical histories tolerably complete, but we are not so apt to get the post-mortem examination. When the cases occur in hospital patients' histories, as in the case of this man, are apt to be incomplete, but we are more apt to be able to see what the condition of the body is after death. These two cases, in private and hospital practice, must be put together to get a picture of the disease.

In this set of cases we find a variety of lesions and symptoms differing in different cases, but there is one lesion which must be common to them all. It seems to lie at the foundation of all the cases, and this lesion is a chronic inflammation of the arteries of the body—a chronic endarteritis.

This lesion changes the arteries in two ways. It leads to the thickening of the coats of the artery and

to a thinning of the coats of the artery, and very often in different parts of the same artery we will find some portions of the artery thickened and some parts thin. The thickening of the artery sometimes merely takes the shape of patches of thickening on the inner surface of the artery; at other times it takes the shape of a complete obliteration of the artery. Either the caliber of the artery is diminished or it is completely obliterated, or the inner surface of the artery is made rougher than it should be. The thinning of the arteries may be a diffuse thinning, or it may be a thinning in places, so that you may have aneurisms formed. This change in the arteries is common to all the cases of which I am now speaking. It is the one constant condition. With this change in the arteries we find associated symptoms, which, as I said, vary in different cases. In some patients the most marked symptoms will be the cerebral symptoms. In other patients the most marked symptom will be the cardiac trouble. In others the most marked symptoms will be those which apply directly to the change in the arteries, that is, gangrene, as in this man, and thrombosis of the veins as in the first patient. In the first place, the cerebral symptoms that we get in these patients are changes in the mental condition of the patient. There is dullness, stupidity, sometimes delirium and loss of power over the voluntary muscles, usually in the shape of hemiplegia. The hemiplegia is sometimes dependent upon actual extravasations of blood, sometimes upon actual obliteration of the arteries, with softening of portions of the brain tissue, and sometimes simply upon the inflammatory changes in the walls of the cerebral blood-vessels. In this man, for example, we have here, as you observe, hemiplegia of the right side, which was at first complete, but is now almost complete. You might say at once this man has, of course, cerebral apoplexy, or he has a cerebral embolism or thrombosis. It is perfectly possible and probable that this man may have a clot on the left side of the brain, or he may have an obliteration of one of the cerebral arteries on the left side of the brain, but it is not certain. It is equally possible that this man has no clot, and no plugging up of the cerebral artery, and no softening of the brain tissue, and yet he can have just as complete a hemiplegia as he has now, and a hemiplegia lasting just as long as this without either a clot, or without any obstruction of the arteries. He may have nothing in the brain at all but changes produced by the inflammation in the arteries of the brain. His condition might be due to either one of these three causes. The cerebral symptoms, then, and the cerebral lesions that we get with this set of cases, of which I am speaking now, are hemiplegia, due either to the accidents of arteritis, cerebral apoplexy or cerebral embolism and thrombosis. These are the head symptoms.

Of the heart symptoms we have had an example in the man I showed you first. He has a heart which is beating irregularly, and which is more feeble than it should be, and you observe that the man has had three attacks, during which the heart's action was so feeble and irregular that he suffered from the most intense dyspnoea, and became exceedingly cyanotic and his condition was such that he looked as if he might die in any one of these attacks. These heart symptoms again are not exactly the same in all these patients. In some patients there will be no structural lesion of the heart. For example, in the first man and in the second case there is no evidence of any structural lesion of the heart. Then, there are other hearts in which we do have structural lesion. We have changes in the size of the ventricles, in the thickness of its walls and in the

conditions of the valves, and in other cases we have changes in the coronary arteries. They all have the same cardiac symptoms, viz: The heart beats irregularly and feebly, and in the very worst cases the heart will stop beating altogether and the patient will die from the cardiac condition. In this way a considerable number of these patients come to a sudden death, and the peculiarity is that during a good deal of the time the heart, although not beating as well as it should, yet beats well enough for them not to know anything about it. For example, in the first case the man's heart is not beating as well as it should at the present time, and still he does not know that there was anything the matter with his heart. You never know when the time will come when the heart will suddenly fail to perform its proper function. Then either one of two things takes place. Either the patient has an attack of extreme dyspnoea, with cyanosis, or he suddenly dies. These are the symptoms which belong to the condition of the heart; attacks of dyspnoea becoming very severe and sudden death, due to the failure of the heart's action.

Thirdly, we have another set of symptoms due to the condition of the kidneys. Here, again, the kidneys are not always in the same condition in these patients. Usually they present the lesions of the atrophied form of chronic diffuse nephritis. Sometimes far advanced, at other times not so far advanced. These kidneys, although in this condition of disease, yet may fulfill their functions apparently just as well as a normal kidney during a good deal of the time. The patient will pass a normal amount of urine, with normal specific gravity. This will contain no albumen and no casts. That is the case in the first patient at the present time. His urine is now perfectly normal. He is passing the ordinary amount with normal specific gravity, and there is neither albumen nor casts. The kidneys, although probably diseased, are yet fulfilling all the functions of the normal kidney. But from time to time, without reason, and like the heart symptoms, the kidneys will cease to fulfil their functions, and the patient will pass less urine. It will contain hyaline casts, and may contain blood, and you will have added to the patient's other symptoms the existence of edema of the feet and of a dyspnoea dependent, not upon the heart's action, but upon the way in which the lungs act; and then, in still other cases, we have what is a prominent feature in this man, viz: The failure of the arterial circulation to such an extent that dry gangrene takes place. In this man the toes are dying because they are insufficiently supplied with blood. This insufficient supply of blood is due to the endarteritis, the inflammation diminishing the caliber of the arteries, and not allowing a sufficient amount of blood to go to the extremities. In other cases, instead of this, you will have thrombosis of the veins. This thrombosis of the veins takes place indirectly. It seems to take place because the blood does not circulate with sufficient rapidity through the arteries to carry on the return circulation through the veins. The blood is not forced back through the veins by the arterial current as it ought to be, and as a result we get thrombosis, as we had in the first patient. These, then, are the symptoms which you get in these different patients. You might in all these cases, if you chose, say that they were all nothing but cases of chronic Bright's disease, with more or less complications. For nearly all of them do have chronic Bright's disease, and they all nearly have the same form of chronic Bright's disease, viz: the atrophied kidney. But yet, I think if you take into consideration all the different symptoms from

which the patients suffer, and the different courses which different cases run, that it hardly seems reasonable to simply class these as a variety of chronic Bright's disease. To me the combination seems the other way—that the chronic Bright's disease is a complication, and that the patients suffer really from a general inflammation of the arterial system, an inflammation which is complicated with other lesions, and which shows itself with different symptoms in different patients, according to the degree and the character of these complications.

As regards the treatment of these patients I unfortunately can say very little.

The prognosis is exceedingly bad. The patients usually die and they generally die within a moderate length of time. Even this first patient whom you saw here though at present apparently pretty well, though such a large strong muscular man, yet I think one could safely estimate the chances as at least eighty out of one hundred that the man will be dead within two years. He will either die suddenly from a sudden failure of the heart's action or he will have another attack of extreme dyspnoea and cyanosis as before and will die of that. Or he may develop cerebral symptoms and suddenly become hemiplegic or he may develop mental changes. He may become dull, stupid and unable to attend to his business but in one way or other the man is pretty certain to me to die from the condition of his arterial system. In this man the lesions in the arteries are probably much more developed than in the preceding case and the symptoms due to those lesions have become very much more marked. The gangrene has commenced. That gangrene will continue. First the toes will slough away and probably more and more of the feet will be involved. The hemiplegia which he now has may remain or partly disappear. It may almost entirely disappear and after disappearing it may return again or instead of disappearing the hemiplegia may continue and the man may at any time become finally comatose and remain in that condition. From the way in which he is behaving so far, I should expect a continuance of the cerebral symptoms.

Now the reason why I lay stress upon these patients is the number of incomplete cases you meet with. For example I saw yesterday a man who was picked up in the street and brought into another hospital comatose. He remained comatose until he died. There was no previous history. He was not only comatose but almost completely hemiplegic. The house physician supposed that it was a case of cerebral apoplexy. At the autopsy what was found? There was no apoplexy and no obstruction of the cerebral artery. There was nothing but the condition of inflammation of the coats of the cerebral arteries of which I have been speaking. There was no organic heart disease but the arteries throughout the body showed the lesions of chronic inflammation and there was commencing atrophy of the kidneys. Here you observe was a man who died suddenly and if you were not aware that there was such a set of cases of which I have been speaking you would not be able to say why he was hemiplegic, comatose or why he should die; or you would simply put the case down as chronic Bright's disease. Unfortunately I cannot tell you why the man has these symptoms but we know from experience that a considerable number of patients behave this way with inflammation of the arteries.

I have under my present care a gentleman fifty years old who enjoyed very good health till a few days ago. Then he began to have trouble. First he had great pain in one leg. Then he had a loss of power

in that leg. Then there was swelling and it became evident that he had developed a small popliteal aneurism. This popliteal aneurism lasted for a time and during the course of another year he developed another popliteal aneurism in the other leg. Then he went on. These aneurisms remained small. After remaining in this way for a time he developed a thrombosis of the veins of one of the thighs and one of the legs and he had repeated attacks of thrombosis in the thigh and leg and each attack of thrombosis was attended with phlebitis and with a certain amount of febrile movement and constitutional disturbance. That is as far as the gentleman has got at the present time. With him the condition of the arteries has led to the development of these two aneurisms which have remained stationary and this same condition of the arteries has led to the development of these repeated attacks of thrombosis. But that is not the end of the case. That man is absolutely certain to develop either a cerebral attack or cardiac or renal attack with the symptoms that belong to them. Then there are still other cases which are common enough. Men who are apparently in perfectly good health and who are attending to their ordinary business and while attending to their business, perhaps eating their dinner, shaving or taking a bath—suddenly have a feeling of depression about the heart and fall dead. You make the autopsy and find nothing except this condition of the arteries which I have spoken of. There is no lesion of the brain or heart. But you find atrophied kidneys and the general inflammation of the arteries.

SPONDYLLITIS—MITRAL OBSTRUCTION—EPILEPTIC CONVULSIONS.

A CLINICAL LECTURE.

BY

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CASE I. History.—Boy aet. 3 years. Perfectly well up to nine months ago. Mother then thought that the child was growing lazy. He would lie down on the floor, refuse to play and sit up, and would cry when touched or taken up. The trouble appeared suddenly. A few weeks later a lump appeared in the back between the shoulders, which increased gradually in size. For the past five months the child passes water and feces involuntarily. Has gained some control over the bladder recently.

On examination we find a prominence corresponding to the seventh and eighth dorsal vertebræ.

There is very little deformity of the anterior portion of the thorax. This is a case of spondylitis; inflammation of the vertebræ, resulting in kyphosis, two or three vertebræ being affected. There is one point of special interest in the case, viz.: that the child has lost control over the sphincters and over the lower extremities. It could move the upper extremities, however.

The question is how to explain this.

At no time has the child been in such a condition of anemia or debility as to result in incompetency of the sphincters or of the muscular movements of the lower

limbs. For at no time when the lower extremities and the sphincters were affected was there insufficient power in the upper extremities. Thus we have to conclude that whatever incompetency of the sphincters and voluntary muscles was present, it must be explained by the kyphosis, and the question is then in what way it can be explained.

Very extreme cases of kyphosis will sometimes result in compression of the spinal cord to such an extent that the substance of the spinal cord is hopelessly destroyed. Then there are cases of paraplegia of a hopeless kind.

Other cases are those in which there is very slight compression.

In such cases there is no paraplegia, but simply a paresis or partial paralysis. In other cases there is simply a little twist and compression and hyperemic condition of the dura mater, and in those cases you may have the result of very severe peripheral pains depending upon such meningitis or meningeal hyperemia. This may be but temporary, as in the case of meningeal hyperemia from other causes.

It is possible that we may have had such a case here.

This hyperemia may take place in consequence of the changed condition in the bone. The bones will not always be of equal size in consequence of changes which have occurred in the degree of inflammation.

While a child may become quite paraplegic now and then, it will be only slightly so, and sometimes will not be affected at all. I have seen cases of that kind improve after being paraplegic for a number of years.

In this case the diagnosis was previously made of chronic meningitis. Sometimes a chronic periostitis compressing the roots of the nerves where they emanate from the spinal cord will produce a meningitis. I remember one such case that took mercury and iodide of potassium for a long time, and improved considerably and constantly. In this case it appears that the paralysis was due only to a temporary congestion perhaps of the dura mater or a temporary swelling of the periosteum.

It has got well by itself. The kyphosis has not.

The treatment should be first, absolute rest and immobility of the spinal column. This is just in the place where Sayre's Plaster of Paris jacket would work to advantage. Therefore a fair result may be expected, provided the parents will have sufficient patience.

I should again and again propose the use of phosphorus in minute doses in cases of subacute and chronic bone inflammation. I have used phosphorus for that purpose fourteen to fifteen years to great advantage. There is no doubt that fractured bones in animals, which are given phosphorus at the same time, will heal very much more rapidly. There is no doubt that in minute doses two or three times a day phosphorus will certainly contribute a good deal to healing up cases of chronic or subacute osteitis, with or without caries.

CASE II. Mitral Obstruction Causing Cyanosis.—Girl aet. five months. During the first five weeks the mother never observed any abnormality about the child. At this period some pimples were noticed about the arms, also some fissures which would bleed when washed. When seven weeks old had red skin, which would scale, forming no scabs. At the same time she had some scales as large as fish scales. Also had snuffles and eczema. The snuffles lasted four weeks. From 2-3 months a general blueness has been noticed. The skin is bluish and the veins are very large.

If the external veins are large; if the capillary veins are larger than normal and filled with venous

blood to such an extent that the mucous membranes are blue, and that there must be an immense stagnation of blood between the periphery and the center.

If you found that in the lower extremities, you would say that there must be obstruction to the venous circulation belonging to the lower extremities. In such a case you would look for the obstruction somewhere in the abdominal cavity, perhaps in the liver or even lower down. If there were no swollen veins in the abdomen we would look for the cause of the cyanosis in the pelvis. Where the veins of the chest are very much dilated; where the hands and arms are bluish; where, on the other hand, the abdomen and lower extremities are free from venous obstruction, you would say that the obstruction must be not in the central organ, but in a portion of the circulation which controls the upper extremities and the chest. You would then look for the cause of such local cyanosis in the vena cava superior. If we found cyanosis all over the lips, hand and feet, we would certainly look for a central origin. This central origin can be either the lung or the heart.

Moderate cyanosis in the adult is frequently the result of lung diseases. In bad cases of emphysema we find cyanosis as one of the results, and in children lung diseases are very rarely the cause of cyanosis. It is mostly the heart that is affected, and as a rule there is not an acquired, but a congenital disease of the heart.

The large majority of heart diseases in the adult are confined to the left side.

In infants, where the heart disease is congenital, it is in the majority of cases confined to the right side. Those of you who remember the physiological activity of the right side of the heart in the fœtus, recall that the right heart is as large as the left; that it is the half of the heart which has more decided and important physiological functions, and this is more apt to become pathologically affected.

Thus diseases of the heart, when congenital, are more apt to be found on the right than on the left side.

I find here an unusual absence of heart murmur. Usually in these cases it is very loud. In this case I have only a very slight and very feeble murmur, corresponding with the mitral valve.

There is no trouble in the lungs. It struck me at first that there was an unusual amount of tympanitic sound on the left side, which occurred to me might be due to the passage of some of the intestine through the diaphragm into the chest.

A diaphragmatic hernia is sometimes accompanied with a rudimentary development of the corresponding lung to such an extent that a large portion of the intestines passes through the patent diaphragm into the cavity.

This tympanitic resonance, however, disappeared on turning the baby over. I only find here a mitral incompetency.

This ought to give us some confidence in being able to relieve some of the symptoms. Whenever there is so much stagnation in the heart that the surface is blue, the lungs must certainly be overstocked with blood. The mucous membranes secrete a great deal more mucus, etc., etc. I should propose for this child a few drops of the tincture of digitalis a few times a day.

CASE III. History.—Epileptic Convulsions.—Girl aet. 3 years. Child has convulsions. Mother noticed first attack when two months old. It would wake up at night and start. When four months old took one convulsion with a "click," which increased. A peculiar click would come on several times in the night. The eyes would stare, and she would become rigid and pale

all over the body. At first the child had four to five attacks at night and one or two during the day. There was a general convulsion at times. Has had as many as thirty a day.

Here is a case of undoubted epilepsy commencing very early in life. What the mother describes as clicks and what was when her attention was sufficiently awakened a click with a rigor, or click with a rigor and tremor; which afterwards, when the child was nine months old, developed into a real epileptic attack; which then gave way again to slight attacks of click and rigor; which again changed into very severe attacks of which the child has had a dozen, or two dozen, or even thirty in the course of the twenty-four hours, is only an instance of the many ways in which epilepsy may occur in infants and children.

In other cases I have directed the attention of gentlemen who were present to the fact that epilepsy in children very frequently shows only a few symptoms; sometimes a click, sometimes sudden pain usually præcordial and loss of consciousness for a half or one second. This is sufficient to direct your attention to the brain and make your diagnosis of epilepsy.

It will not then be difficult for you to predict the appearance in future of very severe attacks of epilepsy.

This baby has gone through the whole list of them from the very slightest to the most severe. The child moreover has had an aura from the very beginning. When quite a baby the child had a cry before even a click came on. When a little older she was afraid of something. There is the aura of which as a rule in the majority of cases adults will speak of.

What is the cause of this epilepsy? It is difficult to say. There is not much abnormality about that baby. It is quite well developed; there is no premature ossification. If there were a premature ossification resulting in epilepsy, that ossification would have been congenital and that baby would have a very small head instead of having a circumference of about 19 inches. The question then is what can have given rise to epilepsy at such an early time?

You have heard me inquiring about the condition of the baby when born. It was cyanotic when born. The labor was an instrumental one and it took some time before the baby came to.

A great many cases of epilepsy in future life are the result of asphyxia right after birth. Remember what takes place in asphyxia. There is very little circulation for a minute or two sometimes for fifteen minutes. During that time thrombosis will take place in the smallest veins in the brain as well as in distant parts. Taking such a case with thrombosis of the cranial blood-vessels, and you have at once the possibility of brain disease in every form. When there is thrombosis in some parts, there may even be in after life deposits of thrombi in distant organs. Thus many a child that suffered from asphyxia only a minute or two and that appeared to be perfectly well for a day or a number of days may be taken with a sudden fatal disease after a few days or weeks quite unexpectedly.

There are a number of such cases where a baby born asphyctic and getting well will suddenly die almost in an unexplainable manner. You hear a great deal of unexplained causes of death in infants. This is one of them.

I believe in the absence of any other cause that the origin of this epilepsy is to be sought for in the asphyxia right after birth.

The paralysis of the baby would be sufficiently explained by the epilepsy and brain disease that brought

about the epilepsy. Then came the pertussis and congestion following upon that. There may be a rupture of the blood-vessels inside of the brain in the same degree that children affected with whooping cough will bleed from the lungs and throat and will have hemorrhages in the conjunctiva. Very probably the whooping cough resulted in a severe attack of rupture of the blood-vessels on one side. It is from this cause that a child may die during an attack of whooping cough. In these cases the baby dies of apoplexy.

Diagnosis.—The diagnosis is epilepsy originating in the presence of a cranial thrombosis depending on asphyxia right after birth, increased by whooping cough and an apoplexy taking place mainly on the left side one year ago.

Treatment.—The indications for treatment would be to remove the thrombosis and to restore the blood-vessels that have become atrophied around that thrombosis and in the neighborhood. There may be a removal of the clot and after the inflammatory irritation with interstitial hyperplasia in the neighborhood. You cannot remove the clot.

Prognosis.—The prognosis is certainly an absolutely bad one. It would be worth while first to treat her symptomatically. I do not see why bromide of potassium cannot be tried again in larger doses. Secondly, I should propose to give her small doses of arsenic as a regular article of food for the reason that there is no better remedy in the world as far as we know now with an effect as a stimulant of the animal cell in general and the nerve cell in particular than arsenic. I should also propose to see after awhile what the iodides will do on the supposition that it may still be possible to remove inflammatory deposits.

If the same process occurred in other organs the prognosis would be more favorable with mercury, iodide of potassium and the galvanic current, but in brain disease a favorable result is more difficult to obtain because of the vital importance of the organ.

ORIGINAL ARTICLES.

PHYSICIANS AND THE BICYCLE.

BY

GEO. S. HULL, M. D.

That the bicycle has been demonstrated to be a practical roadster, is a fact beyond dispute, and that thousands have recognized its utility and are pressing it into active service, is not to be wondered at; but that physicians, who above all others are in constant search of a speedy, safe and cheap means of locomotion, should almost ignore the claims of this two-wheeled already, steed is an enigma.

Bicycling, until lately, has been looked upon by many as a sport for youth, or as a "craze," soon to pass out of fashion; but slowly, and surely it has been dawning upon the public mind that this great invention is really a vehicle that is destined to supplant, in many instances, the horse and buggy—is doing so and pointing to greater possibilities.

Having had one of these iron horses in active use for over two years, allow me to point out to the profession some of the features that adapt it specially to the use of the practicing physician, and also make it available to him as a therapeutic measure, and a powerful and agreeable tonic.

There is one question that comes up, frequently, to every busy practitioner:—How to see his patients in the quickest, easiest and cheapest way. Hitherto the only solution to this question has been the horse, ridden and driven; and to how many vicissitudes this noble animal is subject how uncertain he is at best, and, especially, how expensive to keep, are bits of knowledge we all possess, and for which some of us have paid dearly. How many times, with a stable full of horses, is a physician compelled, especially in emergencies or at night, to take the oldest method of locomotion, *shank's mare*? Now, while walking for pleasure through fields and woods is a healthy-giving recreation, the constant tramping over hard pavements, with the mind pre-occupied is anything but an invigorating exercise. To my mind the bicycle comes nearest solving this question; it offers to the profession many inducements beyond other means of locomotion, and affords much pleasure and profit.

To say that is hard to learn to ride the bicycle is an exaggeration, and arises mainly from the fact that the pride of some who are graceful riders makes them magnify their own accomplishments by alarming, unnecessarily, those who are anxious to learn. A few lessons and a little determination, and before one is aware of it, the art is acquired. Certainly it is easier to learn than skating, and I might say from my own experience, not as difficult as horse-back riding.

To the physician who has mastered this iron steed, it stands always at his bidding, saddled and bridled; it requires no feed, no stable, no groom; it goes night and day without tiring; needs no hitching, does not run away, nor kick nor stumble; can be ridden over the majority of roads traveled by the horse and buggy, and is at home on many roads and short cuts, over which a horse cannot pass. During the early years of a physician's practice, it will often save the expense of a horse and buggy, while to the busy practitioner it offers itself as a means of saving his horseflesh, at the same time, affording him the means of getting some healthful and, invigorating exercise, without compromising his business or depleting his pocket.

The bicycle will make on most of country roads from 8 to ten miles an hour readily (100 miles a day is getting to be a common run) it takes but one-third of one's weight to propel it on a level; up steep hills one's weight can be doubled, if necessary, by pulling upon the bars, thus giving the muscles of the trunk and upper extremities some vigorous exercise; down grade it goes by itself, and at any speed desirable.

For night work it is *par excellence*. (I speak from experience, having done most of my night work for the past two years on a 50 inch Columbia.) A small hub-light can be attached to the axle in a moment, and and 6 to 8 miles an hour made easily upon the streets, or better time upon the pavements, which in some of our large cities are unobstructed and well lighted at night. Indeed the day is not far off, I may venture to predict, when the bicycling interests will demand better streets, and possibly, special tracks in some of our cities, and who should be so anxious for that day, and so willing to hasten it as physicians.

Concerning the therapeutics of the bicycle, it is not making too broad a statement to say that it can be recommended in nearly all cases where horse-back riding is indicated, the exceptions being ladies and very old or crippled men, and for most of these the tricycle is still preferable to the horse, and certainly infinitely safer. In horse-back riding the inexperienced rider gets the most exercise (jolting, which is not

always beneficial), while the skillful horseman merely gets the pure air, and very little above the usual amount of that, as his circulation and respiration are not much increased by the easy, quiet motion his *skill* as a horseman gives him. In fact, after learning to ride horse-back, it often becomes tiresome, the exhilarating effect passes off and the good results consequently diminish. In bicycling, however, the whole body is in motion, and every rider gets a like amount of exercise. The circulation is quickened to any extent; the bloodvessels of the limbs are not compressed to the extent they are in horse-back riding; there is but little or no jarring; the muscles of the trunk and upper extremities (which, as a rule, are so imperfectly developed in physicians) are brought more into play, and the mind kept actively engaged in the sport—for sport it becomes, even when flying along to a "terrible accident" or to a death-bed scene.

Does the novelty wear off? Ask the first bicyclist you meet, and be prepared for his emphatic "No!"

Every new remedy is sparingly handled by the profession, until ample proofs of its virtue are produced, and the bicycle has been no exception. Fortunately, however, for this new preparation of iron under consideration, it has been thoroughly tested, and hosts of testimonials can be produced in its favor—not manufactured proofs, such as prop up so many of the patent medicines of our country, but volunteered and accompanied with such undisputable evidence that disease has been conquered, as increased chest measurements, accumulated *avoids*, multiplied strength, improved digestion, refreshing sleep, etc., etc.

Now the bicycle being an easy, safe and rapid roadster, suitable, especially, for the physician in his active, out-door life and many emergencies, and also advisable for convalescents and persons debilitated by close confinement or excessive mental strain, producing insomnia, loss of appetite, etc., and, moreover, being a powerful means of building up good constitutions in our youth, why should not the medical profession seize upon this great invention and make it useful and profitable to themselves (it costs but half the price of a good horse); and why not crowd it into their *Materia Medica* at the head of the "Ferrium" preparations, and then see how it will bear the test of application?

HOSPITAL RECORDS.

NEW YORK HOSPITAL—NEW YORK

CASE OF WRIST.

SERVICE OF

GEO. A. PETERS, M. D.

M. D. aet. 24, native of Italy, single, admitted Jan. 25th. No specific rheumatic or alcoholic history. Family history, as far as can be obtained, is not very good. Her mother has been more or less of an invalid since patient's birth. When five years old patient had hemiplegia of right side, from which she has slowly recovered with the exception of the hand, which is still powerless. For the past 8 or 9 years has been subject to temporary enlargement of the lymphatic glands, especially the cervical, these at times suppurating and discharging pus. The present swellings appeared about four years ago as small, non-painful and only slightly tender lumps. These grew slowly for two years, and

since then have continued about the same size, giving rise to no trouble. Two years ago, while at work, patient strained her left wrist. Soon after this she noticed a slight swelling, which has gradually increased and since the appearance of which a second swelling has been developed near the first. These swellings have been free from pain, not tender and non-suppurating, and have taken on the same sluggish character. Her general health has never been very good. She has been a frequent sufferer from headaches and gastric disturbance. Her monthly illness has also been more or less irregular.

Admission.—Well nourished; general condition fair; appetite poor.

Examination showed two tumors on right side of neck, one somewhat larger than a pigeon's egg, situated anteriorly to sterno-mastoid muscle just posteriorly to angle of jaw. The second smaller than the first, situated on the muscle on a line with the lobule of the ear. Both are freely movable among surrounding tissues, and unattached to integument. They are only slightly tender on manipulation. Examination of left wrist shows two good sized tumors upon its dorsal aspect, soft, apparently unattached to integument but somewhat attached to the deeper structures. There is indistinct fluctuation.

Treatment—*Ether.*—Operation Jan. 28th. Longitudinal incision made directly over the lower of the two masses for about two inches, and the fascia and superficial tissues dissected upon a director where the tumor was disclosed, inclosed in a sac. The surrounding structures were separated with some difficulty and the mass found to surround the superficial extensor tendons of the fingers. On cutting into it no fluid was found but a soft sarcomatous tissue. This was dissected from the tendons, the upper tumor being left untouched. Spray used during the operation, and Lister dressing applied. The hemorrhage, which was slight, was controlled by cat-gut ligatures and torsion. Patient returned to ward. Recovery from ether good.

Jan. 30.—No rise of temperature; no pain; no discharge. Dressed under the spray. Every other suture removed.

Feb. 2.—Remaining suture removed. Lister discontinued. Swelling above the wrist has entirely disappeared and nothing but the sac remains.

Microscopic examination of the tumor showed it to be a round-celled sarcoma.

March 2.—Under ether the tumors at the angle of the jaw were removed.

March 9.—It has done perfectly well up to yesterday, when temperature rose to 103, but this rise of temperature was unaccompanied by a chill. Appetite poor. Ordered quinine grs. xv., and to take cod liver oil and extract of malt.

March 19.—Since last note the induration has slowly subsided. Wound is slowly healing.

March 30.—Wound entirely healed; swelling subsided. Put on one-fifth gr. dose of mild chloride mercury t. i. d.

April 5.—Discharge cured.

ABSTRACTS AND SELECTIONS.

BLASI ON THERMOMETRY IN THE TUBERCULAR MENINGITIS OF CHILDREN.

A paper on this subject, read by Prof. Pio Blasi before the Royal Academy of Rome, is given in the *Gazz. Med. Ital. Prov. Veneto*, April 21. His observations

were founded on thirty-eight cases occurring in ten years in the Hospital of the Bambino Gesù, and in which the clinical history was controlled by *post mortem* examination. The thermometric curve in this disease is most variable, now very low, now rapidly rising to great pyrexia, or presenting short daily oscillations, irregular as to ascent and depression. In spite of this variability the author finds rules which render it distinctive. The medium is not above 39° C. (102.2° F.), the maximum observed was 41° C. (105.8° F.), when with tubercular meningitis acute miliary tuberculosis and pulmonitis were associated, and 40.9° (105.6° F.) in the final period of the disease. The great depressions noticed by the writer do not occur at the height of the disease, but in its last stage, especially when grave collapse is the forerunner of death. Bontan's assertion that the medium temperature is below the normal is not consistent with facts. Blasi finds the medium to be 39.3° (100.9° F.). The usual type of the curve corresponds to the remittent with evening augmentations. In 245 times, the temperature was found higher in the evening in 176, stationary in 18, lower in 51. The greater elevations were found in the commencement and towards the close of the disease. In the intermediate stages, the temperature was relatively low with slow pulse; a day or two before death, in the majority of cases, the highest temperature was reached. This fact, attributed by Hensch to paralysis of the caloric controlling center, was only wanting in 9 of the 27 cases observed. Hyperpyrexia was observed when the inflammatory element predominated over the tubercular, or when pneumonia or eruption of miliary tubercle in other organs occurred to complicate the case. The lowest temperatures, on the contrary, were found when chronic phthisis, pulmonary or mesenteric, existed; nor does the onset of tubercular meningitis, in the course of ordinary phthisis, cause a further rise of temperature beyond that due to the primary disease. Among the cases distinguished by low temperatures, the author notes the frequency with which lesion of the cerebellum occurs under the form of more or less caseated solitary tubercles. In 15 cases in which were noted low temperatures between 38.8° C. (103.4° F.) as a maximum, and 36.9° C. (98.4° F.) as a minimum, in 10 the autopsy revealed the presence of cerebellar tubercle. Where these tubercles were found the temperatures were always low. From this he admits the very probable, if not positive existence of a relation between tubercular lesion of the cerebellum and depression of the thermometric curves in tubercular meningitis. This fact to which other observers have not drawn attention, is not met with in any other complication with anything like the same constancy.

The author affirms the want of rapport between the height of the temperature and the frequency of the pulse and respiration, and speaks of the difficulty of the differential diagnosis between tubercular meningitis and typhoid or subcontinuous fever, with predominance of cerebral phenomena or with simple meningitis. Lastly, he treats of the possibility, by the aid of the thermometer, of establishing the diagnosis or of learning approximately the duration of the disease. For example, one can speak almost with certainty of an inflammatory process affecting the meninges, when, pneumonia and miliary tuberculosis being excluded, the temperature is noted above 39° C. (100.2° F.) One can foresee with much probability cerebellar tubercles in cases of low temperatures, especially if one can exclude a form of concomitant chronic tuberculosis of the chest or abdomen. Thus from the study of the thermometric curve one can have an indication

of the stage of the disease and of its duration, keeping in mind its depression, together with slowing of the pulse in the intermediate stages, the elevation again before death, etc.

G. D'ARCY ADAMS, M. D.

—*London Medical Record.*

SAVAGE ON MARRIAGE IN NEUROTIC SUBJECTS.

Dr. G. H. SAVAGE (*Jour. of Mental Science*, April 1883) contributes a paper on the marriage of neurotic subjects.

Opinions on this point appear to differ. Dr. Savage says: "I find one set of physicians looking with horror upon the idea of any one marrying who is markedly neurotic, whereas another class looks to marriage to cure nervous evils. By neurotic persons I mean those who have suffered from insanity, epilepsy, or grave hysteria, and the near blood-relations of such persons."

Nevertheless, Dr. Savage thinks that it is possible for people to be in too robust a state of health as regards their nervous system. "I am inclined to think," he says, "that if it were possible for us to select those who are to be married, and if we selected only those who are nervously stable for the parents of the next generation, the children might suffer from a want of adaptability. They might, in fact, develop from nervous *stability* into nervous rigidity."

In support of this statement, we have only to look round amongst the families of our acquaintance, and see how often it happens that robust children are the offspring of a parent of highly nervous or even hysterical temperament, such parent usually being the mother, from whom it is supposed the children inherit more of good and evil than they do from the father. The introduction of new blood into a family of horses or cattle is always considered a desideratum, and those marriages contracted by persons of exactly opposite temperaments are usually looked upon as likely to lead to mutual happiness.

Passing on to details, Dr. Savage asks, "Does marriage generally do good or harm in grave hysteria?" and he answers: "It would be harmful in my experience, if every young hysteric were then and there married. The relief, if any, would be temporary, and the result to the developing organism would be disastrous. I do not myself believe that hysteria is *generally* benefited by marriage. I admit I have seen one case, in which anorexia nervosa and extreme depression in a young single girl passed off after marriage and the birth of children. On the other hand, I have seen several cases in which the hysterical girl has become the insane mother, and the hoped-for cure by marriage has proved a delusive dream."

Next as regards epilepsy, Dr. Savage writes: "I should dread the effects of marriage upon an epileptic almost more than those who had been insane. The comparative rarity with which epileptics get well, and the mysterious causation of the whole epileptic condition, make it a dangerous experiment to recommend marriage for the relief of these unknown conditions."

The combination of epilepsy and insanity is considered, as might be expected, to be far more dangerous than that between hysteria and mental disorder, both to the parents and their children. Dr. Savage says: "An epileptic parent may, like Brown-Séquard's guinea-pigs, beget children who are epileptic or insane even. Therefore in speaking of marriage with epilep-

tics, one has not only the hopelessness of cure, but the danger of the offspring to be considered."

"Next, and perhaps this is the question that will chiefly interest most of us, under what conditions are you to countenance marriage with either insane patients, patients who have been insane, or patients who have very strong nervous inheritance?" Of course, the answer to these questions must be influenced by the circumstances of each particular case. "Before giving advice as to whether a patient should or should not marry after having had an attack of insanity I think one should very definitely investigate the cause of the insanity and the nature of the attack, besides taking into consideration the nervous inheritance."

The surrounding circumstances of the case ought also to be duly weighed. "One question quite apart from the medical aspect of the case would have to be considered—that there are marriages and marriages: so that, if you could insure the prospect of comfort, that is, if you were able to see that the selected companion was suitable as far as years and means were concerned, the chances of maintenance of health would be greater than if there were great disparity of years and a certainty of poverty and anxiety to contend against."

Concerning the delicate question as to whether or not means should be taken to prevent offspring from arising from the marriage of neurotic subjects, Dr. Savage says: "I myself should strongly oppose such measures, unless the patient had had several attacks of insanity, or unless there were at least two children of the marriage." "Without children, too, the parents become egotistical, and egotism and insanity are not far removed."

"Another point is when a patient may be married; that is, how soon after an attack of insanity. Most of us have seen cases in which the insane inheritance has been transmitted directly, and, if I may say so, immediately. I have seen three or four cases in which children have been begotten by insane parents who were suffering from acute insanity at the time of their begetting. Such persons are almost sure to be weak-minded, idiotic, or imbecile, from birth. On the other hand, the greater the distance there is between the attack and the begetting of the child the less danger is there to the offspring. I am in the habit of saying that a general paralytic father rarely begets an insane child, unless that child is begotten during the active stage of the disease." "The point then, upon which I would insist, is that the danger to the offspring is directly in relationship to the active insanity itself—that a parent who has been insane may beget an insane child soon after recovery, before the attack, or during the attack of insanity, but that he may beget perfectly sane children in the interval."

"To sum up the whole matter," says Dr. Savage, "one would say that marriage would relieve a certain number of hysterical cases, and that it is justifiable in a certain number of cases who had suffered from insanity. I should never advise marriage as a cure for hysteria, without warning the friends that it might or might not be beneficial, and that the good depends not only on the marriage, but on so many other circumstances. I should not oppose every marriage of those who had been insane, providing only one of the contracting parties had been so, and the other was of good physical health and not of nervous disposition."

The profession cannot but feel grateful to Dr. Savage for this attempt to lay down rules for their guidance in giving advice concerning this most difficult subject.

OVARIOTOMY TWICE SUCCESSFULLY PERFORMED UPON THE SAME PATIENT.—CYST RUPTURED BOTH TIMES.

BY CHARLES H. CARTER, B.A., M.D., B.S. LOND.

PHYSICIAN TO THE HOSPITAL FOR WOMEN.

The narration of the following case is of interest not alone because the operation was twice successfully performed upon the same patient, but also because the cyst or cysts had on each occasion ruptured, and the abdominal cavity was filled with the contents, thereby adding both to the difficulty of the diagnosis and to the gravity of the operation. The cases recorded in which ovariectomy has twice been performed upon the same patient are not numerous. Sir T. Spencer Wells, in his work on "Ovarian and Uterine Tumors" (1882), mentions thirteen as having come under his notice, and in eleven of these he had twice performed ovariectomy, in the other two he had operated the second time. In these thirteen cases the interval that elapsed between the two operations varied from one to eight years. In the case now recorded the interval was three years and a half.

The first operation was performed on June 19, 1879. The patient was thirty-two years old, had been married ten years, and had had five children and one miscarriage. She applied at the out-patient department of the hospital for a swelling of the abdomen, which had come on after her last confinement six months ago and was increasing. She was seen by my colleague, Dr. Holland, who diagnosed an ovarian cyst. She became an in-patient under my care. On admission the abdomen was large, distended, but not at all prominent; the recti muscles were widely separated, and on straining (as on raising herself in the bed) the abdominal contents bulged forwards between the separated muscles; the front of the abdomen was dull to about three inches above the umbilicus; both flanks were resonant far back; the resonance was not constant, but varied somewhat as the patient changed her position and at different times of examination, though never absolutely dull; no distinct outline of a tumor could be made out; the abdomen was soft, and the hand could be pressed down to the spine. By vaginal examination the uterus was completely prolapsed, the posterior vaginal wall being pushed outwards and dragging down the uterus. Nothing solid could be felt in the pelvis by vaginal or rectal examination, nor any distinct tumor bimanually. The patient had a strumous aspect; her general health was bad, with facies ovariana; beyond this there was little constitutional disturbance. The temperature was slightly raised at night; pulse quiet. The cyst probably ruptured in the interval before she was admitted as an in-patient. She was kept under observation for a time, during which she slowly increased in size.

At the operation, after cutting through the parietes and reaching the peritoneum, the peritoneal sac bulged forward through the opening, and on cutting through it a thick darkish fluid, very tenacious, poured out. On passing in the hand, the whole abdominal cavity was full of the same tenacious colloid material, portions of which varied in color from light yellow to dark brown; in the pelvis a hardish mass was felt, consisting of a number of small cysts, and the contracted walls of a larger one which had ruptured. This mass was pulled out of the abdominal cavity, and was attached by a broad pedicle to the left side of the uterus; the pedicle was transfixed and tied in halves, and as a whole, and the cysts removed; a piece of

omentum, which was adherent, was tied with silk and separated. The hand then scooped out as much as was possible of the colloid material which lay amongst the intestines and coated the viscera; altogether twenty-one pints of this material were removed. After careful sponging, which could not get away the sticky substance which adhered to the viscera, a drainage tube was put in and the wound closed with fourteen silkworm gut sutures. The mass of cysts removed weighed three pounds and a half, consisted of one large proliferous cyst, ruptured, and on its walls a number of smaller cysts, many of which were ruptured, and their thick gelatinous contents beginning to exude. The parietal peritoneum was generally thickened and red, that covering the intestines fairly natural. The right ovary natural. The operation was performed under antiseptic precautions and the carbolic spray. The patient did well. The drainage tube was removed on the ninth day. The patient left the hospital on July 31st quite well. In November, 1880, she came to me complaining of a hardness in the old cicatrix; this eventually broke down and an abscess formed and broke, leaving a sinus, which ran between the abdominal muscles and was a long time in closing. She again came to me in May, 1882, and complained of pain and swelling of the abdomen and flatulence. She was regular, and had been so since three months after the operation; the uterus was lower than usual, and a ring pessary was placed; nothing wrong was detected in the abdomen. After this she went into the country and remained there some time, and again came to me in October saying that lately the abdomen had begun to enlarge, and that she had seen a doctor who sent her back to see me. The abdomen was large and distended, dull in the flanks and in front to within two inches of the ribs. By vaginal examination the uterus was not markedly enlarged, external, and not kept up by the ring pessary; the posterior vaginal wall was much distended and pushed outside. The skin where the incision had been made was very thin and bulging, evidently from fluid. She was admitted into the hospital on November 4th, and she measured $36\frac{1}{2}$ in. at the umbilicus, dullness extending in mid-line $2\frac{1}{2}$ in. above the umbilicus, the flanks resonant, the left less so than the right; no very defined area of dullness, nor any marked evidence of fluid in a cyst; the resonance in the flanks varying; fluctuation could be made out, though obscurely. On November 18th the umbilical measurement was $39\frac{1}{4}$ in. The diagnosis, at first somewhat obscure, was made easier through former experience, and I concluded that the ovary in the right side had become cystic and ruptured; there was but little constitutional disturbance beyond that arising from the increasing size and weight of the abdominal contents, and her chief complaint was the extrusion of the uterus and posterior vaginal wall, which did not go back on lying down, nor could be kept back by any pessary.

The second operation was performed on November 30th, the patient having ceased to menstruate on the 27th. The incision was made half an inch to the right of the old cicatrix; the abdominal walls were exceedingly thin, consisting merely of skin. On reaching the peritoneum it bulged forwards, and on opening it thick colloid material poured out, and the diagnosis was clear that the cyst had ruptured. The incision was enlarged, and the contents of the cavity pressed out, and then the hand passed in and scooped out the jelly-like substance. In the pelvis a number of ruptured cysts were felt and pulled forwards and separated from a larger mass below, and then the larger mass was pulled out

and found attached to the right side of the uterus by a thin broad pedicle. This was transfixed and tied in halves and as a whole, and the cysts removed. The abdominal cavity was then cleared of the colloid material, the hand scooping it out and exploring under the liver, stomach, flanks, &c. After sponging and getting away all that was possible, a drainage-tube was placed and the wound closed by ten silkworm gut sutures. The intestines were fairly natural in color, and the parietal peritoneum reddened. The colloid material removed weighed twenty-five pounds, and measured twenty-three pints; it varied in color from canary-yellow to dark olive-green, and presented a strange appearance, nearly filling a large foot-bath, from the mixture of the different colored masses of jelly-like material, and showing that a large number of cysts had been ruptured. The cyst walls weighed two pounds and three-quarters, and consisting of a great many thin-walled cysts varying in size. The stump of the pedicle at the first operation was felt as a hard nodule about the size of a pea at the upper border of the left broad ligament. The operation was conducted under antiseptic precautions and the carbolic spray. The patient did well; the drainage-tube was removed on the sixth day. A discharge of ascitic fluid continued from the opening left by the tube for some weeks; at first this was rather abundant, and then became purulent, and a sinus remained, down which a probe passed three inches; this very slowly closed. She was discharged on January 30, 1883, the opening still present for about an inch and a half. She was seen about a month after this, when the wound was found perfectly healed and the patient in good health.

I have met with a third example of ruptured cyst where a large quantity of colloid material filled the pelvis. A patient, sixty years old, single, was sent to me in October, 1881, by Mr. Sharpin of Bedford. She had noticed a swelling in the lower part of the abdomen about twelve months previously; it remained much the same size for six months, when it began slowly to enlarge. At this time she had a falling of the womb, which came on quite suddenly without apparent cause, the uterus, and especially the posterior vaginal wall, being pushed out. When I saw her the abdomen was distended by a tumor which reached to within three inches of the ensiform cartilage, both flanks were resonant, though on the left side the dullness extended far back. By vaginal examination the uterus was completely prolapsed with a large bulging rectocele; when replaced it at once returned. After being under observation a few days she complained of great pain in the prolapsed part, which was more distended; she had great difficulty in passing water, the abdomen became fuller and tender, and the temperature rose gradually in three days to 102.6° , and the pulse to 116; after three or four days it fell to normal. On November 7th, when the febrile attack had passed, I operated. On opening the peritoneum a quantity of straw-colored colloid material escaped. The cyst was thin walled, and the contents were too thick and tenacious to flow through the trocar; it was therefore removed, the cyst pulled forward and the contents taken out by the hand. There were no adhesions, and the cyst was attached to the left side of the uterus by a broad pedicle which was ligatured and cut short. The pelvis was full of the colloid material, and after emptying it, the prolapsed uterus, &c., were pushed back. A large quantity of the colloid material was taken from the abdominal cavity, and after careful sponging the wound was closed by silkworm gut sutures. The peritoneum, parietal and visceral, was

very red and inflamed, in some places granular-looking. The cyst and its contents weighed 19 lb. The operation was performed under antiseptic precautions, and the carbolic spray was used. The patient did very well. The temperature was once 100.2° , on the evening of the first day, and the pulse 104. In this case it may be assumed that the sudden coming on of the prolapsus marked the time when a cyst ruptured, and that the pressure of the contents filling the pelvis led to the marked protrusion of the posterior vaginal wall. There was most probably a second rupture of some cyst at the time when she had the febrile attack just before the operation, and when a large quantity of fluid was poured into the general cavity of the abdomen. In the three instances recorded this protrusion of the vaginal wall was a very marked symptom. — *The London Lancet*.

MEDICAL NEWS AND NOTES.

Transplantation of Muscle in Man.—Helferich (*Archiv f. Klin. Chirurgie*, B. xxviii., p. 562) reports a case in which, as a result of the removal of fibrosarcoma from the arm of a woman aged thirty-six, the whole upper half of the biceps, with the exception of a thin strand at its outer part, was extirpated. Into the cavity which was left he promptly introduced a large fragment of the biceps from the leg of a dog. The cut surfaces were carefully brought together with sutures, as little injury as possible being done to the parts. The transplanted muscle was much more voluminous than the original portion, and was long after the operation distinctly perceptible to the touch. Electric experiments instituted about three months after the operation showed that the biceps reacted perfectly naturally to both kinds of current. The high point of stimulation situated at the place of section of the musculo-cutaneous nerve was, however, absent. The movements at the elbow-joints were almost normal.

When to Bathe.—*The London Lancet* gives some timely hints about beginning out-of-door bathing. If the weather be chilly, it says, or there be a cold wind so that the body may be rapidly cooled at the surface while undressing, it is not safe to bathe. Under such conditions the further chill of immersion in cold water will take place at the moment when the reaction consequent upon the chill of exposure by undressing ought to occur, and this second chill will not only delay or altogether prevent the reaction, but convert the bath from a mere stimulant to a depressant, ending in the abstraction of a large amount of animal heat and congestion of the internal organs and nerve centres. The actual temperature of the water does not affect the question so much as its relative temperature as compared with that of the surrounding air. The aim must be to avoid two chills; first, from the air, and second, from the water, and to make sure that the body is in such a condition as to secure a quick reaction on emerging from the water, without relying too much on the possible effect of friction by rubbing. It will be obvious, therefore, that both weather and wind must be carefully considered before bathing is begun, and that the state of the organism as regards fatigue and the force of the circulation should also be considered, not merely as regards the general habit, but the special condition when a bath is to be taken. These precautions are eminently needful in the case of the young or weakly.

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OVERWORK.

So much has been written and said about overwork, especially among Americans, where the tendency to overwork is said to be greatest, that very inaccurate notions prevail as to what constitutes overwork, and where the line should be drawn between healthful exercise of the functions, mental and physical, and their abuse. The following timely and sensible remarks of *The Lancet* very clearly define this important distinction. The theory advanced will no doubt astound the growing class of American dilettanti, who nourished on the cant of the day, have taken refuge from the supposed evils of overwork in an apathetic indifference, and go drifting along life's currents, deadening their energies and blunting their sensibilities from simple disuse of faculties which can never get beyond the germ stage unless developed by earnest labor.

In applying its comments on overwork to education, *The Lancet*, with no uncertain voice, speaks as follows:

A great deal has been said and written of late on the subject of "overwork," more particularly in connection with education. It is time that this question received the full elucidation it requires. It is natural that such a term as "overwork" should come into use, and that it should be popularly applied to all forms or classes of injury sustained by the organ of mind in the course of exercise, whether in result of excess or misdirection of activity; but it must be obvious to every one possessed of even the most rudimentary acquaintance with physiology that the indiscriminate use made of this term is erroneous and misleading, and that the very hypothesis of *overwork* is in itself open to serious question, and what seem to be grave objections.

Let us recall to recollection for a moment what takes place in the case of muscular tissue under ordinary conditions of exercise, when intentionally developed by exercise, and when overstrained by excessive exertion, or, in other words, "overworked." Moder-

ate exercise, as we know, simply consumes the force generated, or, in more technical language, converts potential into kinetic energy. There is just as much material recuperation as will suffice to replace the elements utilized. Pushed a little beyond this, as in "training" judiciously conducted, muscular tissue is first incited to a gradual increase in the amount of work it performs, with the effect of stimulating the recuperative faculty to a little more than merely compensatory energy, so that there is enough feeding to suffice for *growth* as well as *restitution*, and the muscle increases in bulk. This is not, as we know, due to any augmentation in the number of the elements composing the tissue, but to their increased development. They are not more numerous, but they are larger. In point of fact, the fibres attain greater bulk in consequence of the increased stimulation and the larger amount of food assimilated by the tissue, the supply of nutrient fluid, i. e., the blood, being augmented quite as much by the local demand for food as by any other condition which may be supposed to determine a special flow of blood to the part. If muscular exercise be increased too rapidly, faster than the rate of growth of the tissue, or if it be increased after the tissue has attained the full limits of a normal growth—which growth, it will be remembered, is simply compensatory to the work done, as in hypertrophy of the left ventricle of the heart,—there will be exhaustion: that is to say, an uncompensated consumption of tissue and, if the work be further increased, exhaustion may proceed so far as to enfeeble the faculty of recuperation itself, to such an extent that it will no longer even replace normal waste. The stress of the work falls on the nerve centres, which of course are the sources of energy, but it seems probable that the terminal plates in the muscular tissue, which are probably reservoirs of nerve-force kept charged—as Leyden jars may be charged with electricity—for the purpose of local or reflex activities, may themselves be specially exhausted and rendered incapable of normal action, so that "cramps," stiffness—which is *rigor*, doubtless due to commencing coagulation of the myosin,—and local pain or tenderness, often accompanied by fibrillar pains and twitches, due to local excitations, will ensue. At the same time the nervous system of the muscular apparatus being exhausted, the vaso-motor function is impaired, the arterioles of the part affected lose their tone, and the flow of blood through the region is retarded in speed, accumulation takes place, and what may be called atonic or passive hyperemia occurs, followed, it may be, by the phenomena of incipient inflammation; or, if there be not enough of energy for that active state, then passive congestion, transudation, swelling, and oedema will supervene. This is a hasty and very general summary of what takes place, or may occur, in muscular tissue, when it is "overworked." Probably an analogous state of affairs supervenes in the case of nerve-tissue, and notably of the brain, when unduly exercised. There is, however, this essential difference between brain and muscle—namely, that inasmuch as the former is the more delicately organized, and in a sense the most important—albeit it seems likely that nerve-tissue may be developed while muscular cannot be—it is specially protected, so that before "overwork" does serious mischief in the case of nerve-tissue, there are nearly always very distinct indications that the limits of healthy activity have been reached. Under only moderate exercise nerve-tissue does not, as a rule, develop rapidly, nor does it accumulate strength—that is, force held in reserve and available for action. If

the brain is to grow—that is to say, grow complex structurally—it must feed freely, consuming more than sufficient to replace its waste. If it is to feed, it must *work*. There is no way of stimulating the *structural* growth of brain except by intellectual exercise. This is a point of fundamental importance, and it is of cardinal moment in regard to that form of development by training which we call “education.” So true, so inexorable, is this law, that not even *general* stimulation by work will suffice. If any special faculty of what we call “mind”—that is, brain function—is to be cultivated, it must be called out by special training—namely, by work of the special nature it is desired to elicit. For example, there is no reason to suppose the faculty of learning languages can be developed by exercise in mathematics, or the converse. This is a matter not sufficiently well recognized. A “strong mind” is a well-grown brain, and “bias of mind” is a brain with some one or more of its parts specially developed. Of course heredity has much to do with the question of capability of development, because the young animal is produced “in the likeness” of its parent; but so far as we, as educators, are concerned, our training must be special if we desire to get special results. In the process of brain-growth, or, more accurately speaking, of brain-development, the elements of which the organ is composed are exposed to precisely the same risks and contingencies as the elements of muscular tissue under varying degrees of pressure by work, and, *mutatis mutandis*, the physiological, running into pathological, effects of progressive increase of work are similar to those we have attempted to recall. The faculty of recuperation is in danger of being itself exhausted, and depression of nerve force and atonic congestion supervene. A matter of moment to remember is that although the brain is structurally a packing together of centres, with afferent, efferent, and inter-communicating nerve-fibres, it is itself supplied with nerves, and subject to precisely the same conditions of coarse disturbance as other organs. Sometimes we forget this fact, as at others we forget, not so much that it is an organ, as that it is composed of nervous tissue.

The conclusions we deduce from these facts are as follows: “Overwork,” properly so called, is not so likely to occur, or if it occurs, to do mischief, as irregular or disorderly activity. If there be not sufficient time for recuperation in the course of work, exhaustion must take place. If the work done be of such a nature as to put an undue strain on any one faculty, harm may be done, although the brain as a whole may not be severely taxed. If the supply of brain food be insufficient to enable the recuperative faculty to compensate by food for consumption in use, there must be exhaustion. If work be exacted when any indication of exhaustion is present, it is impossible that injury shall not be inflicted. It follows that educators have special need of care to avoid engaging the brains of their pupils in work for more than very short periods, and to provide intervals during which there may be rest of the centres specially taxed. Much may be done by changing the kind of work frequently. We are of opinion that no growing child should be kept longer than half or at most three-quarters of an hour at one task, or even the same description of work. Again, the great centres of relation should not be overtaxed. Vision, hearing, the speech centre, and the centre specially concerned with written language, whether in writing or reading, should not be wearied. Brain weariness is the first indication of exhaustion. The faculty of “attention” is per-

haps one of the most easily vulnerable of all the parts or properties of brain-function. It is the faculty which most readily becomes permanently enfeebled, and when weakened entails most trouble in adult life. In children it is difficult to catch and fix the attention. No effort should be spared to secure this fixity of thought; but in order to avoid weakening the power of “thinking”—as distinguished from “thought-drifting”—the teacher should not strive, or desire, to hold the attention by any effort on *his* part longer than it is voluntarily given by the child. The slightest indication of exhaustion should at once be met by a change of task. If these hints, general as they are, can be reduced to practice, we think there is little fear of “overwork” or harm from brain activity. Desultory and insufficient work is more to be feared by far than “overwork,” because the brain, like every other part of the organism, grows as it feeds, and it can only feed as it works.

THE ABSORPTION OF FAT IN THE SMALL INTESTINE.

It has long been a disputed question whether the fine articles of fat, which it is admitted on all hands are absorbed from the small intestine, enter the lacteals through the columnar cells which cover the villi, or through minute channels left between these columnar cells; and various modes of preparation have been appealed to as affording the means of settling the question. Zawarykin, the well-known professor of physiology in St. Petersburg, has just advanced another view in the last part of Pflüger's *Archiv*, which he supports by strong evidence, to the effect that the lymph cells of the adenoid substance of the villi are the active agents in taking up the fat molecules from the intestine and transmitting them to the lacteals. In his experiments he has employed dogs, rabbits, and white rats, the plan adopted being to remove the intestines a few hours after a meal, and to treat them with osmic acid, and then to act upon them with picrocarmine, remove the water with alcohol, render transparent with clove oil, and finally mount in Canada balsam. In preparations thus made he states that lymph cells charged with fat may be seen in the layer of columnar epithelial cells, in the adenoid substance of the villi, and in other layers of the intestinal wall. Ordinary lymph cells thus treated exhibit nearly homogeneous protoplasm, which is of a greenish color; but those that are impregnated with fat present a mist of black molecules, which are not always evenly distributed through the mass, and cannot therefore be mistaken for the ordinary granulations of the protoplasm. The fat-containing lymph cells may be found in all zones of the columnar epithelium from the basal border to the subepithelial layer of endothelium, and they may be even seen to project beyond the basal striated border. The form of these cells varies considerably, suggesting that they are performing lively amoeboid movements when suddenly attacked and rendered immobile by the osmic acid. In some instances they present long processes, usually directed towards the basal border, and often containing fat molecules. The presence of such a long process, extending from a lymph cell lying near the attached extremity of the columnar cells to the basal border of the epithelium, and charged with fat molecules, would explain the views of those who consider that the fat molecules enter the intestinal wall between the columnar cells. Zawarykin is of opinion that his

preparations tend to show that there is a constant movement in two directions of the lymph corpuscles, those that are destitute of fat pressing towards the free surface of the mucous membrane and of the villi, whilst others charged with fat are moving in the opposite direction. The further transposition of the fat molecules is, he believes, in part into the central cavity of the villi, and in part along the adenoid tissue of the rest of the intestine. In both cases, however, they soon enter the plexiform chyle vessels, which are situated at the base of the follicles of Lieberkühn. A point of importance which he has noted is that the white corpuscles contained in the blood of the veins and arteries are also charged with fat molecules, but he is not prepared to state precisely how they obtain their fat. The follicles of Peyer's patches appear to be especially active in effecting the resorption of fat, as may be well seen in the case of rabbits. The fat may be seen in larger or smaller masses, composed of molecules and larger particles in the follicle itself, occupying both its peripheral and its more central part. The cells are particularly large in the portion of the intestinal coat which lies over a Peyer's patch; the leucocytes charged with fat here assume an almost colossal size, sometimes lying in rows parallel to the long diameter of the columnar cells, in others forming nests. The memoir is accompanied by some well-executed drawings by Rajewsky, which render the descriptions given by Zawarykin very intelligible.—*The Lancet.*

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK PATHOLOGICAL SOCIETY, JUNE 13, 1883.

The President, Dr. Shrady, presided. The minutes of the previous meeting were read and approved.

Dr. Van Giesen presented a specimen of

ENDARTHRITIS OBLITERANS.

The question suggested by the specimen was as to the relation of this condition to the puerperal state. It was very rare to meet with a case in which the artery was occluded to such an extent as in this case. He recalled a case of idiopathic endarteritis. Phlegmasia dolens was of common occurrence in the puerperal state. Might not the same cause which gave rise to phlebitis give rise also to endarteritis? It was the opinion of the physician attending this case that the trouble was brought about by an embolus. Dr. Van Giesen had not met with any similar case. He was not inclined to regard it as having any connection with the puerperal state.

Dr. Gerster, in discussing the specimen, said: This interesting specimen gives evidence to me that the assumption that this condition was brought about by cardiac lesion, in which a clot was formed and embolus detached, is the most probable one. The view that inflammation may have spread into the artery and caused occlusion, is not borne out by the experience of surgeons, since it is well known that inflammations are not transmitted into the arteries. A point in the case which would strengthen the embolic theory is the rapidity with which the trouble came on. Endarteritis obliterans is usually a long time in forming. We have here a normally formed artery, it is true, with thickened walls, but this increase in thickness is not due to inflammation extending from without.

Dr. Livingston inquired as to the extent of the obliterans in this case. He recalled a case of occlu-

sion of the artery occurring after labor. The patient developed septicæmia and died the sixth day after labor.

Dr. Van Giesen thought a pertinent question was as to whether this was a consequence of the puerperal state or merely a coincident accident. He agreed with Dr. Gerster in the main, though he did not regard an embolus to be necessary to the production of the condition existing in the specimen. There were other possible causes, certain conditions of the blood, causing death of the intima. Independent of the obstruction of the vessel by a thrombus, in this case there must have been an inflammation transmitted to the intima. Valvular disease of the heart was not necessary to the existence of this condition. It could not be denied that embolus was a pregnant cause of occlusion, but it was not the universal cause. The pathology of phlegmasia dolens was extremely obscure. The causes giving rise to it were not probably the same as those giving rise to this condition.

Dr. Livingston presented specimens of two cases of

CYANOSIS IN NEW-BORN CHILDREN.

In the first case the child had the first attack on the third day. There was irregular action of the heart and marked cyanosis. This lasted about a minute and a half. The child had several subsequent attacks from which it rallied, but after the sixth attack all means failed to start the heart again. The child had murmurs at the base and apex, both systolic. On autopsy the right heart was found to be distended with blood. The mitral and tricuspid valves were fringed with nodules.

The second case was that of a male child. On the fourth day after birth he became suddenly cyanosed. Auscultation revealed a systolic murmur. The first attack was succeeded by several others, the child not rallying enough to nurse. On autopsy the heart was greatly distended. The foramen ovale was widely open as was also the ductus arteriosus. The lungs were collapsed. These two cases showed no malformation of the heart that would cause cyanosis. The little nodules are not of inflammatory origin but are probably the remains of foetal valves.

Dr. Livingston also presented a specimen of

PULMONARY STENOSIS

occurring in a female infant one year and eight months old. The child was admitted to the hospital for congenital heart disease. There was a systolic murmur. Abdominal organs normal. The child died of septicæmia. On autopsy the lungs were found to be normal. The pulmonary arteries were grown together. The interventricular septum was cribriform in character. There was sufficient obstruction to cause the foramen ovale to remain open. The lungs were normal and blood well oxidized.

Dr. Livingston presented a third specimen illustrating the lesions of hereditary syphilis. Male child, poorly nourished. Blebs on an inflamed base appeared in a few days over the body, face, and soles of the feet. Successive crops of this eruption were developed. The glands were not enlarged. The child died when five weeks old. The foramen ovale was open, the heart studded with red nodules, the lungs were congested, spleen enlarged. The lines of ossification in the bones were regular. The bones showed the yellow line characteristic of syphilitic infiltration.

Dr. Ferguson presented a specimen of

CARDIAC ANEURISM.

Male, æt 54. Well until 1882, when he began to suffer

from shortness of the breath and palpitation; small amount of urine passed. On admission the urine contained albumen and granular and epithelial casts. On post-mortem examination the kidneys were normal in size, the capsule non-adherent, surface smooth, heart enlarged, left ventricular wall hypertrophied, apex thin and fibrous, endocardium thickened. An aortic aneurism was disclosed.

Dr. Gerster presented a

UTERUS AND APPENDAGES

of a woman aged 37, who had suffered from menorrhagia and metrorrhagia for a year. This pathological state was due to the existence of fibromata. She had been married for years but had never been pregnant. Menstruation had not ceased. General condition precarious. Had attacks of syncope. Ordinary means of inducing involution were tried in vain. The patient was sent to me by Dr. Tauszky. I found a tumor, freely movable in all directions. I decided that I had to deal with a tumor occupying the body of the uterus itself. Since it was evident that the patient would soon succumb unless something were done for her, I proposed to remove the tumor entire. The vagina was very narrow and it was impossible to remove it by this way. After preliminary preparations, on the 7th of June, under ether, I opened the abdominal cavity and came down upon the tumor. The ovaries were attached to it. The neck of the uterus was very slender. The abdominal incision was enlarged, the bowels covered with large sponges, each broad ligament tied with an elastic ligature and the intervening tissue cut with the actual cautery. The vessels having been secured, I threw an elastic ligature round the neck of the tumor, secured the pedicle and cut the tumor away. The cut surface was seared with the cautery, iodoform sprinkled over the wound and dropped into the abdominal cavity. Except from the tumor itself and from incision of the abdominal walls there was no blood lost. For five hours after the operation temperature was subnormal, the pulse 116. The patient complained of unquenchable thirst. Forty-one hours after the operation symptoms of collapse were developed and the patient died.

Post mortem.—The incision through the abdomen and peritoneum had united by first intention. Peritoneum normal; bowels collapsed; pedicle unchanged. No evidences of inflammatory change. The tumor was found to be an intermural fibroma of the uterus.

The Society then went into executive session.

ORIGINAL ARTICLES.

TREATMENT OF CHOLERA INFANTUM AND MARASMUS.

BY

WILLIAM A. DAYTON, M.D.

Suggestions as to the treatment of cholera infantum and marasmus can scarcely be said to be uncalled for, especially during this heated term, when children are dying by scores in the embrace of these frightful maladies and under the best known management.

Having had flattering results in the treatment of the above-named affections, and a large field of observation, I am prompted to pen the following:

From an extended experience, principally in that grand institution, the "Floating Hospital of St. John's

Guild," during the seasons of 1875, '76 and '77, and as Assistant Sanitary Inspector in 1881, the writer presents the following ideas, faithfully, yet unassumingly, as reliable means (perhaps in all similar cases) to a most desirable end.

It should not be forgotten, as is too frequently the case, that cholera infantum is gastro-enteritis, an acute inflammation of the mucous membrane of the stomach and intestine, and *not the result of teething*.

The causes of the disease are too well known to require comment; but before considering its treatment it is desirable to bring up for review the most prominent features that are invariably present.

The prime factors in cholera infantum are vomiting, purging and cerebral symptoms, and, later on, fever followed by collapse.

To avoid the tedium of familiar detail, let me simply remind the reader that in the acute catarrhal inflammation of the stomach intestine we have the exclusive cause of these and many other manifestations; and a cursory review of varying conditions alone will lead to a proper understanding of subsequent remarks.

The Vomiting.—When a child vomits it is due either to an overloaded stomach, to an unchymified curd of milk, etc., or as the result of an irritable stomach so rendered by inflammation. Cases of reflex vomiting being out of the question.

The Purging is due, 1st, to excessive secretion; 2d, to undigested food, and 3d, to inflammatory action involving the nerve supply.

The Cerebral Symptoms are usually the result solely of the gastro-intestinal inflammation.

To go no farther in the description of the disease, let me say that the treatment may be summed up in one word, a by-word in surgery, but one that is too often overlooked or forgotten in practical medicine, viz.: "rest," and I believe that if all cases of cholera infantum were treated upon the same surgical principles as Iritis, etc., and acute inflammations of the joints, they would, *ceteri paribus*, almost invariably recover.

I was not aware, until I began to write this, that Niemeyer (or any other writer) insisted upon "rest" as the most important element in the treatment of the disease under consideration. "The more we insist on the fasting," says Niemeyer, "the better results we shall have."

At a glance this sentence furnishes *one* of the means for the accomplishment of this wise purpose. The only other means I can think of (I doubt very much whether there is anything else) is the use of opium; and, as Prof. Alonzo Clark used to say of its employment in peritonitis, I believe it should be given to children with cholera infantum "to within an inch of their lives."

The most reliable as well as the most eligible preparations for this purpose are paregoric and Dover powder. When vomiting is persistent, and particularly in cases where the skin is dry, small doses of Dover powder are indicated; as the ipacac which it contains acts as a sedative to the stomach, while the combination has its usual sudorific effect.

When, however, the vomiting is insignificant, I begin with drop doses of paregoric, repeated every one, two or three hours, gradually increasing the amount until drowsiness comes on; and thereafter continue its use within the limits of safety.

As an example of the extent to which most children bear opium (and I am aware that the books say that children do not bear opium well) I gave a child, aged 16 months, after contracting the pupil with 10 and 5 drop doses of paregoric, 2 drops every two hours for

four days. Many children bear even larger doses with good effects.

The peristaltic rest afforded by opium can have little virtue without observing a sufficiently long interval in the administration of food.

The more frequent the passages the longer should this interval be. Thus for a child having from eight to twelve movements of the bowels per diem, I advise an interim of five or six hours.

"What shall I do when my baby screams for food?" is a question that is most familiar; my answer to this is, *increase* the doses of paregoric and wet the lips with ice.

The gastro-intestinal tract being in an abnormal condition, irritation is reduced to minimum; and ingesta that are not assimilated and absorbed only aggravate the disorder.

Efforts should be made, of course, to restore the digestive functions; and it is this matter that so many practitioners err. There are probably few agents that are more abused in the treatment of this affection than lime water, pepsin astringents and alcohol. Neither of these things are strictly necessary for the proper management of our cases; and yet one or all of them are extensively employed.

When milk forms into large curds in the stomach of an infant, or when the milk is rejected unchanged, surely alkalies are not indicated; and that milk which requires an alkali to make it *safe, is not safe*.

Pepsin is of doubtful value, except, perhaps, that being adulterated and made up, it acts mechanically aiding in breaking up masses of caseine; but it is just as well, and far cheaper, to employ some form of starch.

Alcohol, save in minute quantities (excluding cases in which collapse demands its use) is positively injurious. Without stopping to discuss this fact let me refer the reader to any recent article which considers fully the treatment of the inflammation of the mucous membranes. Again, if there is any effect to be had from pepsin, its action is destroyed by alcohol.

Lastly, astringents—I refer particularly to chalk mixtures, kino-catechu—are not only not indicated—except by enema—but are mischievous agents in many obvious ways; while the preparations of bismuth always obscure diagnosis by rendering the stools black.

For the restoration of the digestive process in cholera infantum I use the following formula for a child upwards of one year.

R. R. Nucis Vomica Mxvi.
"Calisaya Cordial"
Aq. Menth. Pip. āā ʒ i.

S. From ½ to 1 teaspoonful every three or four hours.

(N.B.—Paregoric may be included in the above mixture as required, but in that case it is advisable to omit the peppermint water and to write the dose accordingly.)

The "Calisaya Cordial" is made after the following formula:

R. R. Cinchonæ cp. ʒ iv.
Fld. Ext. Taraxici
Fld. Ext. Aurantior. dulc āā ʒ i. et ʒ ii.
Spts. Vin. Rectificat. ʒ vii.
Syr. Simp et Aquæ āā ʒ xx.

Olei anisi, fœniculi, unc. moschat, citri, singulorum, āā M vi., olei carin, M x. Misce.

Beyond this I have nothing to add but a word of caution against the use of undiluted milk for children under one year. Not that this important factor in the

management of these cases is forgotten; but I have met with many physicians who laugh at dilutions to the extent of one part in four or five. Let my incredulous brethren try it, but *don't boil the milk!*

In the treatment of marasmus this same plan has afforded me much gratification. The bromides are, however, preferable to opium to effect rest, and alcohol, particularly in the form of good sherry wine, may be required.

Not forgetting that a permanent or even an occasional change of air will often produce remarkable results, not forgetting that these affections have a natural tendency towards recovery *without treatment*, and mindful that even with the utmost caution and under the most approved management these diseases will continue to destroy, in particular, our tenement-house patients, I commit these hastily written lines to the indulgence of my readers with a desire to cause unnecessary and possibly injurious measures to be set aside.



GRADUATION OF SURGICAL KNIVES.

BY

JOHN M. WHITE, M.D.

The cut shows a graduated surgical knife that I have devised. The graduations or marks are etched on the sides near the back of the blade and not on the cutting edge, so that the knife can be honed and strapped without removing the marks. The graduations extend from the point of the blade to very near the handle. They will indicate the depth and position of the point of the blade when it is plunged directly downward, also when the knife is held obliquely. The marks on the knife will show the depth of the incision in all cases and be a valuable guide in deep incisions and shallow cutting operations.

LECTURES.

LIPOMA.—CARCINOMA OF THE BREAST.— TALIPES EQUINUS.—NECROSIS OF THE RADIUS.

A CLINICAL LECTURE.

BY

HENRY B. SANDS, M. D.,

Professor of Practice of Surgery, College of Physicians and Surgeons, New York.

CASE I.—Female, æt. 67. Has a tumor of remarkable size, situated in the occiput. This has existed for the past fifteen years. It was at first a movable swelling of small size and unattended with pain. She is chiefly annoyed by the weight and size of the tumor at the present time.

This, gentlemen, is not a malignant tumor. It is neither carcinoma, epithelioma, nor sarcoma, because they would have terminated the life of the patient before this. The tumor is nearly of globular shape, covered by the integument of the occiput and attached to the occipital region by a somewhat narrow pedicle.

It is smooth, not nodulated and softened. It gives the impression of being a sack filled with fluid. Palpation detects fluctuation. It might be a soft solid tumor. The test of fluctuation by causing the wave of the fluid to pass from one to the other is negative in its result. What is this tumor? It may be an encysted or cysted tumor. Cystic tumors of the sacculated type are exceedingly common. They are commonly known as wens and are caused by the expansion of some one of the sebaceous follicles, the orifice of which becomes closed, and the enlargement becomes very considerable. At the same time I have never seen a cystic tumor of the scalp as large as this. The tumor might be a fatty tumor. Lipomata are quite common in this situation. They are more common upon the trunk of the body, lower down, but not at all uncommon in this situation. Lipomata are frequently soft, and sometimes give the signs of fluctuation. I have rarely seen a fatty tumor so fluctuating as this. Fatty tumors occurring in the back of the neck are liable or apt to be composed of a very large quantity of connective tissue so as to be rather fibrous than fatty in their texture. In the College Museum we have a picture of a man who had a very remarkable pendulous cutaneous tumor which hung from the side of the face. That tumor I saw when removed, and it was found to consist of much dense areolar tissue. It was a fibro-cellular tumor. This may be a fibrous tumor interspersed with more or less serum or pus. These are the probabilities. I do not think it is a simple cystic tumor. If so it is a cyst of abundant atheromatous contents. It may be a fatty or fibro-cellular tumor. Now how shall we ascertain this? The test applied in uncertain cases as to whether a tumor has fluid contents or not is a very simple one, viz. the insertion of a hypodermic syringe. If the contents of the tumor are fluid you will get evidences of it by drawing some of the fluid into the syringe. By applying a syringe we can discover the contents and if fluid, the nature thereof. If it is a simple serous cyst, which I do not believe, the fluid will be perfectly clear. If an atheromatous cyst or wen, the fluid will look like thickened milk or very thin fluid, and will contain crystals of cholesterin, besides fatty matter. If it is a fatty tumor the fluid will be occupied by portions of blood.

(The hypodermic needle was passed into the tumor.) I should guess in the Yankee fashion that it is a fatty tumor. I get an idea that there are contents of fluid from the slight force required to penetrate this tumor and the absence of resistance. Nothing comes into the syringe. I will withdraw it and examine the orifice. Sometimes it happens that the contents though fluid are yet so thick as not to pass through the needle of the syringe.

The probable diagnosis is that this is a fatty tumor. What should be done? It is a serious question, gentlemen, what decision you should come to in cases of tumor affecting persons advanced in life. Every case must be considered on its own merits. Here is a woman sixty-seven years of age who has a tumor certainly not malignant which is, however, a source of considerable discomfort to her, and which is growing. The question presents itself: Can we conscientiously urge or advise her to submit to an operation for the removal of this tumor? The operation I think would not be attended with great risk. Nevertheless, she is sixty-seven, and her age has to be considered. It might not be prudent to undertake this operation unless the tumor were a very great burden to her, and she herself would want to have it removed. I would not

urge an operation in a case like this. There are greater risks than if the woman were younger. Besides this the tumor being non malignant would not cause any great inconvenience. In the case of a tumor which does not threaten the life it is hard to say what we would do under the circumstances. It depends upon the patient herself. I once knew a patient to lose his life from the extirpation of a fatty tumor from the back part of the head. The operation then is not devoid of danger.

CASE II. Female, æt. 64. Widow. Has had two children. She comes to us with a tumor of the left breast. She first complained of a swelling, six months ago, small in size. This swelling has since grown and was attended with lancinating pain. The chief interest of this case is in the extensive implication of the integument in the disease. This is an example of carcinoma. We know this by several well-marked physical characters. Observe that the breast is considerably enlarged and note the fact that this enlargement has occurred somewhat rapidly, and that the enlargement has occurred a long time after the period of lactation in a woman sixty-four years of age. As I make pressure upon the swelling here, it is unyielding. This is very much unlike the tumor seen before. This is almost a stony hardness. It is very characteristic of carcinoma. There is almost no yielding to the finger. The nipple is not visible, or rather at the bottom of the pit. It is retracted. To be sure the nipple of the left breast is not ordinarily prominent. There are great variations in this respect. It is here not quite on a plane with the part of the breast which surrounds it. Furthermore, this tumor, unlike simple tumors of the breast, has the skin adherent to it. The disease is advancing toward the surface and is incorporating the tissues with which it comes into contact in itself. These are the characters of carcinoma, and on further examination I find that there are some swellings which can be felt on the thoracic wall of the left side and on the outer border of the pectoral muscle. On the axillary border of the great pectoral muscle I appreciate a second tumor which I recognize as a mass of enlarged lymphatic glands. If this were a simple tumor of the breast, it would have occurred in a young person, and would be slow in growth and unattended with lancinating pain. Nor would there be a retraction of the nipple or deepening of the skin unless it were an abscess. A feature of this case is the involvement of the lymphatic glands in the disease. You observe here a number of ridges having the directions of lines and radiating from the nipple which pass almost to the circumference of the tumor. These ridges consist of masses of carcinomatous material which can be lymphatics of the skin. I notice further that the skin is involved at parts somewhat remote from the main tumor of the breast. Small hard nodules are to be felt in the skin, and here is one at some distance from the main body of the tumor. It is known as the result of microscopical examination that these nodules in the skin are always of similar texture to the main tumor, and the implication of the skin in this case is perhaps the most important feature as regards prognosis.

I raise the arm to ascertain whether the tumor has adhesions to the great pectoral muscle. To apply this test it is necessary to extend the arm so as to put the muscle upon the stretch and to move the tumor in the same direction with the fibres of the muscle. On doing this I find only a limited amount of motion can be made. I infer from this that the swelling has invaded the fascia of the great pectoral muscle. It is quite desirable, especially in fleshy persons, to examine the

subclavicular region to see whether there is any projection of the thoracic wall in this region upon the affected side. Unless you can remove the entire disease an operation is useless. Sometimes there are enlarged lymphatic glands near the apex of the axilla which cannot be felt, especially in fat persons, and these can be detected by examination of the anterior thoracic wall. I infer from the amount of enlargement that the disease is in the breast and in the axilla.

The question now arises as to operation. We know no cure for cancer, and we treat it by extirpation as the choice of remedies. But every case requires to be considered on its own merits, and it is a somewhat doubtful question whether in this case an operation is expedient. It would not be of use to follow the ordinary rule in a case like this, and remove the breast by making two great incisions, remove the affected part and then attempt to maintain union by first intention. The wound may heal, but it would hardly heal before these nodules would develop other nodules. If any operation should be done in this case, it should be a very radical one. It should consist in a double amputation of the breast. No attempt should be made to save any of the diseased skin. In addition to this the axilla would have to be explored. For nowadays we make a regular dissection of the axilla, take out all the connective tissue we can surrounding the diseased glands and expose the large vessels. The wound would heal by suppuration or second intention. Several months would be occupied in this process of healing. Nevertheless, while I would not urge an operation, I would not urge the patient, if she has no internal complication, not to have the operation done. This woman is in excellent health. This would be a reason to perform the operation.

CASE III.—Female, aged 16. This patient presents a very rare form of contraction. It is limited almost to the muscles of the calf. The foot is neither inverted nor everted. We do not know anything about the history except that it does not seem to have been congenital. There has been no paralysis. She cannot, however, flex the foot. She has not the power to contract the tibialis anticus muscle. At the same time I should not wish to say that the muscles which flex the foot are paralyzed without resorting to electrical test. They may simply be weakened from so long disuse. The application of the faradic current or the continuous current would tell us whether the muscles are in a state of atrophy and the paralysis complete, or whether it was simply a case of paresis. This is not important as bearing upon the treatment.

This young woman is disabled in consequence of this deformity. She cannot place the heel upon the ground. She walks upon the toes. There is a slight rotation of the tips beyond what normally occurs.

Treatment. Whether this is an apparent contraction or not, this case should receive attention by tenotomy of the Tendo Achillis. After that, when the wound has healed, the foot should be flexed and retained either by the application of some immovable bandage, as plaster of Paris or by the application of a shoe. How much rectification of this deformity will be secured after dividing the Tendo Achillis, I am not sure. In these cases of talipes equinus I have found good results after the operation by orthopedic treatment. If the foot comes down to its proper position the locomotion is improved. If the case is paralytic it will be necessary to put the foot in the right position and to cause the patient to wear some support. It is simpler to perform this operation upon an adult than upon a child. Do not make an unnecessary wound upon the

skin and do not wound the posterior tibial artery. Also be careful to divide the tendon very freely.

The patient was placed upon the operating table, partially anesthetized and a scalpel was carefully insinuated into the skin of the calf cutting the Tendo Achillis across. When the last fibres were divided there was quite a noise audible. The wound, about an inch long had been rendered dilatable before the division of the tendon.

It is not well to make extension or flexion yet. It is quite time enough in the course of a week. I prefer to wait for several months yet.

The healing of this wound will take place by first intention and the divided tendon will heal by the accumulation of coagulable lymph between the two ends which will eventually cause them to unite.

CASE IV.—This boy broke his forearm last July. A probe shows the presence of exposed bone. The bone is found to be loose and we shall proceed to extract it. I am not so certain that it is loose as only five months have elapsed since the time of the original injury. Perhaps this is time enough to allow the separation of the sequestrum of the radius in a boy, but we are not very sure as regards the time. The discharge here is copious and the boy is very much harassed by it. There are very many operations for necrosis and they are exceedingly simple. The only difficulty in a case like this is that, in searching out the seat of the disease, we are liable to encounter important blood-vessels and nerves. The incision must be made, if possible, to avoid injuring the parts. Notice that the arm is swollen; that it shows a pouting fistula on the inner and outer sides. The orifice is along the ulnar rather than along the radial side of the forearm. It is quite desirable to feel not only exposed but dead bone. I feel a little unwilling to proceed in a case of this sort on an uncertainty. It is considered bad surgery to operate in cases of necrosis until the dead bone has separated from the living; because if nature has not effected a separation, the surgeon cannot easily do so. He is obliged to saw or chisel healthy bone and moreover it is not certain that there will be any great production of new bone until the dead bone is separated. A year is the maximum time for necrosis of the long bones. In the case of the upper jaw exfoliation occurs often in a few weeks, especially in children. In the case of the radius if an exfoliation occurred it ought to be finished now. We do not know whether it is a double necrosis. The history of the case is not very full. We do not know also on the other hand whether there is a fragment which has originally been separated. I should expect to get mobility of the bone on the use of the probe or director. I do not feel enough bone to encourage me to proceed. It is suggested for me to make a large enough opening to explore with my finger. I will open the sinus on the back of the forearm sufficiently to get my little finger in. I can appreciate nothing here in the way of sequestrum. I get my finger way down to the bone, but I think it is bone newly formed from the periosteum. Passing the director into the cavity where the sequestrum should be, I do not find it. I have now passed the probe into a cavity of considerable length, but I get no indication of separation of the sequestrum.

CARCINOMA OF THE RIGHT LUNG.

A CLINICAL LECTURE.

BY

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CASE I.—History—Girl aged 13. Has become very delicate within the past few months. Has lost considerable flesh. The glands in various parts of the body are considerably enlarged. The family history is pretty bad, the father and brother having died of cancer. The father was 56 years of age. The brother was sick one month; aged 10 years. Has had malarial fever as well as the rest of the family. Resides in malarious district.

Congenital cancer is not an unfrequent disease. Carcinoma of the liver and kidney are not unfrequently found; but when found it is almost always in families where there is no cancer. In these cases it is not hereditary. It is primary carcinoma of the kidney and liver. These cases as a rule develop very early, although a number of cases will slumber longer and develop only after a long time. But this is not so frequent. Cancer in a boy of ten years would be deemed hereditary particularly when we know that the father died of cancer of the stomach. It is a little peculiar that the child should have a cancerous tumor in the inguinal region of one side a year ago, which got a little better for a long time and finally broke out again and resulted in intra pelvic disease which ultimately killed him. This is a part of the history not quite clear.

Physical Examination.—The patient is anæmic. She has swollen glands in the right axilla. There is dullness and ronchi over the right lower lobe and a temperature of 102°. The spleen is 9½ cm. or nearly four inches.

The longitudinal measurement of the normal spleen in the adult is 3½ in. The spleen is very probably enlarged under the influence of the malarial poison in which she lives. I have known malaria to exist in Carlstadt, where she comes from, for the past thirty years.

There is then infiltration of the right lower lobe. Of what kind? The suspicion certainly is that we have to deal here with a malignant disease. The glands along the edge of the trapezius are very much enlarged. Can these glands be claimed as the seat of malignant disease? If they be cancerous we might claim that the process which has taken place in the right lung is carcinomatous. We are uncertain about that, however, and as we do not know anything of the history we should certainly not make a diagnosis of a carcinomatous disease here. We can say only that we have to deal with multiple adenitis involving the post-cervical glands on the left side and axillary gland and with a pneumonic infiltration of the lower right lobe. We might also think of the presence of leucocythæmia; for we have swollen glands and a swollen spleen at the same time. It is possible, however, that the enlarged spleen owes its origin to malaria. Then we should have a case here of mixed splenic and lymphatic leucæmia, one that would be of the very worst character and would lead to a fatal termination very soon. This can be determined only by microscopic examination of the blood. The proportion of red to white blood corpuscles in the normal blood being 350 to 1; in leucocythæmia the relation is very much disturbed. Not unfrequently will you find 10 instead of 350 red

blood cells to 1 white one. Sometimes only 7 and sometimes only 3, and I have seen them half and half in the very worst forms.

I will order the child up to my office and then report to you. That would explain at once the enlarged spleen and the swollen glands, and the pneumonia would then only be an accompaniment. That would also show in what way frequently great blood diseases will be developed by and complicated with other diseases. Not unfrequently do cancer and other great blood diseases go together in the same family. In that case we have to estimate that the vitality is so bad in all the members of the family and the power of resistance so small that it becomes possible that all blood and general diseases will occur.

Treatment.—For the fever and pneumonia the patient will take 60 centigrams of quinine. One dose of quinine two or three hours before the usual time in which the afternoon increase of temperature will take place. She should have plenty of milk, oatmeal and barley.

Note: It was found that there was no leucocythæmia. After a while the lung cleared up retiring the suspicion of carcinoma, and the disease was diagnosed as multiple lymphoma pseudo-leucæmia, or Hodgkin's disease.

CASE II.—Hemiplegia and Chorea following Heart Disease—Girl aged 4 years. Two years ago the child was paralyzed on the left side of the body. For the past two weeks the mother has noticed twitchings. She is still paralytic to a certain extent showing that the paralysis was the result of a change which took place in the brain. It must have been in the brain because there was a complete hemiplegia not only of the extremities but also of the face. This cause has to be looked for in the larger hemispheres on the right side. It is a fact that chorea will now and then be observed after paralysis. The paralysis of two years got nearly well. Some paresis is still present and the chorea is only two weeks old. It does not appear that that paralysis was the cause of the present chorea.

On examination I find a systolic mitral murmur. She has therefore an incompetent mitral valve. That would at once explain the chorea.

As she had her paralysis two years ago, it is probable that she had her heart disease longer than two years ago. The hemiplegia was the result not improbably of an embolic process originating from that disease. The same thing has probably taken place again giving rise to the chorea lately. For a large number of cases cannot be explained by anything else but embolic processes even where there is a positive heart disease. The child walked at sixteen months; it had bronchitis at nineteen months.

Nothing is easier and will take place more commonly than a case in which acute articular rheumatism in infants will be overlooked. First, because there is still an opinion among medical men that rheumatism is a very rare disease in infants. Secondly, because rheumatism in children has the type of joint affections and is very much milder than in adults; so that very frequently endocarditis is the very first symptom that shows itself in articular rheumatism. Now such cases are frequently overlooked because it is found that congenital heart disease will destroy life within a few weeks or months. Children with heart disease at five or six years are commonly met. In them the endocarditis is secondary and not primary.

Treatment—As the child is very anæmic it requires good food and a little iron, also digitalis. She has chorea and symptomatic treatment will never be out of

order. A dose of bromide of potassium should be given to quiet the restlessness. As the very best symptomatic remedy in chorea I should advise one drop of Fowler's solution three times a day. Increase it to $1\frac{1}{2}$ gtt. after a few days.

In this case the chorea is not the result of the paralysis. But the chorea and the paralysis were undoubtedly the result of the heart disease.

INFANTILE ATROPHY—CHRONIC MALARIAL POISONING.

A CLINICAL LECTURE.

BY

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CASE I.—This little child is seven months old. The mother has ten children. All the previous children have been healthy except one which died of diphtheritic croup. This is the tenth child. Weighed thirteen pounds when born. All the previous children had been nursed, including this one. The child was perfectly well until about three weeks ago when she began to get weaker and lose flesh. The child had to take medicine to secure a movement of the bowels every two days. She has had a cough all winter, which is now relieved.

Infantile atrophy has numerous causes. A case of chronic atrophy may follow an acute disease from the tendency to induce morbid changes. It may leave behind it derangement of the alimentary tract. Chronic atrophy may follow a loss of nervous power in connection with some acute disease. For instance, measles not infrequently excites the development of a tendency to tuberculosis. Both measles and scarlet fever produce a derangement of the alimentary tract and this leads to atrophy. Diphtheria may give rise to atrophy, owing to loss of nervous power. These are particularly acute diseases which lead to chronic atrophy. You might have chronic atrophy having its cause in the abdomen and outside of the abdominal tract, in the mesenteric glands or in the thoracic duct.

A child with chronic atrophy is more predisposed to all acute diseases. These acute diseases occurring in connection with chronic atrophy have sometimes special characters of their own. A child with chronic atrophy having acute disease will have very much the same symptoms that you will get in very old persons. For instance, if this child should have pneumonia, instead of having the ordinary symptoms that you get in a strong healthy child the disease would be masked and assume very much the same character as you see in an old person; that is, there would be absence of fever and very slight cough and comparatively slight interference with respiration.

This child had a whooping cough when one month old. The intestines are very torpid. The torpidity of the intestine not producing proper digestion might be a cause of this atrophy. The mother's milk is deficient in quantity and quality, and this, combined with the condition of the intestinal tract, are probable causes of this condition. The child's stomach is entirely clean and there is no sore mouth and no vomiting. Hence there is no trouble in the stomach except the desire for food.

Treatment.—First examine the condition of the mother's milk, then correct the state of the bowels and act upon them with mild purgatives, such as castor oil. After that endeavor to move the bowels by means of artificial food, such as milk with a large proportion of oatmeal. In atrophy of intestines milk and oatmeal will produce a movement without drugs. Juicy fruits, stewed prunes which have been strained, a good orange and baked apple are useful as mild laxatives. External medication, such as friction of the skin and inunction with oil, are serviceable. Give the child a warm bath with temperature of 99° or 100° , followed by inunction of oil, linseed or olive oil. Do not give cod-liver oil as this may interfere with the appetite of the child. Anoint the entire body, especially the abdomen, which should be bathed and anointed three or four times a day so as to stimulate the action of the intestines. This child will regain flesh and recover perfectly.

CASE II.—Girl, twelve years old. Has been sick three months. On going up stairs she loses her breath and cannot speak. The patient is getting yellow.

The liver is enlarged more than one inch. The spleen has its free border between the ninth and tenth ribs in the axilla. She has had intermittent attacks of fever, headache, loss of appetite and constipation. In connection with these symptoms she has had a peculiar discoloration of skin almost brownish. The skin is much better colored now than a few days ago. This discoloration began very soon after the fever. She dates her pain in the side from the time that the fever began, three months ago.

In what way does malaria cause an enlargement of the liver? By producing congestion. This congestion is one of the portal vein and hepatic artery. This enlargement as a rule causes pain. When this congestion continues, you may get fatty infiltration and lardaceous pigmentation. Pigmentation and congestion always go together. Pigmentation is due to a great extent to congestion or stagnation of blood. This pigmentation has its origin in the smallest vessels. The first pigmentation is in the course of the capillary vessels of the portal vein. You may have pigmentation of the liver cells and plugging up of the bile. There is here an unquestionable pigmentation of the skin. There is also a malarial cachexia. The two main causes of malarial cachexia are first, diminution of the red blood globules by the action of the malarial poison, that is anæmia; and in connection with that anæmic pigmentation you may have trouble of the alimentary canal, interference with digestion and cachexia. Then you may have obstruction and interference with the flow of bile.

The enlargement of the spleen might be due to defective circulation or primarily to the malarial poison. A simple congestion is the cause of acute enlargement and in chronic enlargement we have an increased elastic and connective tissue. There is a hyperplasia of the cell organs, a chronic hypertrophy and induration of the spleen. This occurs in every case of chronic malaria. This might be due to waxy enlargement of the liver and spleen. You exclude waxy enlargement because there is no pain in waxy enlargement of the liver and spleen. We have no pigmentation in the waxy enlargement of the liver and spleen but extreme anæmia and we have albumen in the urine in waxy enlargement. This is undoubtedly a case of enlargement of the liver and spleen of malarial origin due to congestion and pigmentation. The treatment is that of chronic malaria.

ABSTRACTS AND SELECTIONS.

SEMMOLA ON THE PATHOGENESIS OF ALBUMINURIA.

Semmola, in a recent paper read at the Académie de Médecine (*Le Progrès Méd.*, Nov. 24, 1883), states, that he first, in 1850, pointed out the dependence of albuminuria on the quality of the ingesta, and that the increase after nitrogenous diet led him to adopt the view that the real disease was secondary, and that the primary departure from health was the failure to utilize the albuminoids in the economy. Later, in 1861, he proved that a healthy kidney could excrete albumen, but that, if prolonged, this led to anatomical changes.

His principle arguments for the hæmatogenous origin of albuminuria are—1, the diminution of the excretion of urea from the commencement of the albuminuria, without its accumulation anywhere; 2, identity of the albumen excreted in Bright's disease with the serum of the blood; this is not the case in other forms of albuminuria; 3, the bilateral affection of the kidneys; 4, the confusion resulting from the anatomical point of view.

During the last few years, he has become convinced that differences in diffusion power lie at the bottom of this question. He has found—1, that the albuminoids in the blood of Bright's disease diffuse more than the albuminoids of the blood in other forms of albuminuria; 2, that, in early stages of Bright's disease, if the blood be examined before and after the cure, the diffusibility of the albuminoids of the blood augments, diminishes, or stops in relation with the quantity of albumen in the urine; 3, that this physico-molecular constitution of the albuminoids of the blood is produced by more or less considerable default in the functions of the skin. He found that the blood of animals with varnished skins always contained diffusible albuminoids when the varnishing involved at least one half of their cutaneous surface. In these circumstances there was albuminuria, and the bile also contained albumen. He has collected a certain number of cases of chronic eczema and psoriasis, which alternated with albuminuria, and were finally cured by prolonged hydro-sudopathic treatment. He relates a curious case of seborrhœa, which produced effects like those of varnishing the skin. The patient felt the least breath of air, was always cold, looked very cachectic, and had albuminuria. He was cured perfectly by similar active treatment directed to his skin, and the albuminuria has never reappeared.

Dr. Semmola thinks the causes of the diminished activity of the skin are generally cold and damp. These act insidiously, producing by degrees an increase in the diffusibility of the albuminoids, a diminution in the urea excreted, and finally the forced elimination of albumen by all the depurative channels of the body. The saliva and sweat, as well as the bile, may be shown to contain albumen. This is the explanation of the albuminuria of Bright's disease, as distinguished from other forms having a purely local cause, congestion, inflammation, &c. By injecting egg-albumen under the skin he has been able to produce all the phenomena of nephritis; thus proving that the continuance of this abnormal secretion may bring about inflammatory changes in the kidneys.

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London Medical Record.

FOA AND TIZZONI ON REMOVAL AND RE-PRODUCTION OF THE SPLEEN.

At the annual meeting, in 1882, of the Italian Medical Association, Prof. Pio Foà read a paper on the Physio-Pathology of the Spleen. Referring to the latest studies on the subject, and to his method of experiment, by which he carefully examines the omentum before proceeding to the removal of the spleen, he remarked that the action of the air does not seem much to be feared, since he only had two cases of septicæmia in the forty-five cases in which he operated on dogs. He speaks of the results of the removal of the spleen in anæmic dogs examined at various periods with no result, as far as the new production of the spleen is concerned. Thus he had seen excessive functional activity of the marrow of bones follow the ablation of other organs besides the spleen. He has found often in healthy dogs nodules of the omentum, as well as in the gastro-splenic ligament. Cauterization of the spleen gave rise to adhesences between it and the omentum in the cauterized points; there was no new production of nodules. The splenic pulp near the cauterized point shows a re-awakening of the hæmatopoietic energy. After ligature of the splenic artery and its branches he did not observe modifications of the spleen. Sometimes there was awakening of the hæmatopoietic activity. Partial amputation of the spleen is followed by swelling and hæmatopoiesis of the remaining part. He does not admit the conversion of the epiploon into splenic tissue; in fact, when the epiploon is removed even without any adhesions, cicatrization happens. He obtained no results from irritating the epiploon. He concluded as follows:

1. Re-formation of the spleen after removal is not proved by experiments.
2. Many pathological facts in the spleen may be explained without assuming its new formation.
3. The production of nodules is independent of the state of the spleen and of the osseous marrow.
4. The spleen may be re-formed when it is partially removed.
5. The spleen is virtually only hæmatopoietic.
6. Even in the physiological state nodules are found in the omentum, while no pathological alteration of the spleen and hæmatopoietic organs exists at the same time.

At the same meeting (*Ibid.*) Dr. G. Tizzoni related seven cases of splenotomy in the dog. In two of these cases he observed diffused reproductions of the spleen in the great omentum and in other folds of the peritoneum, consisting of nodules containing nucleated red corpuscles in great number. Undoubtedly the spleen was normal in these cases; besides the large nodes, spots on the omentum were found, which represented the commencing formation of Malpighian corpuscles. The aspect of the nodules is that of newly formed spleen, follows the same course of development, is not limited to the omentum, but extends to other points—for example, the meso-rectum and gastro-splenic ligament. In sixty dogs he found seven diseased spleens with simultaneous new production. The alterations found in the great spleen were of three kinds: (1.) cicatrices here and there in the spleen; (2.) a single cicatrix which divided the spleen in two; (3.) simple cicatrix, to which the great omentum is adherent. He showed the drawing of a splenitis indurans. The new production of the great spleen took place around the affected part of the spleen, then as much in the gastro-splenic ligament as in the omentum when this had become adherent to these parts, and therefore he believed it impossible to do splenotomy without meeting with pre-existing nodes. He insisted on the fact that the

newly formed spleen has the character of embryonic spleen, and follows a natural development, while in the new productions of the omentum from disease of the great spleen, the small nodules have the character of adult organs and are irregularly developed, perhaps because in this case the new production was surprised in a more advanced period. In experimental reproduction, the nodules always contain Malpighian corpuscles, while in pathological reproduction there may be even large nodules without corpuscles, and represented by simple infiltration of blood in a connective tissue with many venous vessels having thin walls. He showed also that the new formation of the spleen is the more abundant in proportion as the great spleen is affected, except when the great omentum is implicated in the lesion. As to the reproduction of the portions of spleen, he agreed with Griffini, that it proceeds from the omentum. To surprise the phases of development of the splenic reproduction away from the wound, he opened the abdomen at various periods, and demonstrated the successive appearance of nodules of spleen in the great omentum.

In conclusion, he admitted that the spleen can reproduce itself totally as much after removal as in disease of the spleen itself, when partial reproduction may take place through the medium of the great omentum. The probable conditions which favor these reproductions, total or partial, are the removal of irritating processes, and the employment of means which conduce to prompt cure; and, therefore, local reproduction is observed when the operation is done by the knife, and is wanting when a lesion is produced with more energetic means, such as caustic, etc. As to the interpretation which must be given to this new formation of the spleen, Tizzoni has made new researches which lead him to conclude that the connective tissue, in various contingencies of the organism, returns to the embryonic state, and that reproduction of the described nodules, and the appearance of elements which have the nucleus disappearing and the protoplasm smooth and colorable with eosine, takes place.

Professor Foà stated that he had operated on forty-five dogs. He opposed twelve cases of removal of the spleen to Tizzoni's seven, in which, after the most rigorous examination of the epiploon before and after the operation, he found no regeneration of the spleen; in the smallest nodules thoroughly examined, he could not find Malpighian corpuscles. He said he could not accept the explanation of the development of the splenic pulp from hæmorrhagic infarct around a Malpighian corpuscle. He said he had seen several cases of pathological spleen with nodes on the adherent omentum, but he insisted again on cases in which he had found nodules on the free extremity of the epiploon without adherence, and without any alteration of the spleen and hæmatopoietic organs. He was not able to accept any necessary connection between these nodules and any state whatsoever of the spleen.

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Lond. Med. Record.

TREATMENT OF PUERPERAL CONVULSIONS BY HOT BATHS.

In a paper by Dr. Carl Breus, in the *Archiv für Gynäkologie*, is given an account of eleven cases of puerperal convulsions treated by diaphoresis produced by means of hot baths. Other means, as the inhala-

tion of chloroform, and the administration of chloral hydrate, were also employed. The convulsions set in at different periods during labor, and in the course of the first day after delivery. In four cases they came on at the beginning of labor, in two after the first stage had lasted some time, in one during the second stage, and in four a few hours after delivery. One only of the eleven cases died. There was present in all the cases albuminuria, together with more or less œdema. The baths were employed after the convulsions set in, during and after labor. A case is also mentioned in which forty-five hot baths were given during pregnancy. The author believes that the immediate danger to life in these cases is due to the diseased state of the blood—hydræmia—shown by the albumen and anasarca; and that the rational treatment of this condition consists in the production of a rapid change in the blood-state. This he believes is brought about by profuse sweating, which, he states, diminishes the quantity of albumen in the urine, and the œdema. The hot baths have occasioned no bad symptom in the author's practice; they have not brought on premature labor when used during pregnancy, nor have they occasioned hæmorrhage when employed soon after labor.

DIGITAL DILATATION OF CONTRACTED PYLORUS.

Another method has been added to the short list of the resources of the surgery of the stomach, the treatment of the organic diseases of which organ have until comparatively recent years been left entirely in the hands of the physician. Professor Loreta of Bologna proposed that forcible dilatation of the pyloric orifice in cases of simple stricture might be substituted for the operation of resection of the pylorus. In the *Journal de Médecine* a record is given of two cases which, so far, have been completely successful; both patients were operated on by Loreta. Briefly, a longitudinal incision was made through the abdominal parietes to the right of the linea alba; the stomach was reached, drawn forwards, and incised near the pylorus, so as to enable the right index-finger of the surgeon to be inserted into that orifice, which was by this means forcibly dilated. It would be of much interest to know what the final issue of such cases would be. Looking to the nature of the cicatricial tissue, would it not be right to think that relief could only be of comparatively short duration?

THE HYGIENIC DRESS EXHIBITION.

An exhibition of hygienic dress and sanitary domestic appliances, under the auspices of the National Health Society, has been held recently at Humphrey's Hall, Knightsbridge. The award, signed by Mr. Wynter Blyth, Dr. Murrell, and Mr. Wigner, as jurors, in Class II. is of considerable interest, as many of the leading pharmaceutical chemists were competitors. Strictly speaking, the class included only food products, but many articles were admitted which might equally well be classed as drugs. First on the list in the catalogue is the Aylesbury Dairy Company, who appear as exhibitors of various milk preparations. They receive a silver medal for their artificial human milk and a bronze for koumiss. Messrs. Burroughs and Wellcome are awarded a silver medal for their capsuled pills and compressed lozenges, a bronze medal for their preparation of hamamelis

virginica, and an honorable mention for a tincture press. Messrs. P. and P. W. Squire receive a silver medal for their extract of malt, the only award given for this substance, and a bronze medal for improved medicine chests and for antiseptic respirators of good and cheap construction. Messrs. Allen and Hanburys appear as exhibitors of malted farinaceous foods and other articles, and obtain honorable mention for castor oil. Messrs. F. C. Calvert and Co. showed an admirable collection of sulpho-carbolates, for which a silver medal was very properly awarded. Messrs. Feltoe and Sons carried off the palm with their "Spécialité" lime juice, and also received a medal. Maignen's "filtre rapide," designed as a poor man's filter, attracted much attention, and received the highest award for this class of goods. The exhibition of disinfectants was large, and both Sanitas and Jeyes were commended. The judges in this case append to their report a recommendation which will doubtless receive attention. They say: "In making these awards we desire to express our opinion that care should be taken in future exhibitions to exclude from competition medicines of which the composition is not stated." It is noteworthy that no gold medals were given, and that the awards were unusually few in number.

GALIUM APARINE AS A REMEDY FOR CHRONIC ULCERS.

Dr. F. J. B. Quinlan, M.D. Dubl., F.K.Q.C.P., Physician to St. Vincent's Hospital, Dublin, has treated cases of chronic ulcer with great success, by means of poultices made from "Cleaver's" (*galium aparine*). Respecting a very bad case of senile ulcer, Dr. Quinlan writes: "We had now come nearly to the end of April, and our failure in this case was complete. It appeared to me that now was the time to try the *galium aparine*, which was beginning to peep out in all the hedgerows about Dublin. An ample supply for this and other less severe cases has since been kept up, and it has been used with the most marked success in the following manner: Grasping in the left hand a bundle of ten or twelve stalks, with a scissors held in the right hand, the bundle is cut into junks about half an inch long. These are thrown into a mortar, and pounded into a paste. This paste, which has an acrid taste and slightly acrid smell, is made up into a large poultice, applied to the ulcer, and secured with a bandage. It is renewed three times a day. Its action appears to be a slight steady stimulant, and powerful promoter of healthy granulation. Its effect in this most hopeless case was decisive and plain to all. Healthy action ensued, and has since steadily continued; and, after a month of treatment, both ulcers have been reduced to considerably less than half their original size. If this action continue, which I have no reason to doubt, the cure will be accomplished within a measurable and short period. The patient is in the ward, and any one can see the great amount of new dermatization which has been effected during the month." Dr. Quinlan was equally successful in several other cases. He continues:

"A difficulty at once suggests itself as to its general employment; viz., that in winter and spring it is not to be had at all. It appears to me that this difficulty can be effectually met by the method of ensilage, by means of which green food for cattle has for the last few years been kept perfectly sweet and fresh by burying it in silos under the ground. This plan is generally known, but all particulars about it can be learned

in the pamphlet of Mr. Thomas Christy, F.L.S. (Christy & Co., 155 Fenchurch Street, London, E.C.). In the case of the *galium*, the process would consist of cutting the herb very fine, ramming it down by screw-pressure into a glazed earthenware jar with an air-tight cover, and burying it in the ground. Thus secured from air, moisture, and heat, it would be likely to keep through the winter. One of my pupils, Mr. M. Pierce, has already laid it thus down, and will report the result to me. This plan, if successful, might be extended to other pharmaceutical herbs; for I have always had the idea that green herbs are more powerful than dried ones. Indeed, the late Mr. Donovan of this city used to maintain that, to make tincture of digitalis properly, the alcohol should be brought to where the foxglove was growing, and the live plant plunged into it.—*British Medical Journal*.

MEDICAL NEWS AND NOTES.

The Coldest Place in the World.—Verchogansk in Siberia is the coldest place in the world. At one time it was thought that the coldest weather was to be found at Irkoutsk, but the average temperature at Verchogansk is much lower; in January it is 45° centigrade, in February 49°, in March 33°, etc. On Dec. 30, 1871, the thermometer was 63° below zero, but this, however, happened but once. The cold is so intense that the three coats of reindeer skin scarcely prevent the wearer's blood from freezing. Every respiratory movement hurts the throat and lungs. The watery exhalations of the breath freeze and present the aspect of fine needles of ice. These rub one against the other, making a noise like that of tearing velvet or thick silk. An English traveller relates that the whole of the caravan which accompanied him on his journey in these parts were enveloped in a blue cloud composed of the condensed breath of the men and animals. A crow flying slowly through the frozen air left behind it a track of condensed vapour.

Prevention of Infectious Diseases.—At the sitting of the Berlin Medical Society on Feb. 21, it was suggested that a fine should be imposed on parents who did not isolate their children when scarlatina or diphtheria was in the house. The difficulties of isolation among the poor were fully recognized, as also the uncertain state of medical knowledge with regard to the duration of the period of infection. Herr Goldsmidt stated that he had prevented the spread of scarlatina in a house by anointing his patients with lard, and then dusting on salicylic acid.

Investigation of Malaria.—The Italian War Office has recently completed a work of great interest on the distribution of malaria over Italy. The *London Times*, giving in a recent issue an account of this investigation, states that from the results obtained it appears that "scarcely a tithe of the sixty-nine provinces of which the kingdom consists is free from ague." These results are shown in a remarkable chart compiled by the scientific staff of the War Office, giving the chief haunts of the marsh fever and the statistics of sickness, the aggregate of which may be inferred from the fact that it costs the office two million dollars annually to meet hospital expenses for its fever-stricken troops.

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PRODUCTION AND PREVENTION OF CHOLERA.

The spread of the cholera epidemic in Egypt, and the consequent interest manifested in countries in which the danger of contagion is imminent has awakened popular apprehension and given rise to much comment in medical quarters on the causes of this disease and its prevention. Although there is no probability of this devastating plague gaining a foothold in our own country at the present time, it will not be uninteresting to review the subject as presented in a recent résumé in the columns of the *Medical Times and Gazette*:

"The Egyptian epidemic is local only in the sense that, having been imported from some country (perhaps from India) where it is endemic, it has found a state of things consequent on a recent campaign, unusually favorable to its development—we mean land and water polluted by unburied corpses of man and beast, together with want, and other evils consecutive on war. There may have been no extraordinary epidemic of late depopulating the plains and cities of Hindostan, but cholera is never absent from India; and the pilgrimages, which far exceed in their magnitude and their horrors anything that ever was witnessed at Mecca, are invariably attended by an amount of cholera which in any other country would be deemed an epidemic. These pilgrimages are confined to no part of the land or season of the year; they are everywhere in constant operation, until scenes and consequences that would excite consternation elsewhere, cease by familiarity to be even noticed. It is thus only that we can account for the fact that many Indian surgeons question the propagation of cholera by human intercourse, and are inclined to seek the cause of its outbreaks on an unusual scale in aerial, terrene, or other meteorological conditions. The fact is, that they do not enjoy the advantages that we in Europe possess of tracing its progress under conditions analogous to those of an experiment admitting of exact

scientific observation, but are in the same position that we are in with regard to measles, which we believe to be always propagated by infection, but the source of which we too often cannot trace. Cholera is contagious in the same sense as is enteric fever; *i.e.*, the poison—bacterial, possibly—resides in the evacuations, and is occasionally inhaled, but more often imbibed through contaminated water. In India we have every condition requisite for its perpetual maintenance—a high temperature; a soil saturated with organic, and especially with fecal matter, and a water-supply almost invariably of the foulest kind; a hundred million persons daily defecating on the open ground, and often by preference in temporarily dry water-courses; heavy rainfalls from time to time sweeping the excreta into rivers, into which the carcasses of men and animals are thrown by thousands, the water of these or of tanks used for bathing constituting the drink of the whole population. Improved water-supplies, such as that now provided at Bombay, would do much to limit the ravages of cholera in the great cities, and among the European residents; but many generations must elapse before, if ever, the habits of the Hindoo population are changed. Besides pilgrimages, the countless fairs serve to maintain local foci of infection, whence the disease is carried in various directions; and the annual caravan of Afghan merchants, or Provinhahs, slowly traveling from fair to fair through the cities of Northern India, easily convey it to Persia and to Central Asia, whence, as we have seen, it has so often entered Russia. Once imported into Europe, it depends on the sanitary surroundings whether it establish itself or no. The actual carriers are usually pilgrims, the lower class of seamen, and steerage passengers, dirty in their persons and their habits, their clothes and baggage also serving as fomites. If, as in the smaller towns and villages of Europe, the old system of cesspool and well is still in favor, nothing more is wanted than the arrival of an individual suffering from the initial symptoms to set up an epidemic like that of Altenburg in 1865. A supply of pure water removed from all possible means of pollution is the first requisite for prevention, and a well-constructed and arranged sewerage provides an additional guarantee.

"In the immediate prospect of an invasion, the duty of the local sanitary authorities is to remove promptly and frequently all deposits and accumulations of organic matter from dustbins, yards, markets and streets; to inspect and order the cleansing of all closets and water-butts or cisterns, providing for the decent maintenance of the same; to flush, say weekly, not merely the sewers, but the drains of courts, small streets and tenement dwellings, the gutters and surface of streets, courts and yards in crowded quarters; to rigidly inspect markets, shops, and especially coster stalls for the sale of food; to look up all overcrowding and occupation of cellars; to offer facilities for the speedy and gratuitous treatment of diarrhoea; and generally to give greater discretionary powers and liberty of action to the parish surgeons, medical officers of health, and sanitary inspectors, such as, with frequent meetings of the sanitary authority, should minimize the friction and delay. Whether disinfectants are supplied to the public or not, they should be encouraged rather to complain of offensive emanations and seek the removal of their causes, than to trust to masking them by carbolic acid and like substances. In seaport towns the port medical officer should, personally or by deputy, board and inspect every vessel arriving from abroad, and, regardless of clean bills of health, satisfy

himself that the crew and passengers are free from suspicion of being already attacked. Whether they shall be passed at once or detained for a few days must depend on the time that has elapsed since the vessel left, or called at, an infected port. Ships on board of which cases have actually occurred should on no account be allowed to enter the port, but be ordered to land their human freight, and to undergo purification at some isolated part of the coast that shall have been selected as a temporary quarantine station. In every town where cholera has made its appearance, or which is specially exposed to risk, a building, or buildings if necessary, should be secured in central situations as a hospital. The instant a case is detected, whether by day or by night, it should be removed thither, the other male members of the family receiving (if of the indigent class) orders for admission to a common lodging-house, and the women and children to a refuge temporarily provided. The key of the room being taken by the sanitary inspector, it and its furniture should be thoroughly disinfected and cleansed; all bedding, clothing and other articles which may have come in contact with vomit or excreta being inventoried, destroyed and replaced by the local authority; after which the family may be allowed to return.

"In no disease is it more true that prevention is better than cure, since in few is the former more practicable or the latter more hopeless."

ORIGINAL ARTICLES.

*A CASE OF LOCO-MOTOR ATAXIA TERMINATING IN GENERAL PARALYSIS OF THE INSANE.

BY

C. K. MILLS, M.D.

As the relations between loco-motor ataxia and general paralysis of the insane have been of interest to neurologists since the time of Westphal in 1863, I have selected the following case as one of interest in this respect.

The patient, J. P—, was forty-seven years of age; of good constitution and noted for his strength and endurance, but for three years had not been well. He had been treated by different physicians for rheumatism. He was addicted to venereal excesses and used and occasionally abused alcohol. Many years before he had had a chancre, but had not subsequently had any of the ordinary evidences of secondary or tertiary syphilis. He first had darting pains in the feet and legs. He soon experienced sensations of numbness and tingling of the feet and later in little and ring fingers of the left hand. After a short time he was troubled with double vision and his sight diminished in acuteness.

The results of the examination made during the first week of observation were as follows:

No paralysis was made out. Galvanic and Faradic irritability were well preserved. The patient could not walk well after dark. He swayed and tottered on trying to stand with his heels together or when his

eyes were shut. He complained of numbness and tingling in the feet and fingers and particularly of sharp and severe pains in the limbs.

Occasionally he had a disagreeable sensation in the fingers and a peculiar sense of constriction in the lower part of the abdomen. Within four weeks he lost seventeen pounds in weight. He suffered great mental anxiety in regard to his physical condition. There were, however, no symptoms of aberration of mind, and no delusion. He was fully able to attend to business which required a large amount of physical and mental exertion.

The patient was placed upon doses of potassic iodide with no improvement. He was next placed upon a systematic course of treatment, viz.: silver nitrate, galvanization of the spine and faradization of the extremities. A strong galvanic current was applied with broad rheophores over the entire length of the spinal column. The improvement made apparently under this treatment was remarkable. He gained in weight; the paroxysms and lancinating pains diminished very much in frequency and severity. The sense of constriction about the head and abdomen disappeared. He ceased to have sensations of numbness and formication, and became able to walk without trouble in the dark, and could stand and walk with his eyes shut. After seven months of treatment he discontinued the electricity, occasionally taking medicine. After a few months improvement he again relapsed and now in spite of all treatment including medicine, rest and discontinuance of business, he got steadily worse. He would occasionally improve. The anesthesia of the feet and hands, the staggering gait returned and grew worse. Every two or three weeks he would have attacks of lancinating pains. Decided mental symptoms first began to make their appearance two years after he first came under my treatment. He was in the habit of spending money very freely, not only on himself but upon others. The delirium of Granger did not develop thoroughly until nearly a year later. About the same time a peculiar hesitancy in speech, slight twisting of the mouth to one side and some tremor of the tongue and lips became noticeable. On several occasions at this date he had attacks of hemoptysis, was troubled with cough and night sweats. He lost weight steadily. He made bargains for the purchase of valuable estates which often brought him into trouble. On one occasion he collected his boon companions and gave a banquet. Nearly three years after the case first came to me for spinal symptoms and almost six years after the development of ataxic pains, he was sent to the Insane Asylum of Pennsylvania Hospital. His delusion became of the wildest character. He became irritable and hard to manage. anesthesia, tremor of the tongue, etc., increased, and on two occasions he had slight apoplectic attacks. Later he was removed to the State Hospital at Danville where he died. Previous to his death his general mental condition was very much enfeebled. He did not seem to understand where he was. He also did not seem to realize the difference between filth and uncleanness and of different kinds of food. While waiting for a word or idea, his lips were unsteady and would quiver and be drawn together in points. He had to make several efforts before he could speak. His movements were weak hesitating and awkward. He usually remained in bed, although able to go about at times. A needle could be plunged deeply into the body and limbs without causing apparent discomfort.

Of events which occurred previous to his sickness,

* Read before the American Neurological Association and reported for the "MEDICAL GAZETTE."

he appeared to retain some ideas, but of recent events he could remember nothing. He died just five years and four months after my first examination. I obtained permission to examine the brain and spinal cord. The following is a report of the post-mortem examination:

The autopsy was made forty-six hours after death.

External examination showed two slight abrasions on the top of the head. The skull cap was normal in thickness. There were no adhesions of the dura mater to the skull. The dura mater, however, was adherent to the pia mater for a distance of 3" along the edge of the longitudinal fissure on the middle of the right hemisphere and one inch along the left hemisphere. On the right side of the pia mater the upper and lateral surfaces presented a deep congested and opaque appearance over the following convolutions:

Small portion of posterior end of frontal, posterior third of second and third frontal; entire ascending frontal and ascending parietal to within 1" of longitudinal fissure. Lower half of superior parietal inferior parietal and first half of second temporal. The pia mater was hyperæmic above this area. Over the left hemisphere appearances were exactly similar. The area of deep redness and opacity did not involve quite so large a surface.

The convolutions covered by the change were as follows:

Ascending frontal, ascending parietal, inferior parietal and upper temporal. A considerable amount of fluid escaped, chiefly from the frontal and occipital regions. The convolutions of the frontal and occipital lobes were flattened, most marked, near the left frontal region. The pia mater of the superior vermiciform process of the cerebellum was congested and adherent, and over both cerebral hemispheres at scattered points. The membrane across the right Sylvian fissure presented a dark cloudy appearance and a similar condition was present on the left. The frontal convolutions on the right side of the fissure of Sylvius seemed to be wasting. They were more flattened out than usual and the cerebellum was about normal.

The medulla oblongata was small and firm. The cornua of the lateral ventricles were dilated. The posterior horns particularly were much enlarged.

The only notes made as to the gross appearance of the spinal cord and membranes were that the pia mater was thickened and that the cord presented an irregular shrunken appearance.

Sections from the membranes were made and complete sections of the cord were made at different levels and large sections from the medulla, brain, cerebellum, crura cerebri and convolutions, were prepared and examined. The dura mater of the spinal cord in the lumbar region was slightly thickened. Evidences of meningitis of the pia mater were present. There were some adhesions between the levels of pia mater in this region. The lower lumbar region showed the connective tissue between some of the nerve fibres much increased.

The cortical layers of the posterior columns were sclerosed to the extent of about $\frac{1}{4}$ in thickness of the substance of the columns.

The sclerosis of the columns of Goll and the posterior root zones was nearly of the same extent in this region. The walls of the vessels appeared thickened throughout the posterior columns. The sclerosis was most marked upon the right side. There was a small hemorrhagic infarction of the right lateral column near the posterior horn. The central canal and poster-

ior fissures were obliterated. The dorsal and lower cervical regions showed a similar condition. The sclerosis in the upper cervical cord was less than in the lower portion and was most marked in the columns of Goll. The vessels in the deep portions of the columns of Goll and posterior lateral columns were also sclerosed.

The ganglion cells and hyperganglionic spaces showed a gradual stage of degeneration from below upward. The medulla showed a great number of corpora amylacea in the lateral tracts.

The ganglion cells on each side were highly granular and pigmented. In some larger vessels there was an accumulation of white blood corpuscles. The perivascular lymph spaces appeared widely distended.

The pons presented corpora amylacea in various places. The left crus cerebri exhibited ganglion cells extremely granular and pigmented, and the vessels sclerosed and the walls were infiltrated with cells and pigment. In the right crus cerebri the same condition obtained as on the left side. The left optic thalamus showed the walls of the vessels extremely infiltrated with cellular elements. Even in the capillary plexuses; the nuclei were much increased. Sections of the convolutions across the fissure of Rolando showed the same state of the vessels.

On more recent examination I found the posterior columns of the spinal cord showed marked sclerosis throughout their whole extent. And that meningitis of the pia mater was present everywhere. The sclerosis was most marked in the lumbar region decreasing in intensity as the course ascended. It was well marked throughout the columns of Goll and posterior root zones.

The post mortem appearances correspond to those shown by Westphal to belong to dementia paralytica whether or not associated with tabes dorsalis. In the cervical region Goll's cuneiform columns were especially affected and in the dorsal and lumbar regions the entire area of the superior columns was involved.

In this case the spinal symptoms were the first to appear. Three years before coming under my care he began to suffer of the lancinating pains of posterior sclerosis.

According to Westphal, no direct relation exists between tabes dorsalis and general paralysis of the insane. Locomotor ataxia is by no means uncommon in patients affected with that form of insanity.

A CASE OF VOLVULUS.

BY

O. B. ORMSBY, M.D.

Your selection, "Obstruction of the Bowels," in the issue of July induces me to report the following case:

Early in the morning of January 25, 1880, I was called to see S—R—, an American laborer aged 35. Found him complaining of intense pain in the abdomen, which he described as most severe in the immediate neighborhood of the navel. Examination disclosed no tumor or swelling of any kind, and only slight tenderness. Patient informed me that he had eaten his evening meal and retired in his usual state of health, but that his bowels had troubled him and he had had an evacuation at midnight and another at 3 a.m. Believing the trouble to be spasmodic constriction, I gave $\frac{1}{4}$ gr. acetate morphia (hypodermic) and a purgative to be taken when the pain subsided. 26th

found the patient worse. Pulse small, 120; abdomen very tender; pain constant; no stool. At my request counsel was called at once, and it was decided that a strenuous effort to move the bowels should be made at once. This was done under the impression that there must be fæcal impaction. Ol. tiglii by the mouth and enemata—result stercoraceous vomiting. We then decided that the case was intussusception or volvulus, and Dr. B—— (my counsel) urged laparotomy. I objected, and we elevated the nates as high as possible and with a flexible syringe threw as much water into the intestine as it would contain and manipulated the abdomen in the hope that the obstruction might yield. The injection was returned alone and the laparotomy question loomed up again. Dr. B—— said: "I have encountered one such case before and the patient died. I would cut." I answered: "I have met one such case and the patient recovered. I would not cut." So we agreed to give an opiate, and upon our return to town consult authority on the subject. We referred to Gross and Flint. Gross said he had operated in a few instances and the patients died. He would not, therefore, encourage the performance of the operation. Flint had collected the statistics of 27 cases of the operation, 25 of which resulted fatally, and he left us to draw our own inferences. Dr. B—— considering the case hopeless without operation, withdrew from it, and left me to shoulder the responsibility alone, which I did. I put the patient under the influence of morphia and belladonna and kept him there. Enemas of chicken broth or beef tea were administered twice daily, and twice daily as much tepid water as the bowel would retain (nearly a gallon) was thrown up and retained. Fomentations were applied to the abdomen constantly and nothing given by the mouth except the medicine, and when I could be present at the proper time (the case was 3 miles away) even that was given by hypodermic syringe. This course brought the vomiting down to once every second day, and did much to control the peritonitis which by the third day had become intense, the pulse varying from 120 to 160. Patient soon became delirious and remained so with only short lucid intervals during the entire course of the complaint, which lasted from the morning of January 25th to the morning of February 6th (12 entire days) when the obstruction was overcome and the bowels were copiously moved, after which the peritonitis speedily subsided. The attendants had been instructed to reserve any discharge that might be passed for inspection, which they did; but I found neither solid lumps to account for the obstruction nor any portion of intestine, thus confirming the diagnosis of a twist of the gut. I found that the copious injections of water relieved the patient's thirst without the danger of provoking vomiting, while at the same time they acted as internal fomentations; soothing the inflamed peritoneum. During the last three days of active treatment digitalis was given with the morphia and belladonna on account of feeble heart action. An interesting feature of the case was a delusion in the patient's mind causing him to think that the family had moved during his illness, which delusion persisted until he had been able to sit up and move around the house for more than a week. I may add that the only similar case it has been my fortune to attend recovered after the sloughing and separation of about 5 inches of intestine, presumably the ileum. The specimen was lost on account of a change of nurses between the time of the appearance of the dead intestine at the anus and its complete extrusion. The patient recovered, but

the duration of his complaint was only half as long as in the case reported.

LECTURES.

HIP-JOINT DISEASE.

A CLINICAL LECTURE.

BY

NEWTON M. SHAFFER, M. D.,

Clinical Lecturer on Orthopædic Surgery at the Medical Department, University of the City of New York.

CASE I.—This boy, aged 4 years, had slight symptoms of hip disease two years ago. The aunt remembered enough of her condition when she had hip-joint disease to realize the nature of the trouble. I examined the child carefully and I thought it was the beginning of hip-joint disease. I put the child upon a splint and two months ago I removed the splint to see how well he was. I have seen him once a week for nearly two months, giving the limb exercise, and making motion with pressure. After watching him carefully for this period of two months, I have made up my mind that there is still a certain amount of reflex muscular spasm, and these are indications which mean that we must watch the patient still longer.

We will now place the boy upon his back and test the motions at the hip.

Flexion is normal in the right leg. It stops at an angle of nearly ninety degrees in the left leg. Rotation of the left limb is also limited as well as further motion.

On placing the boy in the prone position we find extension of limb on the left side limited; rotation also limited.

Flexion then is normal on the right and left sides, and there is no reflex muscular spasm as applied to the anterior surface of the body. When you get complete flexion of the body the chances are very greatly in favor of the absence of hip-joint disease.

There is resistance on the left side in extension. We find a limitation of motion then only in extension. Look at the muscle and examine its function and see its meaning. Now, what does a simple psoas muscle contraction mean? One action of the psoas magnus is flexion of the body upon the thigh.

In suspecting Pott's disease we should first examine the muscular condition of the joint, and indeed we should examine both joints. Examine as to mobility of the spine; examine the pelvis and try and get all the characteristics of the patients. In this way you will find even in difficult and obscure cases a means of making a diagnosis.

The patient improved in the first month. He got better and had no pain or trouble. There was simply an expressive symptom of limp. Is this due to the disuse of splint or to some trouble in the joint? In the region of the spine there is free mobility and limited psoas action only as applied to the hip-joint and not as applied to the spine. In Pott's disease we have limited spinal action. The next time I see this boy and put on the splint, I shall keep it on for three months. Then I will take it off and try him again.

I have taken patients out of the apparatus and have seen them hop, showing that as soon as the diseased joint has been under treatment and has become solid there will be no pain. In children we get no expression of pain except by studying their gait, muscular sense and mobility.

CASE II.—Our next patient, gentlemen, is a little boy five years old. He is brought before you to illustrate the good result obtained after two years' treatment. We will measure his limb and we find it to be $32\frac{3}{4}$ in. This is the length of the right limb. From the anterior superior spine of ilium the limb measures around $11\frac{5}{8}$ in.; left limb, $12\frac{5}{8}$ in. Hence there is one inch difference. The largest measurement around the calf on the right side is $8\frac{1}{4}$ in.; left side, $8\frac{1}{2}$ in.

There is then a slight difference below and a large difference above. This means that the atrophy above is not entirely dependent upon the vessels and pressure. It means that reflex muscular spasm brings with it reflex muscular atrophy. The joint on the right side is a little more vulnerable than the joint on the left side. This boy should be protected from the injuries which are apt to occur to children from running, racing, etc. He can hop almost as well on the diseased limb as on the healthy one.

A boy was next presented to the class with trouble of the left limb. A week ago he walked stiff. The left limb does not extend so freely as the right. Rotation of the limb causes him to flinch. Abduction is very free on each side. There is then no limit to extension, but a slight limitation to flexion in the left leg.

This boy then has a disease of the vertebræ and requires an apparatus to steady the spine. A force should be applied in the direction of the arrow so as to overcome the tendency of crookedness and thus prevent a deformity which must otherwise supervene.

ANEURISM OF THE AORTA.—FIBROID PHTHISIS:—FUNCTIONAL DISTURBANCE OF THE LIVER.

A CLINICAL LECTURE.

BY

FRANCES DELAFIELD, M. D.,

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CASE I.—*Aneurism of the Aorta. History.* Male, aged 36. Occupation, stevedore. Patient is a naturally strong, muscular man. For the last ten months he has been troubled with very severe pain referred to the upper part of the sternum. This pain extends upwards into the neck and backwards into the shoulders and arms. The patient is continually getting worse. Besides the pain he has been losing flesh and strength. Has difficulty of breathing and is unable to lie down for any length of time. He is obliged to open the window to get air. Has no cough and no difficulty in swallowing. Has had some swelling of the feet. Appetite is good.

Phys. exam. If we look at the man's chest we observe that it is not quite symmetrical. This want of symmetry is due to the bulging of the costal cartilages. Such a bulging is usually either congenital or it occurs in connection with emphysema. Placing my hand over the upper part of the chest I get a strong pulsation over all the upper part of the chest from the second rib up, but still it is not diffuse. It is not the pulsation that I would get from a pulsating tumor but rather the increased thrill that I get from undue pulsation in the large arteries at the root of the neck. I get dullness on percussion which extends the whole width of the sternum and a little beyond. This dullness extends pretty well down the sternum. In addition

to the area of dullness belonging to the heart then we get an area of dullness over the upper part of the sternum. There is considerable tenderness over the upper part of the chest above the heart. The heart beats steadily and there is a pretty loud systolic murmur heard all over the heart viz. apex, præcordial region upper part of the sternum and under the clavicles on each side. The pulsation in the radials is equal on both sides. In the back percussion is a little duller over the right side of the chest than over the left. Breathing is not quite as good over the right side of the chest.

The general condition of this patient although somewhat emaciated, is tolerably good. The heart is about its natural size. It beats forcibly and regularly; but there is an unnatural area of dullness over the upper part of the sternum. There is a loud systolic murmur over the whole of the præcordial region and upper part of the sternum. There is no difference in the radial and carotid pulses.

The diagnosis then is aneurism of the aorta. The aneurism is given off from the anterior aspect of the ascending portion of the arch of the aorta to the left. It presses toward the sternum. It does not press against the large veins of the trachea and œsophagus, for the man has no cough or difficulty in swallowing and there is no evidence of pressure on the vena cava. It would be equally possible for the aneurism to be given off from the transverse portion of the arch provided it is given off from the anterior surface and does not involve any large arteries. It is given off either from the transverse or upper and anterior portion of the arch of the aorta. His heart's action is regular. There is no great amount of venous obstruction. The appetite is good and the pain and dyspnœa seem to trouble him most.

Treatment. Most of these cases of aneurism of the arch of the aorta are put upon the use of iodide of potassium. Empirically it relieves the symptoms by regulating the heart's action. As this man's heart is beating already regularly and steadily, I should not expect so much good in this particular case. I should be willing to unite some drugs which enfeeble the heart's action. Aconite and veratrum viride in the form of tincture; dose: 1–5 drops may be given, according to the ability of the patient to stand the use of the drug. Begin with five grain doses of potassium iodide and two drops of the tincture of aconite root taken three times a day. If he bears this well and if the force of the heart's action is not sufficiently diminished, then increase the amount of aconite up to three drops at each dose. This man will eventually have to use opium in some shape or other for the relief of his pain. We will try and put that off and endeavor to diminish the pain by regulating the heart's action.

CASE II.—*Fibroid Phthisis. History.* Male, æt 40. Eighteen years ago in Germany patient had an attack of pleurisy with effusion on the right side from which he recovered. He was well until six months ago when he struck the lower part of the right chest against a sewing machine after which he had a little cough. He felt pretty well until three months ago, when he had a sudden cough with abundant muco-purulent expectoration. He has lost flesh and strength. He is not a very vigorous-looking man and is not well nourished. He looks like a man whose occupation does not make him very strong.

Phys. exam. As you look at the man's chest in front, you observe a deformity. The right side is not as full as the left side of the chest. Behind the

left side is also fuller than the right and there is a lateral curvature of the vertebral column. Percussion is flat on the right side. This flatness extends to about the sixth rib where it begins to change to dullness. This dullness continues for a couple of inches till I get to the region of the liver where it becomes flat again. The breathing on the left side is natural. The quality of the breathing on the right side is changed, approaching to the tubular breathing. It is not a well-marked tubular breathing. The voice is louder on the right side. The cough is sharper and there are a few course rales. In the back percussion is flat over the whole right side.

Diagnosis.—There is a compensating emphysema in the left lung. He has some chronic bronchitis. He has also very great thickening of the pleura on the right side. There is here a fibroid lung with chronic interstitial pneumonia with the production of new connective tissue. His trouble dates back to the attack of pleurisy that he had eighteen years ago. This left him with permanent adhesions and thickening of the pleura. This has been followed by interstitial pneumonia, and has been attended with chronic bronchitis. Now he probably has a very considerable amount of new connective tissue produced in the right lung replacing the parenchyma. This right lung probably has some fusiform dilatation of the bronchi and a chronic bronchitis.

This patient then has fibroid phthisis, sometimes called cirrhosis of the lung. It is a chronic interstitial pneumonia with the production of new connective tissue. This condition began in the pleura. The injury which this man received six months ago has nothing particularly to do with his case.

Prognosis.—In some respects the prognosis is good. It is bad in others. The lesions that have already taken place will never disappear. It is probable that the lesion will continue. That is the unfavorable side of the prognosis. The favorable side of his case is that these cases may go on for a very long time. This is not an example of a wasting disease, and in this respect it differs from phthisis. There is nothing fatal about this lesion as long as the other lung continues good. The left lung will never have anything the matter with it except a compensating emphysema and more or less bronchitis.

Treatment. The indications for treatment are simply to improve the man's health in any way we can. There is no use in employing counter-irritation for the relief of the interstitial pneumonia. He should be fed with as much as he can digest. Dilute sulphuric and dilute hydrochloric acid should be given for the bronchitis.

CASE III.—FUNCTIONAL DISTURBANCE OF THE LIVER.

History.—Patient is a tailor by occupation. He complains of "lightness in his head." He has a general weakness. Has been troubled for two years. Appetite is good. He is constipated and is able to work.

This man gives us a sort of history that is common enough. The main feature in this case is vertigo or dizziness. This has troubled him more or less during the last two years. Twice it has been more severe than at any other time. From time to time he has sufficient vertigo to render it necessary for him to catch hold of something to keep him from falling. These two more severe attacks of vertigo were attended with vomiting. At other times he has no vomiting.

These cases of vertigo seem to depend sometimes upon derangement of the functions of the stomach; sometimes they depend upon derangement of the functions of the liver. There are other cases in which

both these organs seem to be at fault. It is not always easy to be sure which organ is the cause of a particular case. To take this case roughly, from the absence of any other stomach symptom, from the fact that he has no nausea and vomiting, except in these too severe attacks, and no pain about the region of the stomach or flatulence; from the fact that he has good appetite and is a tailor, I should judge roughly that the trouble with him is a functional disturbance of the liver rather than a disturbance of the stomach.

Treatment.—I should in the first place put him upon some drugs which would increase the production of bile from the liver:

R.					
Hydrarg. Bichlor.	.	.	.	.	gr. $\frac{2}{10}$
Pulv. Ipecac.	.	.	.	.	gr. $\frac{1}{10}$
Ext. Belladonnæ	.	.	.	.	gr. $\frac{1}{10}$

Let him take one of these pills after each meal. In addition I should cause him to take one of the mineral acids, as dilute hydrochloric acid, with his meals. He can get some commercial dilute hydrochloric acid and put twenty drops into a tumbler of water with each meal. Then after this let him take one of the above pills.

EPITHELIOMA OF THE NECK—SCROFULOUS ADENITIS—SINUS OF THE WRIST.

A CLINICAL LECTURE.

BY

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CASE I.—Epithelioma of the Neck (?)—This patient, gentlemen, comes here for a swelling which you see on the side of his neck involving it a little beyond the skin. It has been there for five years. This swelling is found to be somewhat firm, red and rather moist, covered with a secretion mostly dry, and there are no other secondary swellings. This particular swelling is confined to the skin and does not seem to involve the subcutaneous tissue. Five years' duration of the disease excludes carcinoma or epithelioma. Epithelioma is quite common in the neck and especially the face. Carcinoma is quite rare. Though this may be some other kind of tumor, yet I am inclined to think that it may be epithelioma of this side of the neck. Epithelioma of the skin generally is comparatively slow in its progress. It often lasts for a long time without increasing sensibly, and after removal recurrence is much less liable to take place than when the disease affects other parts of the body. This is not exactly an epithelioma. Lupus, glandular swellings, hypertrophies of sebaceous or sudoriparous glands and papillomata occur in this region. It is not the latter, for papillomata are invariably rough on the exterior. In the case of these smooth growths it is difficult to say whether they are glandular hypertrophies or of the nature of epithelioma. Lupus can be excluded in this case because there are almost always fresh deposits in lupus, while the old ones result either in ulceration with subsequent cicatrization or the tumulous tissue disappears with a cicatrix. I believe it is epithelioma or glandular hypertrophy. In either case the tumor can be removed best by incision. This is preferable to the removal by any of the caustic applications. The proper mode of procedure is to make an incision above the

morbid growth one half or three-quarters of an inch and make two semielliptical incisions. Make free incisions, cutting $\frac{1}{4}$ in. on either side of the morbid growth, and see that you do not shave it off in such a manner as to leave some of the tissue adherent to the base of the wound. Then bring the sides of the wound together by a few sutures and union will take place by first intention.

CASE II.—*Scrofulous Adenitis*—This little girl has been troubled with abscesses about the elbow and shoulder joints which have opened themselves superficially. There is slight stiffness of the shoulder joint and also of the elbow joint. This stiffness probably comes from disease. It is, however, not very marked. These scars are the remnants of abscesses which have been unhealthy and scrofulous in character. I judge that this is not a case of necrosis or caries. There are a number of spots not situated near the bone. Here is one over the muscles at the root of the neck. There is one near the scapula. There is one running below the clavicle for a considerable distance and one in front of the anterior axillary line evidently superficial in its situation. I judge these to be scrofulous abscesses. They occur in unhealthy children sometimes in the lymphatic glands, sometimes in the connective tissue. Sometimes they are occasioned by tubercular deposits and when opened they discharge an ill-conditioned pus.

After healing they leave large and red scars looking different from the scars which follow the opening of a common abscess. The skin becomes undermined till it perishes by ulceration, and the destruction of the skin is followed by cicatrices. Is there any other disease connected with the sores? There is a swelling situated under the skin involving the skin, part of which is quite red and tender. Matter is in the process of formation and in the course of time break down and be followed by ulceration as is seen on the middle of the child's forearm. This is the story of the disease in its several stages. In the first stage we have the formation of the abscess. Secondly, after the abscess has been opened and considerable tissue lost. Thirdly, we have the scar after the cicatricial process is completed. You would probably find solid connective tissue interspersed with points resembling tubercles which soften and finally break through the skin and cause an ill-conditioned abscess. A cure can be expedited by opening these abscesses with a knife and scraping out with a sharp spoon all the degenerative products and treating the wound with stimulating dressings, while cod liver oil and iron should be given internally.

CASE III.—*Sinus of the Wrist*—Female. Eight days ago she fell and received a blow upon the hand and an injury of the forearm which seems to have been a fracture of the radius. There was an opening of the skin, and it is stated that a surgeon of eminence here saw the case who put the bone back in place. She comes here now with an inflammatory swelling of the wrist. We don't know positively whether the bone is broken. The skin is broken and there is an inflammation of two or three inches in extent in the skin and parts beneath. There is an elevation of the integument and some pus beneath, and an opening which in the case of fracture leads likely to dead bone. It is desirable to know whether this is a case of fracture or simply a wound, as the treatment would be different in the two cases. There is not that displacement commonly observed in a fracture of the radius when no retentive appliances are used. Commonly the lower end of the bone is drawn backward and upward and causes

a very marked prominence on the dorsal aspect of the forearm just above the wrist. I think I obtain crepitation there, possibly a cartilaginous crepitation. There is not a very distinct bony crepitus. The bones may not at this stage become covered over by granulation. Place the hand upon a back splint and have the sinus washed out with some disinfectant solution. You cannot apply the ordinary antiseptic treatment. Air has gained access to this sinus and it is already infected. I should disinfect it by washing it out with the chloride of zinc in the strength of forty grains to the ounce. It has the effect of producing a slight destruction of the parts in contact and disinfection of the wound. I have also used one part of iodoform to five parts of ether. The circulation is somewhat impeded already as evidenced by the swelling of the hand and the œdema as shown on pressure.

CASE IV.—*Hydrops Articulī*—This man illustrates a disease of the knee-joint. He hurt his knee six months ago. You see, gentlemen, that the right knee is larger than the left. It is also warmer than the left. The knee had been swollen by effusion. Has been very much troubled with pain. This means that the injury has produced a dropsical affection of the knee joint called *hydrops articulī*. In these cases it is difficult to get rid of the fluid. There is a slight swelling remaining now due not to fluid in the joint but to connective tissue. He has used St. Jacob's oil, kerosene oil and liniment, but they did not do any good. If I were he I should be very well satisfied. He wants his leg to look well. In some cases a cure has been effected by ignipuncture—the introduction of a hot needle. Some people suffer great pain from proliferation of the cartilage of the joint not constituting a fungous arthritis but a disease which seriously interferes with locomotion. The joint has already been opened and the diseased portion of cartilage shaved out and antiseptic dressings applied and the patients have had motion restored and the pain removed. These minor operations will replace in the future the more formidable and somewhat doubtful operation of excision.

ABSTRACTS AND SELECTIONS.

CASE OF TESTIS IN PERINEO, COMPLICATED WITH CONGENITAL INGUINAL HERNIA AND ACUTE ORCHITIS. By J. ALEX. WILLIAMS, M.B., M.R.C.S. Eng., House-Surgeon and formerly House-Physician to the London Hospital. House-Surgeon to the Royal Portsmouth Hospital.

"The patient, aged 2 years, was admitted on September 15, 1882, into the Royal Portsmouth Hospital, under the care of Dr. Lloyd Owen, by whose courtesy I am permitted to publish the case. The mother then gave the following account of his case. A lump had been observed in the right groin from birth. It was about the size of a small hen's egg, mobile, and often slipping into the abdomen. A medical man, whom she consulted, said the child was ruptured. The parents had noticed the absence of the right testicle from its proper scrotal pouch, and the child was often observed to be fretful and peevish without obvious cause. A few hours before admission, the child came in from play crying, when the mother noticed an increase in size of the lump; and, thinking it had met with an injury, brought it to the hospital.

When examined, a large sausage-shaped swelling was observed in the right inguinal region, extending downwards into the perineum to within half an inch of the anus. A distinct sulcus was visible externally, separating its upper and middle thirds. The upper portion was tense, resonant, and presented the ordinary appearances of hernia. The lower was ovoid, dull, fluctuating, translucent, and evidently contained fluid. The scrotum was well formed and symmetrical; the rugæ well marked. The left testicle was normal in every respect; the right was absent from the scrotum, and could not be felt. Examination of the swelling appearing to cause much pain, chloroform was administered, and the taxis applied to the upper portion, but without success. The lower portion was now punctured, and about an ounce of straw-colored flaky fluid was withdrawn. This, upon standing, coagulated, and was evidently of inflammatory origin. This portion of the swelling was then very much reduced in size, but did not entirely disappear. The taxis was then reapplied to the upper portion, which was now easily reduced, with distinct gurgling. The testis was then thought to be indistinctly felt in the perineum. The child was then placed in bed, and had lead lotion applied locally. Next morning, the nurse reported a reappearance of the swelling, when, upon examination, a lump about the size of a hen's egg was observed in the right perineum, extending posteriorly to within half an inch of the anus. It was irreducible, but mobile, and very tender upon the slightest pressure. It had the feeling and general outline of an inflamed testicle; and the cord, slightly enlarged, could be felt extending from the swelling up to the groin. The skin over the swelling was slightly reddened. The bowels were naturally opened, and there was no return of the hernia or hydrocele.

September 17th. Ice was now applied locally, and the swelling subsequently became reduced in size and less painful.

September 30th. The child looked pallid, and appeared to have suffered much pain. The testis now felt hard, smooth, ovoid, measuring two inches in its long diameter; it had become fixed, and the tissues covering it were slightly thickened by the recent inflammation. It was less painful upon manipulation than formerly. The cord felt running up to the groin was not appreciably enlarged. The right inguinal canal was rather patent, and invagination of the skin caused considerable pain. The right scrotum remained empty; the left contained a testicle.

October 1st. The patient was discharged, the mother being told to bring it to the hospital for periodical examination; at the same time, it was suggested that the testicle ought to be excised, if the child continued in pain or had its natural movements impeded.

January 26th, 1883; The right testicle is still in perineum, of normal shape and size; there is now only a slight perineal prominence to indicate its position. The hernia is constantly slipping up and down. The left testis is normally placed in the scrotum. The child enjoys good health. He plays much without pain or inconvenience.

British Medical Journal.

SEA-SICKNESS. BY R. VACY ASH, M.B.AMER. L.R.C.P.LOND. In this paper Dr. Ash observes, "I have an idea that the sympathetic nervous system is the culprit for the following reasons.

1. Flushing of the face is a common sign of the approach of nausea and we all know that irritation of

that nerve will cause this, as well as an extra secretion in a gland.

2. There is an increase in the quantity of fluid ejected from the stomach after it has lain there for a short time. In my own case I frequently noticed, and I subsequently verified it in many others, that, if I took half a cup of beef-tea, and lay in the horizontal position for a time, so as to avoid vomiting, when I did again vomit, when the exhausted muscles had regained their tone and were ready for another attack the quantity ejected was greatly in excess of that taken in. For instance, if four ounces had been drunk, about twenty ounces would be ejected, of a sour beef-tea liquid. Now, whence did the surplus come? That it was gastric juice, may, I think, be taken for granted; for, although I had not the means of chemically examining its component parts, it certainly partook outwardly of the character of that juice, inasmuch as it would dissolve meat and had an acid reaction, and it did not contain any special features that would lead to the supposition that it came from other gastric organs.

Granting then that it was gastric juice, it follows that secretion, induced by the presence of the beef-tea, was in action, while the balancing power of absorption was held in abeyance. Now, if we follow this out, we shall see that the sympathetic nerve-power was acting regularly; for secretion of gastric juice is governed in the follicles by the latter, while absorption of fluids direct by the veins which are governed by the former is held in abeyance, or in other words, paralyzed. I do not say that it is so, I only throw these facts out for others to corroborate, or not, as the case may be. Whence could the increase in the quantity of fluid have come? It must have been taken in some way from the blood; and what so ready to do so as the gastric follicles stimulated into action by the presence of the small quantity of beef-tea?

Now, as to remedies. If my observations be correct, any drug or remedy acting on the sympathetic nervous system would cure this tiresome complaint; ice to the spine may so act, as well as the remedies mentioned by Mr. Kendall, in a more direct way. The teaspoonful of Worcester sauce, which, I have found useful, may owe its efficacy to the hot condiments contained therein, and I imagine it to be possible, that they act through the sympathetic in the coats of the stomach. I know that the majority of the quack remedies for sea-sickness contain a mixture of nearly all the carminatives and condiments under the sun, with the hope that one out of the lot will hit, and they do hit, or rather temporarily relieve; as cayenne pepper and Worcester sauce will do. There is one mode of applying remedies that I should like to see tried by some one would honestly take the matter in hand; and that is the introduction of certain remedies by subcutaneous injection, for it necessarily follows, that, if my idea be correct and absorption be held in abeyance in the stomach, it is of little use to pour any medicine into that viscus when it is impossible to be taken up by the blood."

British Medical Journal.

GOOD REMEDIES OUT OF FASHION. In an address on this subject, delivered at the Annual Meeting of the Metropolitan Counties Branch of the British Medical Association, by the President, Dr. C. J. HARE, late Physician to University College Hospital, the lecturer made some interesting observations on emetics and bleeding.

"It is not long ago that, in a very urgent case of bronchitis, I advised the administration of an emetic;

when the gentleman whom I had been called to meet in consultation said, "Why, I never gave an emetic to an adult in my life." In former times, it was not unusual, on the contrary, to commence the treatment of many diseases with the administration of a dose to procure vomiting; and although the remedy might then be given sometimes indiscriminately and according to routine, only those who have seen the effects of emetics, proper and judiciously given, can conceive the beneficial effects they sometimes produce. In the early stage of an attack of croup, it was by no means unusual to give an emetic of tartarized antimony or of ipecacuanha; and it is in accordance with the recorded experience of some of the best authorities and most practical men, and quite consonant with my own experience too, that symptoms which presented the most certain augury of a severe attack were by these means cut short, the hoarse voice resumed its natural character, and the feverish symptoms were in a few hours relieved. I know quite well that a great fear is entertained by some as to the depressing effects of emetics; but the fear is theoretical, and not practical, and those who have had most experience in the administration of them best know how groundless the fear is. In diphtheria, too, I have seen the false membranes which are out of the reach of local remedies, and which the patients cough and cough in vain, and utterly exhaust themselves to get quit of, readily brought up by the action of vomiting, to the immense relief of the sufferer.

"In suffocating bronchitis, the effect of emetics is sometimes magical, and by their administration in such cases not only is immense relief given, but I verily believe—I am certain—that lives are saved. You are called to a patient who has been ill a few days, with increasing dyspnoea; she is sitting up in bed (I draw from nature), for to lie down is impossible; she is restless, and tossing about; the lips, and indeed the whole face, blue; the eyes watery and staring; the pulse quick and small; the cough constant; the expectoration semi-transparent and tenacious; over every square inch of the chest, front and back, from apex to base, you find a bundance of rhonchi; moist, sonorous and sibilant ones in the upper part of the lungs, and muco-crepitant or mucous *râles* towards the bases. Ammonia and stimulants, right and good in their way, perhaps, in such a case are too slow in their action; the patient is, in fact, more or less slowly, more or less rapidly suffocating. An emetic of twenty-two grains of ipecacuanha in an ounce of water is given; in ten or fifteen minutes the patient vomits and brings up a huge quantity of that tenacious mucus, and the whole aspect of the case is altered; the distressed countenance is relieved; the breathing is at once quieter; and the patient is able for the first time for the past twenty-four hours to lie moderately low in bed, and to get some sweet refreshing sleep. The patient is, in fact, rescued from the extremest peril, and in this case, and in many similar ones too, I believe, from otherwise most certain death. Of course, in such cases the emetic is not given for its effect on the stomach, but for its collateral effect in mechanically clearing out the enormous amount of secretion which accumulates in the bronchial tubes, and which the patient is otherwise quite incapable of getting quit of; and thus the half-choking, almost asphyxiated, condition is changed for one of comparative comfort, and time is gained for the action of other appropriate remedies. No doubt the secretion may, and often will, accumulate again; and I have not hesitated again in bad cases to repeat the same good remedy; but it is a fact, and a very positive one too, that, quite contrary to what those

who have had no experience in the plan suppose, the system rallies instead of being more depressed under the action of the remedy.

"There is a class of cases in which the right heart is engorged with blood, and in which the only hope of rescuing the patient from death is by bleeding. A man of middle age (I again draw from nature) has considerable chronic bronchitis, with some congestion of the lungs, and, like many other unwise persons, he goes to a southern watering place instead of remaining in his room and in a uniform temperature. Becoming worse, he intends to return home, and travels on a cold spring day; his dyspnoea is so much worse on the journey, that his friend and the fellow-passengers doubt whether he will arrive home alive; and when his carriage meets him, it is with the greatest difficulty he is conveyed to his house, and got into his drawing-room. You are at once sent for, the message being that the patient is dying, and when you arrive you find that that is the fact. He is sitting in a chair (to lie down is impossible for him), his face is blue and swollen, his lips purple, the eyes suffused and staring, his heavy gasping breathing you have only too distinctly heard and recognized as you ascended the stairs, and when you see him you find his chest heaving, and each short gasping inspiration followed by a long wheezing and moaning expiration; his lungs are full of moist sonorous, and mucous and submucous rhonchi, and scarcely a trace of vesicular respiration is to be heard, and he is pulseless. He looks to you beseechingly, and gasps out, in scarcely articulate words, that he is dying. This is but too true. Now, the treatment for such a condition at the present day is "to pour in stimulants" (though the patient can scarcely swallow). Brandy and water are given, and ammonia, and perhaps ether; then, if the patient live long enough to have them made, mustard poultices are applied to the chest, and to the calves, and to the feet, and the patient is fanned, and the patient dies. Something has been done, but that which true pathology—and, indeed, common sense, unshackled by prejudice, custom and fashion—would dictate, has been left undone. Appearances have been saved but not the patient's life.

"The fact is, that here the danger lay in the right side of the heart being gorged with blood, so that it was impossible for its stretched and distended walls to contract and to propel forwards the thick and blackened blood. Oh, as you value your patient's life, as you value the blessed consciousness of being a minister who has done everything possible for his welfare, let me beg of you not to be contented with the futile treatment of to-day; relieve that poor oppressed distended heart, and all may be well! Open one of those veins which are, with every systole of the heart, tending to carry more and more blood to this already distended right ventricle, and all may yet be well with your patient. Sometimes this blood-letting, in extreme cases, is no easy matter; it may be necessary, before you can effectually open the vein, to place the patient's arm in warm water, so as to sufficiently distend the vein; and even when the ligature has been efficiently applied, and the vein well opened, you may have to press and squeeze and rub upwards the arm before a drop of the thick and tarry blood will flow. But, when it *does* flow at length freely, oh, what a marvelous change may you see take place!—the breathing becomes quieter, deeper, and less noisy, the haggard face resumes the appearance of tranquillity, the blueness of the skin is replaced by a more natural tint, the pulse becomes more and more distinct, and, in a word, the

choked up heart is set free. This is no fancy picture. Every word is simple truth, and I appeal for confirmation to the memory of every senior member present who recollects the experience of his earlier days, and who can also probably tell you that the after-progress of such cases was sometimes almost miraculously rapid, so that in a few days even the patients might become convalescent."—*British Medical Journal*.

THE TREATMENT OF HAY-FEVER. MR.

W. F. PHILLIPS of St. Mary Bourne, Andover, writes :—

"It is just over five weeks since a lady placed herself under my care for the treatment of hay-fever, or summer catarrh—a very much better name. She had suffered severely for many years, and sometimes from the end of May to near the end of July with little or no intermission unless she kept indoors. Her mother, it is worthy of remark, was very sensitive to the odor of certain flowers, and was affected by some of them even to the extent of fainting. She was not subject, however, to summer catarrh.

Knowing how exceedingly unsatisfactory is the treatment recommended and practiced for this disease, is sufficiently evident from the recent communications to the *Journal* on the subject, I sought for rational indications that might guide me to the selection of a remedy. I thought of the neurosis that seems to underlie most cases of this kind, and to constitute the essential cause or predisposition on which the disease depends; of the characteristic symptoms of the malady: the injection of the conjunctiva, the hyperæmia and hyperæsthesia of the nasal cavities, the excessive secretion of tears and mucus; and then I thought me of a drug whose physiological action might indicate the possession of the power to control such symptoms. Belladonna was the drug that suggested itself at once, and I determined to give it a trial, all the more hopefully because I remembered how strikingly useful on similar indications, and by a parity of reasoning, I had often found it in ordinary conjunctivitis and simple catarrh. I began with the following prescription: \mathcal{R} Succ. belladonnæ mxxiv; aqua ad \mathfrak{z} iij. Misce. A teaspoonful to be taken every hour till relief is obtained. The medicine was taken without the production of any undesirable effect, and with very marked advantage indeed—an advantage that became still more evident and unmistakable, both to the patient and myself, when the dose was increased from one minim to one and a quarter (half a drachm in three ounces). Once, too, when the eyelids were especially tender, the patient was advised to use the mixture as a lotion to the affected parts, and this local application was found to be a most useful addition to the internal administration of the remedy. Repeatedly when the symptoms of an attack had been allowed to begin, the patient found prompt relief after a few doses of the drug, the catarrhal affection disappearing first, and then the asthmatic; and on taking it regularly every day after the malady had been subdued, she has found to her delight that she can take her walks abroad through blooming grass and flowers without the least protection or precaution—a thing she had not been able to do for years before.

The patient, remembering no doubt the failure of past treatment, pronounces the remedy "a great success;" but, however satisfactory the case may be, it is, as far as I know, a solitary one, and therefore stands in need of confirmation and support."—*British Medical Journal*.

CASE OF CO-EXISTENCE OF DIPHTHERIA AND TYPHOID FEVER. DR. G. E. PAGET, F.R.S., Regius Professor of Physic in the University of Cambridge, describes the following case :—

"The recent illness of the Postmaster-General may add interest to the following case. The patient was Mrs. J. K., a married woman, about twenty-eight years of age, living in Manor Street, Cambridge. Three days before her illness began, one of her children had died of diphtheria, two of them having been affected. Mr. Carter, who attended them, had no doubt as to the diagnosis. The children had sore-throat, and exudation upon it.

When I first saw Mrs. K. (on December 14th, 1861), she had been confined to her bed about a week. From Mr. Carter I learnt that her illness had begun with sore-throat, and that there had been small white diphtheritic patches upon the throat. When I examined it I could find none, nor any signs of diphtheria; but upon her abdomen were some of the rose-spots characteristic of typhoid fever; and at the base of her right lung, to the extent of two or three inches, the percussion-sound was dull, and small crepitation could be heard. She was feverish; her pulse was 130; her bowels loose. She was in the seventh month of pregnancy.

For six days she continued in much the same state as an ordinary case of typhoid fever, with moderate pneumonic complications; her bowels loose; her pulse above 120; her tongue dryish; and a general condition requiring wine and brandy. During these six days her throat remained free from diphtheritic appearances; but on the morning of December 20th it again became sore, and in the evening the uvula and soft palate were covered with a white exudation, the adjacent parts being bright red. Her pulse then became a little less frequent, falling to 116. Chlorate of potash was now prescribed in small frequent doses, and next day tincture of perchloride of iron. On December 28th, her urine contained albumen. The exudation, after its reappearance on December 20th, was seen from day to day; it had a diphtheritic character, and was very extensive. It was still present, though somewhat reduced in extent, on January 2nd. When I saw her on January 5th, it had been completely cleared off.

Early in January, she began to suffer much from retching and vomiting. She was troubled also with cough. The right lung was consolidated at its base, but to a small extent only. The vomiting so persisted from day to day as to bring her into great peril. On January 20th, the liquor amnii escaped. Active delirium now came on, and continued for upwards of twelve hours, when she suddenly aborted of a seven months' child, which lived half a day. The mother nearly died during the removal of the placenta, though scarcely any blood was lost. After labor was completed, the vomiting ceased, and she gradually recovered.

Mrs. K. had been nursed during her illness by her mother, Mrs. S., aged 58, who lived in the outskirts of Cambridge, in an isolated cottage within a large garden. On February 14th, 1862, she took to her bed with typhoid fever. She had the ordinary symptoms: the rose-spots, loose stools, etc. She went on favorably until March 13th, when, after sitting up near an open door, she had rigors, ushering in double pneumonia and hemorrhage from the bowels. She died on March 24th.

The chief interest of Mrs. K.'s case is in the disappearance of the local signs of diphtheria, and their

suspension for six days during the continuance of the typhoid fever, and then their reappearance and persistence for thirteen days or more. This appears to me a fact, not perhaps contrary to what might be expected, but at least worth notice. It differs from what was reported in the case of Mr. Fawcett."—*British Medical Journal*.

TWO CASES OF POISONING WITH ILLUMINATING GAS SUCCESSFULLY TREATED BY THE INHALATION OF OXYGEN.*

BY ALONZO CLARK, M.D., LL. D.,

Emeritus Professor of Pathology and Practical Medicine in the College of Physicians and Surgeons.

So far as I know, these two cases of poisoning with illuminating gas are the only cases of the sort on record in which the treatment by the inhalation of oxygen has been resorted to. The histories of the cases, somewhat condensed from the written reports of the house physicians, are as follows:

CASE I.—A woman, forty years old, was brought to Bellevue Hospital, and admitted into my service May 30, 1882. She and her daughter had gone to bed the night before, and about noon they were found in a state of unconsciousness, the room where they had been lying for fifteen hours being filled with illuminating gas, the odor of which they had noticed on going to bed. On recovering from her insensibility, the patient could remember nothing that had happened from the time of her going to bed until she regained consciousness in the hospital ward, after the lapse of twenty-four hours.

At the time of her admission she was found to be suffering from pulmonary oedema; the radial pulse was scarcely perceptible, she was unconscious and cyanotic, her extremities were cold, there was trismus with rigidity of the flexor muscles, the urine was passed involuntarily, the pupils were slightly contracted, and a frothy mucus issued from the mouth. Her temperature was 96.5° F., and her respiration 40.

I entered the hospital shortly after she was brought in, and directed the inhalation of oxygen. Its administration was kept up for three hours. In addition, dry cups were applied over the chest, and tincture of digitalis was given endermically—in all, to the amount of thirty minims. Whisky also was given subcutaneously, and hot water bottles were applied to the extremities. Occasionally, too, the patient was aroused by flagellation.

This treatment extended over a period of four hours, at the end of which time the woman began to show signs of returning consciousness; the pulse became more perceptible and regular, warmth returned to the extremities, and the temperature and the respiration were found to be normal. The next day the patient was able to tell her own story, and was soon after discharged.

CASE II.—The daughter of the first patient, a girl twelve years old, was admitted at the same time, in Dr. Loomis's service. Her breath had a very strong odor of gas; she was completely comatose, the breathing being stertorous, the eyes closed, the conjunctivæ insensitive, and the pupils contracted and insensible to light; the pulse was 156, extremely feeble, and occasionally intermitting; the respirations were 30 and shallow. There were clonic spasms involving the left

side of the body, with bird-claw contraction of the fingers of both hands. The urine and fæces were passed involuntarily. The face and clothing showed evidence that the patient had vomited a good deal before reaching the hospital, but after her admission there was no vomiting.

Seeing that my patient was being treated by the inhalation of oxygen, the house physician, Dr. Pryor, resorted to the same treatment in this case, and, in addition, gave a hypodermic injection of a sixtieth of a grain of sulphate of atropine. This patient also recovered.—*New York Med. Jour.*

NOTES ON CHOLERA AND ITS TREATMENT.

BY

SURGEON-GENERAL C. A. GORDON M.D., C.B.

Honorary Physician to Her Majesty the Queen.

Diarrhœa may occur as an independent affection in times of cholera, or it may happen as an early stage of the latter disease. When cholera prevails it is difficult to decide correctly and with precision where diarrhœa as such ends, and where distinctive cholera begins. The symptoms of the two affections differ in degree rather than kind; but it is usually considered that the retention of color in and slower progress of diarrhœa by itself are to be taken as indicative of the milder malady.

Diarrhœa, when it occurs as a premonitory stage of cholera, has a duration seldom exceeding three days. As regards the prevalence of this affection among masses of population, it has been observed to vary from a few days to several weeks. In 1866 statistics regarding this point were taken in London. In 41 examples on that occasion recorded the duration of the diarrhœa in 3 cases was 12 hours, in 1 case 18 hours, in 1 case 19 hours, in 7 cases 33 hours, in 12 cases 2 days, in 6 cases 3 days, in 2 cases 4 days, in 2 cases 5 days, in 1 case 6 days, in 1 case 7 days, in 2 cases 2 weeks, in 1 case 5 weeks, in 1 case 8 weeks. The general result of these observations shows that in more than half the number of cases diarrhœa preceded the more marked symptoms by less than three days. On that occasion in London there was a subsidence of diarrhœa before the outbreak of cholera. A similar subsidence had preceded the outbreak of 1848-9 and 1853-4.

In some instances epidemics of diarrhœa have been considered to be really epidemics of cholera, although occurring in that form. In 1836 this was the case in the Indo-Chinese fleet. On that occasion the epidemic of diarrhœa which prevailed was considered to take the place of cholera which had in previous years occurred in the same fleet. At Huddersfield, in 1849, diarrhœa and cholera prevailed simultaneously in so defined a manner that the cause which produced them both was considered to be identical, only the form of resulting disease to differ in different individuals. At Oxford in 1852 deaths took place by diarrhœa without the cases passing into confirmed cholera. And similar occurrences are noticed in other epidemics of the disease.

Persons coming from infected localities have been attacked with diarrhœa within a period extending to fourteen days from the date of their departure, the disease in them undergoing no further development; and yet confirmed cholera occurred in the locality into which such persons had entered.

*Related at a meeting of the New York Medical and Surgical Society, February 24, 1883.

It has come to be acknowledged as an axiom that the more severe the impending epidemic of cholera the shorter is the period of premonitory diarrhœa. In young persons diarrhœa in connection with cholera is considered to be of more frequent occurrence than it is in those more advanced in years. In a number of instances cholera has manifested a partiality to individuals habitually subject to diarrhœa.

But although diarrhœa often precedes cholera, this does not happen invariably. There was no premonitory diarrhœa on the occasion of the cholera outbreak in the 86th Regiment of Kurrachee in 1846; none in the Madras epidemic of 1848. In the French epidemic of 1855 diarrhœa is mentioned by 97 reporters; by 15 its occurrence is considered exceptional. In the Crimea in that year our troops were seized, in many instances, with collapse of cholera without any premonitory symptoms whatever. At Gateshead in the same year 55 persons who went to bed in perfect health on the 25th of December were attacked with cholera before sunrise on the 26th; and of the number so attacked, 32 were dead before sunset. In 1861 there was no marked prevalence of diarrhœa before or during the epidemic of cholera at Delhi. In 1866 diarrhœa, and indeed all other premonitory symptoms, were absent on the occasion of the cholera outbreak at Meer Meer. At Peshawur the attack of cholera in the 42nd Highlanders was sudden, and unpreceded by premonitory symptoms.

The success of treatment applied in cases of cholera depends in a very great degree upon the early use of that treatment. For example, in London in 1849 there were treated 43,737 cases of "premonitory" diarrhœa, and of this number 58 only developed into cholera. In that year throughout England there were treated 130,000 cases of diarrhœa, of which number only 250 passed into cholera. A question was raised as to whether many of the cases so treated were not cases of simple diarrhœa. Perhaps they were; it is impossible to say. From calculations made in Glasgow in reference to the epidemic of that year, it has been stated that of persons treated within the first six hours after attack by cholera 21 per cent. died; of those first treated between six and twelve hours after attack, 33 per cent.; of those between the twelfth and twenty-fourth, 45 per cent.; and of those treated later, 66 per cent. In India the importance of early treatment is universally recognized, and special orders on this point are enforced in respect to soldiers. In 1877 the observance of such orders was followed by important success at Madras.

Briefly, the remedies administered in the stage of premonitory diarrhœa comprise carminatives, antispasmodics and astringents.

In the sixteenth century venesection, ligatures to the head, limbs and loins, acupuncture, pepper in rice-water as a drink and applied externally, were the means employed. After the violence of the disease had passed, purgatives were given.

In the seventeenth century the natives of India withheld liquids from patients affected with cholera, and cauterized the soles of their feet. Among the remedies administered were diffusible stimuli, saffron, opium, vegetable astringents, and ammonia. Towards the end of that century, and in the early part of the eighteenth, the French Missionaries at Trichinopoly administered to the cholera patients "*un peu d'eau bénite et se mit à réciter quelques prières*," with the happy result, as stated by themselves, that "*le malade guérit subitement*."

Among the remedies used in the eighteenth century

were the following:—Calumba root in 1756; cassia fistula and rhubarb in 1761-63; opium and rice-water in 1769; Glauber salts with tartrate of antimony, in doses of one-eighth of a grain, in 1782; Madeira wine, laudanum and cordials also in that year; castor oil at Arcot in 1787; large doses of opium at Batavia in 1789.

During the portion of the nineteenth century already gone, methods of treatment in their nature absolutely the opposite of each other have been used. In 1817 large doses of calomel, combined with small quantities of opium, were given. In 1831 emetics of ipecacuanha were said to have "acted like a charm;" on the same occasion sulphur and phosphoric acid internally were given. In 1832 venesection, used, as already stated, in the sixteenth century, was reverted to; in 1849 the same method was for the third time practiced. Naphtha was employed for the disease as it occurred among the Prussian troops in the Caucasus; and, under the name of "elixir of Woreneje," that substance is believed to have been employed for the same purpose in Russia. In 1848-9 naphthaline and petroleum were given internally in the United Kingdom.

The use of opium vaunted by some writers is utterly condemned by others. During the epidemic in France, 1855, opium was extensively used; the result assigned to such use being that in some instances living persons were buried while in a state of narcotism only. There are many medical officers of great experience who assert that it is chiefly or only among patients thus treated that the severe train of symptoms known as "secondary fever" occur.

With regard to ipecacuanha, about twenty reporters record their experience with that drug. Of 4,180 patients treated by means of large doses of it, 2,509 died.

Experiments, pursued by some writers, are by others stated to be deadly. The same remark applies to the use of tobacco fumes.

Antispasmodics—notably, ether and chloroform—are used with the greatest advantage against spasmodic phenomena in the course of the disease.

Among the means applied externally and variously reputed have been frictions and excitants; hot baths, with and without aromatic herbs; bags of hot sand to the hands and feet; the application of cold; galvanism, etc., etc.

Among various other remedies used from time to time are the following, they being but a very few out of a long catalogue, namely:—Hot negus, with grated nutmeg; quinine, strychnine, and nux vomica; sulphate of copper; homœopathy, practiced, it is said, during the epidemic in France with sad results; hypodermic injections of various kinds; inhalation of gases; transfusion of blood and of different saline mixtures; purges; astringents; carminatives; alkalies; sulphur; sulphuric acid; chloral, both by the mouth and hypodermically; acetate of lead; tartrate of antimony; stimulants; preparations of iron; hydrosulphuret of ammonia; olive oil; yeast; eupatorium, etc. For a time *Sumbul*, the product of *Euryngium Sumbul*, N. O., *Umbellifera*, was used. In 1864 a solution of permanganate of potass was given in India.

In order to account for the insuccess of medical treatment in cases of declared cholera, the circumstance must be born in mind that 'for the time being the function of absorption is in abeyance; especially is this the case in the algid stage of the disease.

But, while on the one hand there is no certainty of saving the life of a person attacked with cholera, neither is it right or justifiable to despair as to the results of means reasonably employed, even in cases the most desperate.—*The Med. Press.*

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HOW SIGNATURES OF MEDICAL MEN ARE OBTAINED FOR INDORSING NOSTRUMS.

As illustrative of the manner in which unscrupulous dealers in nostrums obtain the indorsement of eminent medical men, whose recommendation is often the basis on which a sale is effected, we quote the following letter:

Editor MEDICAL GAZETTE:

"MY DEAR SIR: I have lately seen a circular issued by L. Reich, in which my name appears as recommending certain wines.

"I wish to say through your journal that some time since Mr. Reich brought me an album, and laying it open before me, asked me to add my name to that of other members of the profession which the album contained, and I did so. If the album contained, as I am now informed it did, recommendation of his wines, he did not so inform me, and I did not know it.

"Yours truly,
"FRANK H. HAMILTON."

What more urgent plea could be presented for the abolition of this unprofessional habit of lending one's name to promote the business interests of a dealer in wines or nostrums than this simple statement of facts, which shows how small a foundation in fact these published commendations have.

No doubt the professional men who are most sought after for these advertising purposes frequently consent to their names appearing through charity or indifference, or perhaps to rid themselves of a persistent solicitor, or in acknowledgment of some favor from the dealer. In whatever way such indorsements are obtained, whether by consent or by fraud, as in the case published above, such practice is most compromising to the dignity of the profession, and a flagrant violation of ethics, and can not but belittle those who lend themselves to it, and lay them open to the suspicion of being influenced by pecuniary considerations.

The medical press has repeatedly alluded to this evil. It is an abuse that can not too speedily be abolished.

As for the rascally dealer who thus obtains signatures by trickery, he ranks little above the forger, and with him richly merits public correction.

THE INFLUENCE OF SOCIAL POSITION ON THE DEATH RATE.

Some statistics bearing on this point were recently published in the *Medical Times and Gazette*. They furnish encouragement to the philanthropist, who has assurance that his efforts to better social conditions have a direct effect on the prolongation of human life:

"Since the commencement of the present year the Registrar-General for Ireland has included in his weekly return a table showing, in five general classes and eighteen groups, the occupations or social position of the persons whose deaths are registered week by week in the Dublin Registration District, the annual death-rate represented by the deaths registered, the number of deaths at each of six periods of life, and the number from each of the principal causes of death. This table has already supplied some suggestive and instructive information. Thus, the second quarterly return for 1883 shows that in the thirteen weeks ending June 30, 1883, the number of deaths registered in the Dublin Registration District (the total area of which is 24,710 statute acres, and the population of which, estimated in the middle of this year, is 349,685), amounted to 2674—1294 males and 1380 females—affording an annual ratio of 1 in 32.7, or 30.6 in every 1000 of the estimated population. The deaths in families of the "professional and independent class" were equal to an annual rate of 24.3 per 1,000 of the persons in that class; in the "middle class" the death-rate was 26.8 per 1,000; among the "artisan class and petty shopkeepers" it was 23.6; and in the "general service class" and the "inmates of workhouses" combined it was 38.6. Among the last division—"inmates of workhouses"—taken separately, the rate was as high as 43.6 per 1,000 per annum; whereas among the subdivision of the professional and independent class, entitled "persons of rank and property, not otherwise described" (numbering 19,030), the death-rate was only 18.5.

ORIGINAL ARTICLES.

A CASE OF INFLAMMATORY GLAUCOMA ABSOLUTUM, IN WHICH THE EYEBALL WAS ENUCLEATED FOR THE RELIEF OF SYMPATHETIC IRRITATION.

BY

DAVID WEBSTER, M. D.,

Professor of Ophthalmology in the New York Polyclinic.

Miss S. A. H., aged forty-four, came under observation October 12, 1882. She stated that about one year previously she awoke, one morning, with a feeling as if something had gotten into her right eye. She was under her family physician's care, at the time, for a "bilious attack," with headache and vomiting. The doctor could find no foreign body in her eye. The organ became painful, however, and the sight soon began to "cloud over." Some months later she

consulted an ophthalmic surgeon, who pronounced the disease glaucoma, and advised an operation upon the eye, which she declined. Eserine was tried, but failed to relieve the supra-orbital neuralgia, or to restore the sight. For several weeks all perception of light had been lost in the affected eye, and the fellow (left) eye had been subject to periods of unsatisfactory vision, which would pass off, however, leaving the sight as good as before.

Present Condition.—The right eye is injected, the emergent ciliary veins much enlarged, the cornea so cloudy as to prevent inspection of the deeper media and of the fundus, the pupil dilated and immovable. Tension much increased. (+ 2.) V = 0.

The left eye is normal in appearance, both externally and ophthalmoscopically. V = $\frac{2}{3}$ without a glass, raised to $\frac{3}{8}$ with a + $\frac{1}{2}$. Wears + $\frac{1}{3}$ for the distance.

As the sight of the right eye was irretrievably lost, and as the left eye was very "weak and sensitive," and was evidently suffering from sympathetic irritation, we advised enucleation. Accordingly the eyeball was enucleated by Dr. C. R. Agnew on the 17th of October.

The sympathetic irritation of the left eye was entirely relieved by the operation.

Dr. T. Mitchell Prudden, Director of the Pathological Laboratory of the College of Physicians and Surgeons, New York, examined the excised bulb and made the following report:

"The *Cornea* contains a few new-formed blood vessels just behind the anterior epithelium.

"The *Iris* and *Ciliary body* are normal.

"The *choroidal vessels* are engorged.

"The *retina* is œdematous, especially along the inner border of the rods and cones.

"*Anatomical Diagnosis*:—Keratitis vasculosa, congestion of choroid, œdema of retina."

As no mention was made of the condition of the optic nerve in Dr. Prudden's report, I infer that it was normal, although I should have expected cupping of the optic disc, from the long continued and excessive intra-ocular pressure.

LECTURES.

PSEUDO-HYPERTROPHIC PARALYSIS—ARTHROPATHIES OF THE KNEE JOINT,

A CLINICAL LECTURE

BY

NEWTON M. SHAFFER, M. D.

Clinical Professor of Orthopædic Surgery, Medical Department of University of City of New York.

The first case that I will call your attention to to-day, gentlemen, is one that we will give the history of before making the diagnosis. In all nine cases were reported in the sixth edition of Dr. Hammond's book on "Diseases of the Nervous System" in this country. In the various medical journals during the past twenty to thirty years, I think there are about eighty cases on record altogether. This is a case of pseudo-hypertrophic muscular or spinal paralysis. In a large number of cases the patients commence to walk badly. They attract attention by their liability to stumble and waddle. Sometimes a whole family will be affected. In one case, I came across three members—a whole

family—who were afflicted with the disease. This is a disease which involves the spinal cord. We get very little information regarding the clinical history of this case on the part of the father. We simply learn that this child has walked badly ever since she began to walk; she will soon be eleven years old. There is nothing in her history to which we can attribute this trouble. It began without any apparent cause and has been getting apparently a deal worse ever since.

The child has come to the Orthopædic Hospital, in Fifty-ninth street, asking for supports. The most prominent spinous process overhangs the gluteal region itself. There is a duck-like waddling of the pelvis. You notice that the thighs are not developed in proportion to the calves. You also notice the congestion and mottled appearance of the skin in the calf and when you grasp that muscle and look at it sideways you are especially struck with its hardness. When we come to compress the upper extremities there is very little grasp. There is a general paresis of the entire muscular system. She is perfectly able to bend the spine but she lacks the muscular ability to make the proper leverage of the spine in getting up from the recumbent position, she has more power in the thigh muscles—and she uses the limb to throw herself up—than she has in the spinal muscles themselves.

This disease has been ordinarily divided into four stages: First, the stage of the staggering gait. This commences at any time. There are cases on record where it began in the first year of life. By far the larger number of cases are boys. These cases are hereditary and the heredity comes from the maternal side.

The second stage is the stage of hypertrophy. This hypertrophy may occur in any part of the body. It may be in the glutei or in the biceps.

Thirdly, we have the stage of atrophy.

The fourth stage is death, which occurs not so much from the disease itself as from some inter-current trouble such as pneumonia or heart disease, because the muscles of the heart, as well as the muscles of the leg and arms are affected. You must be on your look-out for cases like these and not confound them with muscular paralysis. In this particular case the patient has a modified contractility of all the muscles. On the other hand, in a great many cases the electric contractility is not diminished except in the muscles of the anterior part of the tibia. Then we have a dropping of the toes and practically an equinus. There is no response whatever to the reflex action. Where the galvanic and electrical contractions are diminished, the sensibility is not diminished. The hypertrophy existing here is unhealthy and as the sensation is not impaired and motion is, we trace this disease to the spinal cord and locate the lesion in the anterior horns in the same columns that preside over the diseases in infantile paralysis or anterior poliomyelitis. In this case all the muscles are involved. This child had, at the beginning, a tendency to walk badly. The large muscles will deceive the parents and make them think that the child is very strong and will outgrow the habit of tumbling down. The child easily falls down and she takes a very long time to get up. This disease comes on insidiously and it is possible that this lesion has an acute origin; the same as infantile paralysis. In other words it is only a modified form of anterior poliomyelitis. There is an acute attack in poliomyelitis, followed by a destruction of certain nerve cells and a general loss of power, until we get localized paralysis, with loss of faradic contractility and a contraction of muscles, with deformity.

Diagnosis.—Take a Duchenne trocar, with a long hook on the end and insert it in the muscular tissue and pull out a piece of the muscle and put it under the microscope. This will enable you to decide at once whether you have the characteristic signs of pseudo-hypertrophic paralysis. That is, the muscle will be injected with fat cells.

Prognosis.—The prognosis is very unfavorable. Of all the cases reported only two have recovered. These were treated by Duchenne and he recognized the disease very early and treated them with galvanism and massage. He applied the cathode in the cervical region and the anode below. He also administered general tonics and applied massage and other remedies. In our own country we do not know of any recoveries. The disease may last fifteen or twenty years. If these patients develop pneumonia or some other disease, the resistance is so slight that they die of the other disease. We have no case on record where the death was due directly to the disease of the spinal cord. It is always some intercurrent disease that carries them off.

Etiology.—It is impossible thus far to find any adequate cause for this disease. There is no history of specific disease here. In every case on record in which we have been able to obtain a history of hereditary disease of any sort in the family, it is always on the maternal side. In one family ten to fifteen members were affected and in all these cases the heredity was on the maternal side.

[It was suggested by a member of the class that he was positive of the mother of the child having been affected with syphilis, as she had been covered with sores.]

Treatment.—We will treat the child with galvanism applied to the spinal cord so far as we can reach it. We will apply one electrode high up and the other low down in the lumbar region. In the meantime we will give the patient cod liver oil and do everything we can to improve her nutrition and then we will spend the greater part of an hour some time in localizing the muscles and applying the galvanic current.

The probabilities are that I shall be able to show this patient to you again in the fall. This is getting to be not an unusual disease. As soon as one person discovers a disease there are immediately a large number of contributions to that subject.

CASE II.—This man comes to us with an enlarged knee. As we look at the knee we are struck by the appearance of the joint. It does not show any particular puffiness, such as you see in chronic synovitis. While there is undoubtedly fluid there to a certain extent, still there is something else there which is not fluid. When I see the immense enlargement, not only of the joint, but of the bones themselves, I ask myself the question: Is this an ordinary case of joint disease? This is a spinal arthropathy. It is a disease of the spinal cord, with the joint disease as a symptom. This man has locomotor ataxia. In this disease we do sometimes get the spinal arthropathy. This is a case of so-called Charcot's Disease, which is very rare. In washing his face the patient feels as though he were going forward and this man has another very marked condition. These cases commence like an ordinary conjunctivitis. They go on and are treated locally by the oculist. They finally find that they cannot walk well, etc. In this case, like the case in St. Luke's Hospital, the man's ataxic gait was the last symptom and was noticed only when he had the joint disease and irregular walking. From the pain that this man has, the swaying of the body, etc., we infer that

he has locomotor ataxia. His left leg measures around the enlarged knee $17\frac{3}{4}$ in., while the right leg only measures $14\frac{1}{2}$ in. Now if this were a simple synovitis we would have a great deal of pain associated with it and the symptoms of reflex muscular spasm. This man shows a considerable amount of motion and no pain. When I come to feel this knee, I find in certain parts of the joint a doughy feeling, which comes from the degeneration of the cellular membrane, with a certain amount of serous effusion. This, however, does not account for the great enlargement of the bones. In true bone disease, the bone ends are not enlarged. As I feel the patella I find an enlargement. There is a trophic action going on and as a result new nutritive processes in the trophic centres of the nerves themselves. We get as the first symptom of these conditions a very great enlargement of the bones. In these cases we also get a rise of temperature. The trophic disturbances going on in the joint are such as produce a rise in temperature. It is not an inflammatory rise, but simply due to the active processes going on in consequence of the change of nutrition. Before long this joint will become a great deal worse. The nutritive processes going on in these joints attack all the structures of the joint, viz; cartilage, synovial membrane and bone. The cartilage is gone and the bone surfaces are lying together. In such a condition the articular disease due to those changes which have taken place here, would not allow the man to stand without a great deal of effort.

This, then, is a case of sclerosis of the posterior columns, because we get impairment of sensibility. If we had an inflammation of the anterior columns we would get exaggerated tendon reflex, but this is a sclerosis and not an inflammation. We will put an instrument on this man which will prevent him from injuring his joint. I will measure him practically for a pair of bow-legged springs, with antero-posterior motion. This will enable him, as he throws his weight upon the limb, to have the weight of the body come upon the instrument.

This patient gives a history of syphilis of twenty-five years standing. He was treated for the disease in Ireland. As to whether the specific history has any thing to do with this disease or not I am not prepared to say. The best authorities are in doubt as to the etiology of locomotor ataxia. Some refer it to syphilis and others consider syphilis if existing as a mere accident in the disease. I shall, however, put this patient upon iodide of potassium and bi-chloride of mercury. If this is syphilis, it is syphilis in its last stage. This man hurt himself fifteen years ago and never had any swelling until recently. Now if the injury then received produced a chronic synovitis, we would have had symptoms of chronic joint disease. This arthropathy may occur in the early as well as in the last stage of locomotor ataxia.

HYDROCELE AND SPERMATIC CYST.— SYPHILITIC NECROSIS OF THE FRONTAL BONE.—INGROWING TOE NAIL.

BY

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CASE I.—This girl, gentlemen, comes here on account of trouble with the right foot. The nature of her trouble is an ingrowing toe-nail. We also notice

that she is the subject of a malformation which is symmetrical and which consists in the presence of a web between the second and third toes in each foot. This is a curious malformation every now and then seen in the feet or hands. I recently saw an infant in whom all the fingers of one hand were fastened together and the child looked as if it had a mitten of skin drawn over its fingers.

No question arises here regarding the treatment of this malformation because no inconvenience results from it. In the case of the hand, operations are sometimes practiced and occasionally they can be practiced with success, although the cases are not promising. It is easy enough to divide the band between the two toes or fingers but it is not so easy to provide a sufficient covering of integument to prevent the parts which have been divided from healing together again. I think the operation would be easy enough here.

The disease for which she comes to be treated is one of frequent occurrence. It is known as ingrowing toe-nail. It affects the nail of the great toe. It also affects the outer side of the nail commonly. The disease consists essentially in a burrowing of the edge of the nail and of the external corner of the nail into the integument and in the production of sluggish or exuberant granulations which often rise to a very considerable distance above the matrix. It occurs usually in consequence of the nail being cut too short or in consequence of a shoe being worn which is too tight, or from these two causes combined. The nail should never be cut as short as this is cut. The soft parts in front of and outside of the nail rise above the level of the nail and then it takes very little pressure to force the edge of the nail into the skin. An ulcer is formed and this is likely to extend and finally the whole side or the nail becomes buried in the substance of a sluggish ulcer. Very great pain results from this state of things and a tolerably copious discharge of a foul character ensues. Frequently the soft parts on the inner side of the nail and on the anterior aspect rise several inches, always at least one quarter to half an inch above the level of the matrix. The affection is a painful one and causes a great deal of inconvenience. Persons are prevented from walking. This is a very recent case of only six weeks' standing. The affection is obstinate and a great many plans have been proposed for the curing of the disease. One principal point in the treatment is to remove the cause. The nail should be allowed to grow so as to cover if possible the skin which lies in front. Pressure should be removed, tight shoes should be thrown aside and the proper ones substituted and if possible the pressure which the nail makes upon the granulations should be removed. Dr. Abbe has seen a number of these cases in the out door department of the New York Hospital, and has found as a useful agent of treatment a piece of pad or lint placed between the great toe and the toe next to it, and strapping this in place. It tends to prevent crowding of the other toes against the affected toe. Sometimes strapping is used with the same object in view. There has been tried, and with success, the elevation of the nail at the side by placing something between the toes so as to cause a healing of the ulcer. This treatment is perfectly sound in principle but it is more difficult in its application. Sometimes bits of cotton and pledgets of lint are placed inside underneath the nail; occasionally plates of metal are used, and bits of soft sheet of lead are dug into the nail. If you succeed in elevating the nail without making too much pressure upon the ulcerated surface beneath you can possibly accomplish a cure in recent cases.

The most successful plan of treatment which I have hit upon in cases of this sort in the mild degree, is that of crowding underneath the nail a piece of absorbent cotton which has been saturated with a solution of the persulphate of iron, and then placing a small pledget over the entire extent of the nail. This is speedily followed first by a sort of scab, after which the healing process will go on without interruption. I have frequently seen an ingrowing toe-nail cured by one such application. When these means fail we have to resort to a radical operation. The simplest one consists in breaking off the segment of the nail. The old operation consisted in removing the entire nail. The object can be gained by taking off a quarter of the nail. The knife is entered just behind the posterior margin of the nail, thrust down, but not carried forwards, cutting through the matrix of the nail. A strong vulsellum forceps is used to remove the nail. There is nearly always immediate improvement. Under simple dressings the ulcer will frequently heal. After this has been done, it not infrequently happens that the new nail causes a return of the disease. Sometimes it is recommended instead of doing this or in addition to this, to cut away the soft parts, and I think this recommendation a good one in case the granulations are very exuberant. In other cases it is not necessary and I dislike to remove the integument if I can avoid it, for the integument must be replaced by cicatricial tissue which is always more or less tender. In the worst cases nothing suffices except destruction of the dead nail. The nail is taken away and the actual cautery is applied to the matrix so as to destroy and prevent any recurrence of the disease. This radical operation should also be avoided. In this case it is not necessary to resort to any operation. The pressure should be removed and the application of a pledget of lint will cause the ulcer to heal.

CASE II.—Hydrocele and Spermatic Cyst.—This man, æt. 62, comes to us on account of a swelling of the scrotum affecting both testes of very long duration. In the left side it has lasted for nineteen or twenty years; in the right side seventeen or eighteen years.

I have shown you several times this winter the methods of diagnosing hydrocele and how to distinguish it from hernia. The swelling on the right side is an ordinary hydrocele. It has all the characters of that disease. It is a pyriform swelling, the broadest portion being downward. It does not extend up into the inguinal ring. The spermatic cord is felt to be normal in size and it receives no impulse upon cough. The tumor is elastic, fluctuating and translucent. These are the signs of hydrocele and they are signs of nothing else. The singular thing about this hydrocele is that it has not acquired the largest size in the course of eighteen years. The sac has not been emptied, and yet it is of very moderate size. It is the ordinary variety of hydrocele. This fluid occupies its ordinary situation in front of the testicle. We always examine to ascertain whether the characteristic pain is elicited by pressure of what we suppose to be the testicle. In the majority of cases the testicle is in front instead of behind, and if you aspirate the tumor in front you will injure the testicle. On the left side the tumor, though smaller, is of much greater interest.

Dr. Weir informs me that the swelling upon the left side is also translucent. This is not the history of the disease which it is supposed to be but it has the physical characters of what is known as encysted hydrocele. Twenty years ago this patient had an injury and a swelling appeared which went away and was after-

wards replaced by the small one. This we take to be a cyst. It is fluctuating, elastic and translucent and these are signs which can hardly be present if there were no fluid there. Of course it is not an abscess. Therefore it is in all probability a cyst. You will observe, however, that it is not situated where the cyst is upon the right side. Here on the right the collection of fluid is evidently in the tunica vaginalis. In the left side the tunica vaginalis is unfilled. The body of the right testicle is in front—the normal situation—and has a normal appearance. There is then the ordinary hydrocele which we have illustrated on the right side, and there is the encysted hydrocele of the spermatic cord which occurs when the funicular process is obliterated at certain points, and the accumulation takes place in parts not obliterated. Then there is encysted hydrocele of the testicle of which we are supposed to have an illustration here but we are not certain. This kind of cyst very rarely attains a large size and as a rule does not exceed in size a hazel nut or a walnut. It is usually situated in connection with the epididymis. It is not situated in the body of the testicle nor in the tunica vaginalis. The fluid which is withdrawn is usually either perfectly clean or else of a milky white color. In neither case does it contain much albumen. On the other hand the fluid obtained from an ordinary hydrocele is serous and will coagulate and form a solid coagulum on the application of heat. In the encysted hydrocele the fluid contains a little or no albumen. When the fluid is milky and sometimes white, it is known to contain spermatozoa, and the number found is sometimes very great. It is not quite certain how these spermatozoa get into the cyst. Some have supposed that there were outlying portions of the gland forming tumors independent of the portion of the gland forming cysts and spermatozoa. This is the view set forth by Paget. Most surgeons think that there is a communication between the cyst and ducts of the epididymis, either that they rupture or that the cyst is formed by the distension of one or more ducts of the epididymis. Spermatozoa in any case are found and often in active motion. These spermatic cysts on the inside of a hydroceleous testicle often give no trouble. Their growth is very slow and painless and I do not think they need to be interfered with. Where anything is done they should be tapped with the hypodermic syringe or aspirating needle. If this does not effect a cure, then we must resort to the same means of cure as for ordinary hydrocele, namely, the injection of iodine or some other counter-irritant.

[A hypodermic syringe was introduced into the body of the tumor.]

The syringe, gentlemen, confirms the diagnosis of a cyst. It also teaches us that the fluid is opalescent, not quite so milky as I have often seen it; yet you will discover a difference between this fluid and the fluid of an ordinary hydrocele. I have no doubt whatever now that this is a case of spermatic cyst, and have little doubt that that fluid on examination will be found to contain spermatozoa. There is no use of treating this old gentleman by tapping his scrotum.

CASE III.—*Syphilitic Necrosis of the Frontal Bone.*—Female æt. 32. Gives a history of congenital syphilis. Six years ago she fell and bumped her forehead, from which came a tumor. About three years ago she was seen by a surgeon who found necrosis of the frontal bone. He writes: "When I examined the patient three years after her injury I detected a tumor. I cut down and chiseled away the dead bone. Later, thinking the growth loose, I attempted to find and remove

it with a pair of pliers. I found the tumor bleeding freely and abandoned the attempt."

You observe here, gentlemen, a circular depression bounded by a black mass. This depression is surrounded by an elevation. Beneath this I do not feel anything which I should suppose indicated the presence of a tumor. This black mass on examination proves to be bone. Necrosed bone when exposed to the action of air for a long period invariably becomes black. On examination with the probe I fail to discover that there is any motion to the dead piece. Here is a circular groove around the central portion, of this exposed piece of bone and that marks the track of the trephine. The operation of trephining was abandoned because the hæmorrhage resulted. After the operation was performed and some pus liberated, she was free from pain. The case is a very plain one so far as diagnosis is concerned. It is not very clear as regards the cause. Still it is quite possible that the trouble may have been congenital, and the disease has the characteristic rather of syphilitic necrosis. In this situation necrosis except when it depends on traumatic causes is somewhat different from necrosis when it affects the long bones. It is marked by a very long duration. The sequestrum does not separate as does the sequestrum from a long bone, neither is there a reproduction of bone from the periosteum as in the long bones. The disease spreads very gradually in many cases of syphilitic necrosis so as to involve large portions of the skull. I have seen a case in which one-third of the surface of the cranium was implicated in the disease.

This form of necrosis is amenable to the same treatment as ordinary cases of necrosis. You must be more careful in performing operations in this region. The sequestra do not separate as in ordinary necrosis. They hang on for a long time. When you have reason to think that any considerable portion of bone is loose, it is proper to perform an operation and endeavor to effect a removal of as much dead bone as possible. For the present I do not think any operation is expedient. I should wait for a while, hoping that the bone might become loosened, and then an operation can be performed, perhaps with some benefit. She is free from any head symptoms. This necrosis has not been attended by any symptoms of brain disturbance. Occasionally there are some symptoms. I think Mr. George Pollock of St. George's Hospital, London, has proposed to treat certain cases of necrosis by the application of hydrochloric or sulphuric acid, the idea being to dissolve the calcific matter in the necrosed bone. I have tried this treatment in one case of syphilitic necrosis, and at first I was encouraged to think it might effect a cure, but after a long time the treatment was abandoned. Dilute acid is used for this purpose, the solution containing one part of the acid to eight parts of water.

PERINEPHRITIS — CIRRHOSIS OF THE LIVER.

A CLINICAL LECTURE.

BY

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CASE I.—Gentlemen: This patient is sixteen years of age. He was admitted to the hospital on the 19th of September. The patient is a printer by trade and

has been in the habit of standing in front of a printing press and leaning over. After some time he had slight pains in the abdomen and side and he has ascribed these pains to the position in which he worked. But still he was well enough until about a week before his admission to the hospital. At that time he began to have very severe pain in the right iliac fossa. He at once felt very sick. He had repeated rigors, febrile movement and headache. The pain and the febrile movement continued and there was some cerebral disturbance. He was delirious, especially at night, and his bowels were constipated. He continued in this condition until he was brought into the hospital. On admission the patient was constipated. This was succeeded by a temporary diarrhoea. When brought into the hospital it was evident that the patient was really ill. The pain in his abdomen he complained of very bitterly and he referred it to the right iliac fossa. There was not only pain, but also very marked tenderness, and he lay in bed with his thighs drawn up, apparently to relieve the pain in the right iliac region. No tumor could be felt in the abdomen, although there was this very marked tenderness over the whole right side of the abdomen. There was some tympanites besides. The temperature at this time was 102° ; pulse, 100. He was put partly under the influence of opium, and in this way was made more comfortable, but his temperature continued high, ranging between 102° and 104° F. His bowels were sometimes loose and sometimes constipated. The tenderness continued and was still referred to the same place, and so he went on until about the 25th of September, and then in addition to the extreme tenderness over the right iliac region it was observed that there was a change over the right lumbar region behind. It was becoming fuller than the left. The skin and subcutaneous tissue felt œdematous and the appearance was that as if there was an abscess deep down in the tissues of the back. His temperature all this time continued pretty high and the prostration was still well marked. The patient continued this way until Sept. 26th. Then an incision was made in the back through the skin and muscles in the lumbar region, and after this incision reached some little depth, a large abscess was discovered and a large amount of pus of a fetid character was discharged. The opening was made pretty free and a drainage tube was inserted so as to allow the pus to escape. At the time the opening was made, the gentleman who made it introduced his finger and found that the cavity of the abscess was large, and he thought that the kidney was pushed forward. After this operation the patient was more comfortable. The temperature fell and his general condition was improved. Since then he has been going on in very much the same way. When the discharge from the abscess is free, his temperature falls to normal and his general condition is good, but from time to time the drainage of the abscess appears no longer to be complete. There appears to be an accumulation of pus and then the patient's condition is not as good. His temperature runs up and he does not appear to be as well; so that up to the present time the abscess which was opened in the back has not healed up, but is still discharging pus and still shows an inclination for the pus to accumulate; and when this is the case the temperature runs up and the patient's general condition is worse. The boy's appearance at the present time is not very bad. He is rather pale. His lips are of a pale color and he is somewhat emaciated. The drainage tube is still in the right lumbar region, and the tube points upward so as to indicate that the pus cavity is up. The pus

runs up under the 12th rib on the right side and pretty close to the spinal column.

Diagnosis.—The diagnosis here lies between perinephritis and perityphlitis. To be more exact we want to know more exactly what we mean by perinephritis. It is a suppurative inflammation of the connective tissue about the kidney, usually the connective tissue behind the kidney. Perityphlitis means a suppurative inflammation of the connective tissue about the vermiform appendix. Neither the kidney nor the vermiform appendix have any thing to do with the disease. There is no reason for supposing that there is any disease of the kidney or vermiform appendix, but there is reason to believe that there is a suppurative inflammation of the connective tissues. This is about as far as we can go. We have a suppurative inflammation situated behind the peritoneum. It is a matter of little consequence whether this suppurative inflammation is behind the kidney or in the connective tissue behind the vermiform appendix. There is only a distance of a few inches between these two portions of connective tissue. Here we come down to the fact of a local suppurative inflammation of connective tissue without a known cause. Generally speaking, if the inflammatory process involves the connective tissue of the vermiform appendix, the tendency of the collection of pus is forward. An abscess is formed in the right iliac fossa, and it is apt to project forward; and when these abscesses are opened, they are usually opened in front and not behind, because the tendency of the abscess is to collect in front in the right iliac fossa. On the other hand, when the suppurative inflammation involves the connective tissue behind the kidney, then the regular tendency of the pus is to burrow backward into the muscular tract and the abscesses are opened through the skin of the back. I should think it probable for this reason that this abscess began in the connective tissue behind the kidney, although I cannot deny the possibility of its having begun in the connective tissue around the vermiform appendix. In either case the burrowing of the pus has been apparently backwards through the muscles of the back and through the skin behind. There has so far apparently been no perforation of the colon; for no pus has escaped through the patient's stools. In either of these cases, whether pus is formed around the vermiform appendix or behind the kidney, it is always possible for it to perforate the caput coli, and for the pus to run off into the large intestine in this way. This is not the case so far with this patient.

We have then a very superficial history of a suppurative inflammation of the connective tissue, situated behind the peritoneum about the kidney or vermiform appendix, which has gone on with the formation of an abscess which has been opened. The trouble began on the 12th of September, and has gone on up to this day [December 20th]. For nearly two months then this abscess has been discharging, having been opened on the 26th of September, and it is not discharging altogether satisfactorily. The pus accumulates from time to time, and then there is a febrile movement, and after this the general condition of the boy is again fair. What have we to apprehend from his present condition? There are two dangers, viz.: pyæmia and peritonitis, either from perforation of the abscess through the peritoneum or by an extension of the inflammation to the peritoneum. If he should go on this way not developing septicæmia, peritonitis, or pyæmia, and if the suppuration should continue, there would be serious danger of his developing

amyloid or waxy infiltration of the different viscera.

Treatment.—What can we do to lessen the probability of these dangers? We would perhaps have to deal with a surgical rather than a medical question. The cavity is regularly washed out through the drainage tube, and that does not prove satisfactory. The opening has also been enlarged. A counter opening should be made. The abscess is never fairly emptied. The position is not by any means a favorable one for a counter opening to be made. In order to do that we would remove the drainage tube, and take a large probe with one point and see if it was not possible to bring that probe sideways, and then getting it pretty near the skin, cut down over the point of that probe and carry a drainage tube through the opening from one end to the other. Then we would be able to wash out the opening. We could then be enabled to keep these abscesses washed out all the time clear of pus. That is one indication of treatment for this boy at the present time. We wish to see if it is not possible to get a counter opening somewhere, so as to wash out the abscess more thoroughly.

CASE II.—*Cirrhosis of the Liver.*

This patient, gentlemen, is fifty years old. He has been a hospital patient for a long while since 1879. The first trouble he had was a swelling of the abdomen, some dyspnoea, and with this some little disturbance of the general health and a little jaundice. He was also troubled with piles. Since that time up to the present he has been in the hospital off and on, and he has been tapped over and over again. After he has been tapped he is relieved for a time, and then his abdomen fills up again and he is tapped again. This has been going on now for several years, and yet you observe that at the present time his general condition is pretty good. His lips are fair colored. He is not particularly emaciated. His liver is diminished in size. His spleen is somewhat enlarged and the ascites is well marked. There is no œdema of the legs now.

You observe then that we have here a case of cirrhosis of the liver. The man's ascites is due to cirrhosis of the liver. This cirrhosis has lasted for a considerable length of time, and the ascites has been a concomitant thing with him for several years. He is relieved from time to time by tapping, and yet the general condition of the patient is good.

[An account was here given of a case of cirrhosis presented to the class a week ago.]

You may remember, gentlemen, that last Tuesday I showed you a young man who was in bed and who was very dropsical indeed. There was very great distension of the abdomen, some œdema of the legs, and a history of cirrhosis of the liver which developed pretty rapidly and which had been accompanied by marked dropsy and by marked depression of the general health. There were at the same time some changes in the urine, and I told you at the time that the patient was a good example of that form of cirrhosis in which we have developed both dropsy and a change in the nutrition of the patient, and that although we cannot make out the liver either by palpation or percussion, yet it was probably a small liver. The man died a few days afterwards, and here is his liver. It is small and has a knobbed-like character. His spleen was also enlarged, as you would expect to find it with this form of cirrhosis. The kidneys, although at the time supposed to be atrophied, were not atrophied, but normal in size. It is however still a chronic diffuse nephritis of the atrophied form. It

is a kidney in the earlier stages before it has become diminished in size.

Now, gentlemen, to come back to our patient. The liver and spleen of this man are very likely similar to the spleen and liver of the patient who died a few days ago. What is the reason of that? The liver, although it has undergone marked anatomical changes, is still able to perform the function of the liver. This is an experience that is always curious, although we are constantly meeting with it. We find the same thing with all the different viscera—with the brain, heart, lungs, liver, kidneys, stomach, and intestines—that when we have anatomical lesions, with these anatomical lesions we have greater or less disturbance of function, and the disturbances of function are not by any means always in proportion to the extent of the anatomical lesion. Why there should be this condition we do not know, but it is a thing we are constantly meeting with, and which constantly becomes a matter of practical consideration. This man and the man whom you saw the other day form two very good examples of this fact. Both of them have been suffering from exactly the same anatomical lesion, and I suppose the probabilities are that the anatomical lesion is just as far advanced in this man as it was in the other patient. In both cases we have a mechanical obstruction, and as a result dropsy. In the first case the patient died from want of nutrition. In this case the general health is so good that he would be well enough to go to work if it were not for the fact that his belly is always larger than it should be. In this case we have a good example of cirrhosis of the liver, of which dropsy alone is the symptom, while in the other patient we had an example of cirrhosis of the liver with both dropsy and a change in the general health.

ABSTRACTS AND SELECTIONS.

THE QUESTION OF FOOD IN OBSTETRIC AND GYNÆCOLOGICAL PRACTICE.

An Address delivered at the Opening of the Section of Obstetric Medicine, at the Annual Meeting of the British Medical Association in Liverpool, August, 1883.

BY

GRAILY HEWITT, M. D., F. R. C. P.

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GENTLEMEN,—I take advantage of this opportunity to present to you a few observations on a matter which has for some years deeply interested me, and concerning which I have arrived at conclusions which, to me at all events, appear to possess a certain value, viz., The Question of Food in Obstetric and Gynæcological Practice.

Now, it may appear unnecessary at this period of medical history, and in the present advanced state, as it is considered to be, of medical knowledge, to insist on the importance of food in maintaining a healthy activity of the vital processes. But a lengthened experience has convinced me that the public at large have no practical knowledge of this, and that the most disastrous effects result in multitudes of cases from the ignorance of simple physiological laws.

Engaged as I have been more particularly in obstetric and gynæcological practice, the non-observance of these important physiological laws in connection with

the occurrence of the diseases of the uterus, disturbances of the functions of the uterus and ovaries, and the diseases incidental to child-bed, has forced itself on my notice. It is pretty certain that the generalization which applies to these classes of disease extend, or would be found to extend, to diseases of other organs of the body, for it is the merit of a true generalization that it is of wide application.

There are certain terms in general use by the public and by the profession that are often employed in a vague, unmeaning, and indefinite manner—such as “weakness,” “delicacy,” etc.—whereby it is intended to designate a condition very frequently met with, but the essential nature of which is, as my experience has shown me, very imperfectly apprehended. It is well recognized that this weakness, delicacy, or what not, is very commonly observed not only in young women coming under the notice of the gynecologist, but also in women who have arrived at adult age, and suffering from disorders in connection with pregnancy, parturition, and child-bed. My observation has in a particular degree been attracted to the presence of this condition. I have taken every opportunity in my power for analyzing its nature and ascertaining its essential cause. One conclusion arrived at is, that this general weakness is supposed as an antecedent in cases coming under our notice as gynecologists, and it may even be said that it is almost invariably present in a marked form in such cases. Another conclusion is, that the “weakness” is associated with and caused by a long-continued inadequate dietary, and that it is essentially what may be termed “chronic starvation.” The rational view of the matter is, that this “weakness” is, in the very large majority of cases, preventable; that it should be regarded as the first stage of a serious possible disease; that it is mostly the result of chronic starvation; that it is curable to a greater or less degree in most cases; and that it is of the highest importance that it should be formally and carefully treated, as other diseases are, instead of being allowed to smoulder on until the constitution is thoroughly undermined, or until some ailment distinctly classified in our nosology makes its appearance.

It may be asserted that, as yet, neither the public nor the professional mind has seized the importance of preventive measures in regard to disease. It is, indeed, true that the sanitary engineer is at work in our houses; but it cannot be said as yet, that anything like systematic attention is devoted to the maintenance of healthy and vigorous growth, and the prevention of those diseases which are ultimately so deadly in their effects in many cases; I mean what may be termed the nutritional diseases incident to the human frame.

The analogy between the growth of a plant and of the human organism is one which has often been pointed out. The various chemical changes involved in a continuance of healthy growth in the plant and in the animal, are well capable of definition. We know that the plant requires air, moisture, and a supply of nutritive material regularly and in sufficient quantity. And we should know, for physiologists inform us of the fact, that the vital processes in the human organism require, for their continuance in a vigorous state, material supplies of a suitable kind, as well as hygienic surroundings, fresh air, and the like. Again, it is well known by good gardeners that nothing so effectually protects the plant from external injurious influences, from blight, from the attacks of parasites, from insects, and from the diseases to which plants are liable, as the maintenance of the plant in a state of active growth. Once let the growth fall off in its vigor, the plant be-

comes forthwith liable to fall a victim to canker, to the pestiferous invasion of insects, to deterioration, to weakness, and often to decline and death.

It is a remarkable circumstance that so little as yet seems to have been done in the investigation of the effects of an insufficient dietary, looking at it from the quantitative point of view, although the effects of complete deprivation of food are well known. Thus, in the last edition of Parkes' well known work on hygiene, it is stated that little is known on the subject of the effects of insufficiency of food; and the space devoted to the consideration of this matter is less than one page.

The valuable facts recorded by a series of careful inquiries into the changes occurring in the human body in a state of health do not seem as yet to have been applied at all extensively to the treatment or prevention of disease. It should be known that each day the human body undergoes, in a state of health, a certain degree of waste and loss; and that, experimentally, it has been found that health is maintained by daily administration of certain quantities of material in the shape of food. The obvious inference is that, when the supply is continuously below the amount of daily waste, deterioration must occur, and a state of weakness will result.

It is a curious circumstance that the physiological law and the popular impression—shall I say, in too many instances, the “medical” impression?—are found widely different. Physiology teaches the necessity for a continuous supply of a certain quantity of food. The popular impression is that some people do not require so much food as others, and consequently important quantitative diminution in the supply often escapes attention. I must confess that, not very many years ago, I shared in the popular impression. What induced me to form the opposite conclusion, was that, in the first place, I was struck with the fact that in almost every case coming under my notice a state of what was termed “weakness” by the patient had been notably present; and, secondly, this weakness was almost always found to be associated with a notably deficient dietary. For the last six or seven years I have tested the accuracy and applicability of these generalizations by carefully inquiring into the past history of patients, mostly suffering from some uterine or ovarian disease, or some affection incidental to child-bed, and these conclusions have stood the test of this long-extended inquiry. I have to state the important conclusion that a continuous insufficiency of food, or what may be termed a “chronic starvation,” more or less intense in different cases was found to have existed almost universally. Consequently, I have naturally been led to consider chronic starvation as a most important factor in disease, certainly in those classes of cases which have come more particularly under my notice.

It will be well to cite a few typical instances:—

1. A young married lady, aged 24, consulted me for a severe retroflexion of the uterus, which appeared to have set in shortly after her first labor, some months previously. She underwent treatment for this affection; and, in course of it, one day her mother came with her and inquired of me why it was that her daughter had become liable to this affection. I replied that, in all probability it was due to a previous condition of weakness, and insufficiency of meat as an article of food. “Yes,” said the patient, “that is very likely true; for when I married, and could please myself, being very fond of sweets, I took little ordinary food during the first year, but lived chiefly on sweets and ate little or no meat at all.”

2. A young lady, aged 18, suffered much from menorrhagia, and her condition became finally one of complete inability for exertion. It was ascertained that this patient had lived as regularly as regards her diet, but that her diet consisted principally of bread and puddings; and, having a marked aversion to meat, she had taken very little for two or three years previously; and it is the fact that I was afterwards consulted by two of her sisters presenting uterine symptoms, and with a corresponding history as regards the previous dietary.

3. Again, a young lady of very active habits, but who hardly ever took meat, became very ill after an unusual exertion, was affected with severe sickness, which went on unchecked for nearly a year, and was finally so ill that her life was despaired of. Here the previous dietetic deficiency was most marked. The patient was finally completely cured, the sickness being found to be a reflex symptom dependent on an uterine displacement.

These cases might be multiplied *ad infinitum*.

I have been much interested in observing, also, the effects of previous insufficiency of food in apparently predisposing patients to attacks of puerperal septicæmia. In the cases of this disease which I have seen in consultation, I hardly recollect having seen a case where the patient so affected had, during the pregnancy, lived fairly well; and the worst cases have been those in which the patients fed badly and insufficiently during the pregnancy, and had been fed on a gruel diet after the labor was over. In cases where severe sickness during the early part of the pregnancy prevents the proper nutrition of the patient, the system is liable to become much impoverished, and an insufficient dietary may be, and often is, the preliminary to a dangerous child-bed.

With very few exceptions—and those exceptions only tending to prove the rule—it is, I hold, impossible to find patients suffering from chronic uterine disease who have not undergone at some former period what may be termed a starvation process, and careful inquiry generally elicits the fact that the quantitative deficiency in the diet extended over a considerable period. In many cases the patients are found to be still under the influence of a deficiency in this direction, and to be “eating,” as the expression is, “next to nothing.”

The period of life during which quantitative deficiencies in the dietary are most common is the two or three years immediately following the arrival of puberty. The girl is at school probably; her appetite is bad, or the food is not palatable, or is deficient in important particulars, or, as I have found in some cases, she eats little in order to keep thin; the strength fails, the appetite diminishes, and a habit of taking little is formed—particularly little animal food is taken. Three or four years of the most critical stages of life are thus passed—a time at which the body should be growing fast, and to maintain this growth in adequate vigor large supplies of nutritious material are required, instead of which the supply is far below the normal standard. The result is a general impairment of vigor and of vital action. On the generative organs the effect is, as I have observed in numbers of cases, most decidedly injurious; and the effect in most instances of this kind—that the tissues of the uterus lose their normal, firm, healthy consistence. The further result is that the pelvic organs as a whole, but particularly the uterus, undergo a subsidence in the pelvis; the uterus becomes liable to change of shape, and other alterations, more or less marked, in different

cases. Slight exertions, slight accidents, or even moderate exercise are, under these circumstances, liable to act most prejudicially on the softened and weakened contents of the pelvis. This is a faithful description of what I have observed to occur in very many cases. I refrain from pursuing the further history of patients so affected as not falling within the scope of these remarks.

It is generally admitted by authorities on the subject of diet that nitrogen is the most essential of all foods, and that a certain amount—about three hundred grains—should be taken daily. In cases of chronic insufficiency of food, it appears that the diminution in quantity of food most frequently affects the nitrogen. Meat is the article of diet which, as a rule, is the source of the greater part of the needed amount of nitrogen, for, in England at all events, meat is the popular article of food; and, in cases of chronic starvation, we mostly find that the quantity of meat taken is exceedingly small. “Never a meat-eater,” “Do not like meat,” “Have got out of the habit of taking meat”—such are common replies made to interrogations of patients under these circumstances.

No doubt meat can be replaced dietetically by other foods containing nitrogen in sufficient quantity; but practically, owing to the habits of families, good substitutes for meat are not easy to find. The weakly one of the family is too often allowed to take her own course, and, if she does not take meat, often gets nothing sufficiently nitrogenous to answer the same purpose. Of all the nitrogenous foods, meat is admitted by all authorities to be the most easily digested, most easily assimilable, and most rapid in its nutritive action. Milk is, of course, a most valuable alternative food; but, in these cases of absence of sufficient meat, we do not find it has ever been taken in any quantity as to make up for the deficiency; and the quantity of bread consumed, even supposing it to be pure and of good quality, is in such cases entirely inadequate to supply the required quantity of nitrogen. I need not allude to the effect of deficiency in the other constituents of the diet. It is sufficient for my present purpose to show that the nitrogenous elements, while they are of all the most important, are those which are markedly absent in the cases now under consideration.

There are few observations bearing on the subject now under discussion which can be quoted from published works. Professor Voit (*Untersuchung der Kost*, Munich, 1877), mentions an interesting fact. In a public institution, a home for girls, on which, he reports, the diet included an average quantity of 170 grains of nitrogen only, the girls appeared healthy, but their muscles were found to be weak, and menstruation was found to be delayed in many cases until the sixteenth or seventeenth year.

Parkes states that when the nitrogen is reduced to from 70 to 100 grains daily, the body gradually lessens in activity, and passes into a more or less adynamic condition, which predisposes to the attacks of all the specific diseases, especially malarious affections, typhus, and pneumonia, etc.

It must be assumed from what is known that if the minimum quantity of nitrogen—which for the sake of argument, we may put as low as 250 grains in the case of a young woman—be not given, a condition of weakness will soon be induced, and with greater or less rapidity, according as the quantity of nitrogen falls much or little below this 250 grains *per diem*. Thus it is easy to understand why in a year or two, with an average daily consumption of only 100 grains of nitrogen, for instance, important modifications of the nutri-

tive processes are effected whereby there is produced a direct predisposition to disease.

It is now some sixteen years ago since I first publicly discoursed on the importance of nutrition in the treatment of disease. I have made it the basis of my practice for some years past, and four years ago I described the condition to which I have now again referred as "chronic starvation." In the United States Dr. Weir Mitchell has employed a system of rapid feeding, assisted by massage and electricity, for the cure of weakly, nervous sufferers—a system which has been found most successful, and Dr. Playfair has done good service in introducing Dr. Weir Mitchell's method into this country. The method in question is essentially a rapidly acting means of introducing nutritive material into the system, and it is dependent for its success on the fact that the principle of the curative influence and action of food is adequately recognized.

It is probable that it will be found on further investigation that particular deficiencies in the dietary result in deterioration of particular tissues of the body. The field for inquiry in this direction appears to be a large one. Deficiency in the quantity of meat taken certainly, according to my experience, appears to have an enormous influence in predisposing to uterine ailments, but no doubt, other organs of the body also suffer from deficiency in this article of diet. And I have abundant evidence that it plays a very prominent part in predisposing to the serious wasting diseases so often fatal in this country. I refrain from dilating further on this particular point, because such discussion would in this place be inappropriate.

The conclusion which is obviously suggested by the foregoing considerations is the necessity for a greater attention to the question of diet, in the bringing up of families, than appears at present to be given to it. We all know that health and a good appetite usually go together. But it seems to be too frequently the case that, when the appetite is absent, such absence is taken as a matter of course, and receives no notice. It results from what has been stated, that absence of appetite may lead to most serious results. It is not immediately dangerous, but it is the first step possibly in the downward course. A continuously bad appetite constitutes a grave condition, and should be seriously regarded.

If it be a rigorously proved fact that the human body is dependent for its existence in a state of vigor on an adequate and regular supply of food, it behooves us to take all possible opportunities of enforcing this principle and in making it known as a great and universally applicable measure and precaution in the prevention of disease.

Med. Press & Circular.

THE FRENCH EXPERIMENT FOR THE PREVENTION OF SYPHILIS.

Report of M. Fiaux to the Municipal Council of Paris.

BY

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I have just received from Paris an interesting document presented to the *Conseil Municipal* of Paris in 1883 concerning the great Parisian experiment for the prevention of syphilis, which it seems to me is worth the attention of hygienists of this country.

It seems that in 1845 Paris contained 1,050,000 inhabitants, and that date there were 3,966 women inscribed as prostitutes by the police; whereas, in 1880,

when Paris had 2,200,000 inhabitants, there were only 3,582 prostitutes on the books of the police, who were examined for the purpose of preventing disease. M. Lecour, one of the *employés* at the prefecture of police in Paris, with whom I had a conversation in 1867, when the International Congress met there, puts down the number of prostitutes in Paris at 30,000, whilst an able writer, M. Max Ducamp, thinks there are nearer 100,000 women in Paris who might merit the name, an opinion shared, as far as I can remember, by Dr. Lefort, when I spoke with him on the question many years ago in Paris. In 1843, it appears by the report, Paris contained 235 public brothels, with 1,450 inmates, whilst in 1880 there were but 133 such houses, with 1,041 inmates. In 1855, again, there were 611 women inscribed on the books of the police, and 1,323 arrests of so-called "insoumises" were made. In 1880, there were only 354 inscriptions, and no less than 3,544 arrests of the insubordinates. So that, in short, there has been a diminution in the number of prostitutes inscribed, a diminution in the number of tolerated houses, and in the number of new inscriptions annually of recent years in Paris.

According to M. Lecour, there were in 1855, 1,852 inmates of these houses, and of these no less than 805 were suffering from contagious diseases; whilst of the remaining 2,407 of the inscribed women only 137 were found to be diseased. In 1880, again, there were 1,041 of the inmates of brothels, of whom 205 were found to be diseased, while of the 2,313 not in houses, only 102 were found to be suffering from contagious diseases.

Dr. Mireur, of Marseilles, in a well-known work of his says p. 363, "Of 100 cases of confirmed syphilis observed by me, half of them among my private patients, and half among those seen at my dispensary, I ascertained that 62 contagions were attributable to relations with women in these houses, and 38 to inscribed or clandestine prostitutes in the City." This seems to show that the system which was so much praised by M. Lecour of frequent examination of women in tolerated houses, is not of any great service with respect to the only point for which it exists, viz., the prevention of syphilis. The reporter, M. Fiaux, indeed, calculating that there are, on the lowest estimate, about 30,000 insubordinated prostitutes, in Paris, observes that there are about 29 per cent. of the inmates of the tolerated houses diseased, as against 6 per cent. of those not in houses, and against 2.3 per cent. of those not inscribed at all.

M. Clerc mentions too, that in 1878, there were 2,300 isolated women on the police books, which number should have required 55,200 examinations by the medical staff appointed for the purpose, if each had come twice a month to the dispensary, whereas 35,985 examinations were actually made, and it seems that each physician generally had to examine from 100 to 120 women at each visit. Sometimes as many as 400 had to be seen, a number far exceeding what any man of ordinary strength or endurance could possibly undertake to treat or examine in any serious fashion.

Syphilis is a chronic disease, with a sore or an incubation varying from 15 to 30 days, which sore lasts, perhaps, a month or six weeks, and is followed by secondary symptoms as contagious as the ulcer which precedes them. The duration of these secondary symptoms is difficult to define, in the majority of cases they appear from 60 to 120 days after the contamination, or about from 30 to 50 days after the chancre. Dr. Fournier, of Paris, whose authority on this point is considerable, estimates that such secondary accidents may relapse for as long as four years.

Hence it is, as I have always said, quite impossible to say when a syphilitic patient ceases to be contagious, for some years after the onset of the disease. This is the true reason why the prevention of syphilis is not like that of scarlet fever, measles, or small-pox, feasible by quarantine carried out for a short time. So that the police in Paris apparently withdraw from the street annually 350 women with syphilis with little effect seeing that there are always 400 or 500 of that same class in their houses affected with this chronic contagion. In my personal experience among the patients of the Rescue Society of London I have found it quite impossible to say for certain whatever be the length of time the young women stay in our hospital—and sometimes that is more than a year—that they are no longer contagious if they had syphilis on entering.

These are the reasons why I observed when visiting Parisian hospitals in 1867, at the time of the International Congress of Medicine, in that year, M. Ricord being in the chair, that it seemed to me that the Parisian system had rather increased the number of cases of syphilis, as compared with those in London, and it is for this reason that M. Fiaux recommends the voluntary admission of syphilitic patients into the general hospitals of Paris, the abolition of the prison of Saint Lazare, and urges that the hospitals of Lourcine and Midi should be turned into general hospitals. My own experience of London and Paris leads me to think that M. Fiaux may be, to a certain extent, right; and that at present, when the principles of the prevention of contagious diseases are so much better understood than they used to be, both by the profession and by a section of the public, funds would be forthcoming for the treatment of syphilitic patients in our general hospitals, which formerly were not obtainable, owing to the ignorance which was all but universal, of the extent and important nature of these contagions.

Med. Press & Circular.

MEDICAL NEWS AND NOTES.

A microscopical examination of the Nile made on Saturday last shows that the water which the inhabitants are consuming is teeming with bacilli.

New Medical Titles.—Recently two of the most worthy representatives of the profession in England have received the distinction of a baronetcy in recognition of their eminent position as consultants, and in reward for their exalted services to medicine and surgery respectively.

A New Operation for Prolapsus Recti.—From *Il Morgagni* we learn that Dr. D'Antona has performed with success the operation on a woman: Seizing the prolapse with four Billroth's pincettes, and forming thus two cylinders of the rectal canal, he introduced one catgut suture into both cylinders and then into the margin of the anus. Another suture is passed through the middle part of one cylinder, carried through the Douglas sac, and the perirectal tissue, returning to the other cylinder. The patient is discharged, cured in fifteen days.

The Micro Organism of Cholera.—M. Pasteur, who has just obtained a grant of fifty thousand francs from the French Chambers to send a scientific mission to

Egypt to investigate whether the cholera be not due to the development of a microscopic organism in the human body, states, in a letter to the *Voltaire*, the reasons which induced him to recommend the Board of Health to send out the mission in question. He says: "I urged the sending out of this mission on account of the great progress that science has made, since the last cholera epidemic, respecting transmissible diseases. All diseases of this class that have been the subject of a thorough investigation, have led biologists to the conclusion that they were caused by the development in the body of man, or animals, of a microscopic organism, causing therein disturbances, frequently fatal. All the symptoms of the disease, all the causes of death, are directly under the influence of the physiological properties of the micro-organisms. What is needed at present to meet the requirements of science, is to ascertain the primary cause of the scourge. Now the present state of our knowledge indicates that we should direct all our attention to the possible existence in the blood, or in such or such an organ, of an exceedingly minute being, whose nature and properties would, in all likelihood, account for all the peculiarities of cholera, both as regards its morbid symptoms and the mode of its propagation. The existence of that micro-organism once ascertained, would speedily settle the question as to the measures to be taken to check the spread of the disease, and might possibly suggest new therapeutic means to cure it." The mission consists of Drs. Roux, Thuillier, Straus, and Nocard. M. Pasteur hopes that, by scrupulously attending to the hygienic precautions he has written down for them, the great danger they are incurring may be minimized.

Treatment of Warts and Condylomata by Carbolic Acid.—M. Julien has described in the *Annales de Dermatologie* the treatment used by Tommaso de Amicis and himself in cases of warts and condylomata. It consists in repeated cauterizations by means of pure carbolic acid, and is best adapted to large sessile growths, or to fumigating cauliflower-like vegetations. The *modus operandi* is very simple. Crystals of pure carbolic acid are kept in a small bottle; the warts having been washed, the bottle is warmed in a flame or in nearly boiling water and the crystals touching the glass melt. The fluid is supplied with a brush or cotton-wool to the whole surface of the warts, which assume at once a shiny white appearance. The white layer soon falls off, and on the next day the operation can be repeated. Pure carbolic acid causes much less pain than either chromic or acetic acid. It has been noted that when the cauterizations are repeated, the last are more painful than the first. The number of cauterizations necessary for curing the patient is, of course, variable. In a case of vegetations on the glans and prepuce, the cure was complete after two applications.

The appointment of Thomas Dwight, M. D., as Parkman Professor of Anatomy in the Medical Department of Harvard University is said to meet with approval generally. Dr. Dwight succeeded Oliver Wendell Holmes, who resigned this professorship about a year ago. "The Autocrat of the Breakfast Table" himself succeeded the late Dr. John C. Warren, thirty-five years ago. Dr. Warren was Dr. Dwight's grandfather. Dr. Dwight discharged the duties of this position during last winter's term, and brings a ripe experience, both as a student and teacher of anatomy and kindred subjects. He has been Professor of

Anatomy at the Bowdoin Medical School, and for many years has been Instructor in Topographical Anatomy and Histology in the Harvard Medical School.

Antiseptic Air for Hospitals.—Dr. Macaulay, of Belfast, has recently suggested a plan for cooling the air of dwellings, factories and hospitals. He proposes that Mauchot's sun engine be used to pump in cold air which has been passed through an ice closet, pointing out that the temperature of the air can thus be reduced to the refreshing degree of sixty. As the sun supplies the fuel for Mauchot's engine, the chief cost would be of the ice. This, as *Nature* says, would be the weak point of the plan; but it thinks that sooner or later in America, where ice is everywhere kept and the summer heat excessive, the arrangement is certain to be adopted.

Dr. Macaulay's suggestion is supplemented by Dr. MacCormac, of Belfast. The latter says: "If the air" (before or after passing through ice) "were drawn through a preliminary water chamber, arranged on the principle of the hubble-bubble pipe, mosquitoes and other flying pests would be excluded."

A New Theory.—The *Wiener Med. Blätter* reviews a book with the title 'Eine neue Theorie über Erzielung von Immunität gegen Infectiouskrankheiten,' by Dr. Hans Buchner. The new theory is that in medicine, as well as in surgery, it ought to be possible to find some way of preventing the entrance of germs into the body. As inflammation has been found to alter the tissues so that the specific germs of the different diseases find no longer the suitable nidus for their development, Dr. Buchner looked about for some chemical agent which should so act on different organs as to cause an amount of inflammation sufficient to affect the micro-organisms without injuring the individual concerned. Such, he believes, he has found in arsenic, and, to a lesser degree, in phosphorus and antimony. The experience of the Styrian mountaineers shows that no disadvantages result from even a life-long use of arsenic, and those people are of opinion that it protects them from all kinds of illness. From its well-known antiseptic action after death, the author thinks it ought to have a similar effect during life, and he thinks it will be of special advantage in those diseases which have a long period of incubation—*e. g.* small-pox, scarlatina, measles, and enteric fever.

Dr. L. S. McMurty has retired from the Louisville *Medical News* and is succeeded by Dr. H. A. Cottell, formerly an editor of this journal.

In the case of the people against Robert A. Gunn et al., the General term of the Supreme Court handed

down a decision Aug. 9th (Justice John R. Brady writing the opinion) affirming judgment of Justice Van Vorst in Special Term, that the United States Medical College, of this city was unlawfully incorporated and has no power to grant diplomas, nor to confer the degree of M.D.

Rabies and its Parasite.—The mode of inoculation adopted by M. Paul Gibier consisted in drilling a small orifice through the median line in the frontal region of the skull of dogs, mice, and rats. This hole sufficed for the introduction of a needle, through which the virus could be syringed into the arachnoid cavity. From his experiments, M. Gibier supported the view that rabies can be transmitted to the fœtus from the mother (rabbits). Cold was found to be an effectual attenuant of many viri, including that of rabies. Microparasitic organisms were detected in the cerebro-spinal fluid, as well as in the cerebral substance, notably the medulla oblongata. These consist of minute mobile granules, often arranged two by two and joined by a delicate filament. Sometimes a single granule was seen alone, and possessing a thin cilium; these were no doubt due to rupture of the bilateral figure, and resembled a nail in shape. The size of these elements, which could not be discovered in healthy animals placed under similar conditions, was about one-twentieth of that of a red blood-disc.

The Germ of Yellow Fever.—A distinguished Brazilian physician, Dr. Domingos Friere, reports the discovery by himself of a specific cryptococcus in the blood of patients suffering from yellow fever, and he gives the name of *Zanthogenicus* to the new organism. The *Philadelphia Medical News* describes the phases of development of the germ as exhibiting minute points, and large round cells with grayish or fringed margins, and bright transparent centers. A gramme of blood charged with these organisms from a yellow-fever patient was injected into the veins of a rabbit, which died in a quarter of an hour with tetanic convulsions. Visceral congestions were found at the autopsy similar to those seen in persons dying from yellow fever, and the blood contained cryptococci like those in the inoculating material. Abundant cryptococci were also found in the blood of a guinea-pig which had been hypodermically injected with blood from the rabbit first infected, death having occurred in the former animal also, and likewise in a second guinea-pig inoculated from it. Dr. Friere regards cemeteries as perennial foci of yellow fever, for, having confined a guinea-pig in a chamber with earth taken from the grave of a man who died a year previously of the disease, the animal died after five days, and its blood was crammed with the characteristic cryptococci in various stages of development.

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MEDICAL SUPERVISION OF PUBLIC SCHOOLS.

The system of medical supervision of schools, which has been recently discussed at some length, by Dr. L. W. Baker in the *Journal of Education*, is one worthy of the careful attention of educational authorities, and should receive the support and earnest advocacy of all physicians who are best able to appreciate the importance and advantages of such supervision.

Dr. Baker, in commenting on the operation of this system, in Belgium, and urging its adoption in this country, speaks as follows:

"The system of sanitary supervision of schools has been in operation in Brussels, Belgium, since 1873, under the supervision of the Bureau of Public Health. Five physicians devote their entire time to the medical inspection of schools. From their report it appears, that the objects for which the sanitary supervision is undertaken are:

"I. To secure the uniform observance of hygienic laws with regard to cleanliness of buildings, water-closets, ventilators, etc., and to call immediate attention to any violation thereof, or to unhygienic conditions in or about the building.

"II. To prevent the spread of infectious diseases in and by means of the schools.

"III. To determine beforehand what children are liable to suffer injury, by reason of some constitutional tendency, from the course of study and discipline that others might bear without harm, and to make such pupils the objects of special care with a view to build them up physically.

"IV. To assure to the pupils proper sanitary instructions, so that the schools shall become a means of diffusing, by precept and example, information with regard to sanitary laws among the people.

"By means of suitable blanks, to be kept in every school room, and filled out by the teacher or by the inspector, the latter is kept fully informed of the history and physical condition of each pupil under his care, and he is to favor, by every means in his power, the physical education of the child, and to see that the

mental powers are not overtasked. Feeble children must be the special objects of the inspector's attention, and, when required, the child is at once prescribed for, or referred to the family physician, who must see that the proper preventive or remedial measures are taken. In the event of contagious disease, it is quickly detected, the child is removed and not allowed to return until perfectly recovered. So successful in this respect has the supervision been, that for six years no one of the infectious diseases has reached the height of an epidemic in Brussels, although the other cities of Belgium and Europe have suffered severely.

"This, in briefest outline, is the method adopted by the city of Brussels for the physical care of her school children. Is it not worthy of introduction into this country?

"During the most critical period of life, while the bodily powers are developing at a rapid rate, the larger portion of education is to be acquired: and, unless the physical strength of the child is able to keep even pace with the increasing demands upon his mental powers, disaster, sooner or later, is sure to follow; it is therefore of the utmost importance that the child be allowed to perform his brain work under the best physical conditions. The inherited or acquired physical and mental peculiarities of each pupil should be considered in measuring out to him his mental tasks; the hygienic conditions of the school-house and its surroundings must be as near perfect as modern science can provide; the heating and ventilating apparatus, the sinks and water-closets must be watched, lest they become sources of dangers. In short, the physical welfare of the pupil must be cared for quite as much as his mental culture, or the best results cannot be expected.

"For this peculiar and important work, trained supervision is necessary and it is strange that, with all our desire to make the most of ourselves, and to give our children the best possible start in life, we have as yet paid so little attention to the matter. To be sure, the agents of the State Board of Education are instructed to examine into the sanitary condition of the school houses at the time of their periodical visits, and the School Committee is supposed to look after the sanitary arrangements; but this is not sufficient. Agents of the Board of Education, or members of the School Committee are not always expert sanitarians, and as to the physical condition of each pupil, they of course can know absolutely nothing. What is needed is the appointment in each town for this special work of one or more physicians trained in sanitary science who should be paid for the service; they should be members of the School Committee, and in many towns of the Board of Health. Their especial office will be to keep themselves fully informed, by means of suitable blank forms, of the hereditary tendencies and exact physical condition of every pupil under their separate charge; to make needed suggestions in regard to physical culture or lightening of mental tasks; to see that the hygienic conditions of the school buildings are correct; and to aid in the diffusion of a knowledge of the laws of health by giving lectures from time to time to the teachers and older scholars, on subjects connected with practical physiology and hygiene.

"It is in the schools that preventive medicine can achieve its greatest triumphs; and if the children of to-day are to hold firm place in the warfare that is before them, and, in turn, bequeath a healthy organization to their children, they cannot, in view of the dangers

which lie along their pathway, be too fully equipped for the conflict; and of all the measures intended to advance the interests of children, I know of none more worthy of our attention than the one just briefly outlined. 'Probably,' says Dr. Seguin, 'no measure of public hygiene or education would bring in larger results for the labor and capital expended.'

RESPIRATION IN RAREFIED AIR.

Two French scientists MM. Frænkel and Geppert have recently reported to the Paris Academy the results of their experiments to determine the effects of rarefied air upon respiration. These results show that the degree of rarefaction necessary to make the respiration frequent and profound is only attained by an elevation which diminishes the barometric pressure to one-third of its normal value.

Their experiments were made with a dog, subjected to large variations of air pressure, but they state that "no change in the respiration was observed till a rarefaction of the air to about 400 millimetres took place." The average pressure at sea-level being about 762 millimetres, it would thus seem that the influence of mountain air on the respiratory apparatus, which some physicians covet for their consumptive patients, is not very decided until heights of at least 5,000 or 6,000 feet are reached. An interesting result obtained by these experiments was that at very low pressures the ultimate effect was a diminished nutrition of the tissues.

These results are of value in determining the curative properties of mountain air upon weak and diseased lungs. But they are far from conclusive. Similar experiments were made in 1880 by Dr. Marcet with himself and a scientific companion at Courmayeur (3,945 feet) and the Col du Géant (11,030 feet high). In ascending from Yvoire to Courmayeur—a vertical distance of only 2,715 feet—the relative atmospheric humidity was lowered by 31 per cent. for the higher station, and the mean weight of the carbonic acid expired by the two experimenters was found to be in excess at the higher station over the lower by more than 8 per cent. At the high station of the Col du Géant over 11,000 feet, the rate of breathing was accelerated by more than 39 per cent. in Dr. Marcet's case and over 25 per cent. in his companion's. Carbonic acid, being one of the products of the action of oxygen on the tissues, is very poisonous, and hence must be removed by the lungs as rapidly as it is produced. Although in the rarefied air of high levels the body makes more carbonic acid, it exhales it much more rapidly than under the lower pressure of the plains, and the augmented activity of the respiratory organs necessitated by breathing rarefied air is in many cases the chief curative agency of mountain districts.

The pure antiseptic qualities of mountain air, and its comparative freedom from those organic particles which promote putrefaction, are, therefore, not the only claims that can be made in its behalf as a sanative agent. Under the low barometric pressure of high plateaus "the respirations," says Dr. Yeo, "are necessarily more frequent and profound, and the air breathed is relatively richer in active oxygen than the air of the plains."

ORIGINAL ARTICLES.

* AN APPARATUS FOR THE TREATMENT OF WRITERS' CRAMP.

BY

WM. J. MORTON M. D.

Among the non-fatal diseases of the nervous system there are none perhaps more disastrous to the patient's occupation than "Writers' Cramp." If we add to this the fact that the disease is of tolerably frequent occurrence in one form or another, we find ample reason for interest in a new method of treatment.

In treating these cases I have in some instances followed the method of galvanization, long described by Erb. Or again adopting the theory that the extensors were parietic and the flexors spastic I have formulated the treatment thus: stimulate the extensors by faradization and the muscles which are the seat of pain, viz: the flexors by galvanization. I have also endeavored to treat the cases by Franklinization. I have tried to excite the extensors by the smaller sparks.

Taking the view that the contracture of hemiplegia could be perfectly abolished by the stretching of contracted muscles in the direction opposite to the normal action until the contractility was lost, I stretched the muscles affected by the cramp. By this latter method I have obtained better and more lasting results than by any form of electricity. While waiting for cases upon which to try my method of stretching the muscles, or possibly nerves, I came across the method of treatment of "writers' cramp" by Prof. Wolff, who is a teacher of penmanship in Vienna. He arranged a complicated method of treatment by means of active and passive gymnastics of the hands and arms. It consisted in massage, friction and systematic writing. His treatment requires about two weeks. There can be no doubt that Mr. Wolff effected a great number of remarkable cures by his method; Nussbaum, Benedict, Billroth and others attest his success. Charcot placed two patients under his care and these are both said to have been cured.

To those who have followed the scattered literature upon the subject, it will be recollected that Wolff's method has met with but little success when carried out by others. It requires the special tact of the inventor of the method to insure its success. My own belief, as based upon the experience of two cases by the method of stretching, is, that the more efficacious treatment is by stretching the affected muscles. During the present year came the announcement of a new method of treatment devised by Prof. Nussbaum of Munich. He utilized the idea of bringing the extensors into play in the act of writing and of resting the flexors and adductors. He invented a bracelet by means of which the thumb and first three fingers could be kept apart. To this bracelet he had a pen attached. The patient is thus obliged to use his extensors and abductor of the thumb. The underlying principle involved in this apparatus, which by the way in Nussbaum's and other's hands has given most excellent results, is the diversion of the innervating currents to other than their usual channels and thus to establish rest centrally, that is to say in other than the peripheral nerves, which preside over the adductors and flexors.

Now I think this principle can be carried out much

* Read before the American Neurological Association and reported for the MEDICAL GAZETTE.

more simply than by the bracelet of Nussbaum, and I have consequently revised the apparatus above described. Practically it can be called a thimble-smith pen because it resembles a long thimble with the pen on the end of it.

That is to say, it is a long thimble which surrounds the entire index finger and to the end of this thimble is attached a stub-pointed pen. The thimble should be made of very light elastic metal split from end to end. It should be made so as to clasp the index finger closely. A very small rubber elastic band, such as is commonly used on writing desks, slipped over the thumb and fingers serves to effect a very moderate extension and abduction. A knob on the central end of the thimble keeps the elastic band from slipping too far back. The patient writes by the usual shoulder movement. The whole hand lies flat upon the paper and moves with the pen at right angles. The natural tendency of the fingers and thumb is to extend in this condition rather than to contract as in holding the ordinary pen.

The result is that the patient with little experience learns to write a good hand and without the slightest sign of cramp or spasmodic movement. As I have only treated four cases by this method, it is scarcely worth while to report them. I will say, however, that two were unsuccessful because the patients have been unwilling to take the slightest trouble to cure themselves. My desire is simply to call the attention of this Association to the apparatus and ask some of the members to try it.

The whole idea expressed here is that the innervation of the flexor muscles is entirely done away with so that we have a physiological rest both of the muscles and nerves that supply them. By this method of treatment, I think, many cases of writers' cramp can be greatly improved. A gentleman, after seeing my device, devised a hand splint, but the splint in my judgment is clumsy. It is flexible and tends to keep the fingers flexed instead of extended, thus defeating the very purpose for which my apparatus was devised.

LECTURES.

INFANTILE PARALYSIS.

A CLINICAL LECTURE.

BY

W. R. BIRDSALL, M. D.

Gentlemen: To-day I will occupy your attention with the subject of infantile paralysis.

CASE I.—This first case is characterized by a rapid onset of paralysis reaching its height in three hours, having been preceded frequently by a slight febrile attack. Sometimes when myelitis occurs in children, it is marked by convulsions and slight cerebral symptoms, but it is characterized by the absence of sensory disturbances although at first a certain amount of pain seems to be present. The functions of the bladder and rectum are not interfered with. In rare cases there may be at first slight incontinence of urine and feces. This is a transitory phenomenon, generally passing off entirely. Another prominent feature of this disease is the atrophy which takes place in the muscles in a very short time after the invasion of the malady. With these changes we get the absence of the faradic reaction and very soon after the first week, we get changes in the galvanic reaction. The reaction obtained is

known as the degeneration reaction because galvanism usually excites the muscle now, more than in the healthy state. At a later period the disease causes a disappearance of galvanic reaction. There is principally a disturbance of the motor functions. Usually the parts affected are the lower extremities. The principal muscular groups affected in the lower extremities are the anterior tibial and anterior thigh muscles and the posterior tibial group. In other cases all the muscles of the lower extremities are affected. We may have a paraplegic form of paralysis where both anterior tibial groups are affected. In such cases one set is usually more markedly affected than the other. In this case at the beginning there was a slight amount of paralysis in both anterior tibial groups. It is a prominent feature of the disease that while we may have several members affected and a number of groups of muscles involved, within a few days they rapidly recover, leaving perhaps one or two groups in which the paralysis does not disappear, but in which it remains possibly through life. In this case the abdominal muscles on the left side only were involved. As a consequence weakness of the thigh has resulted, and a certain amount of deformity.

CASE II.—In this little girl the posterior tibial group is most affected, and as a consequence the foot is somewhat raised. Sometimes we get a very flat foot in this condition in consequence of the weak muscles, which presents a hollow called *pes cavus*, but when the foot is put upon the table, it becomes perfectly flat, the posterior tibial muscles not acting. The destruction of paralysis in the muscles of the arm is quite rare compared with the other form of the affection of the lower extremities.

We have three cases here. In Case I. the upper arm was paralyzed. The deltoid is almost entirely gone and the outline of the humerus is very distinct. The muscular tissue above has almost disappeared, but the group supplied by the muscular spiral nerve is improving. The child extends the wrist. The hand muscles are involved to a certain extent, particularly the finger eminences and interossei muscles.

In Case II. you see the prominences of the humerus and flail-like action of the hand. This child has also some power in the flexors and biceps. There is atrophy of the fingers.

In Case III. you can see the outline of the shoulder, the acromion process and the deltoid which latter muscle is almost completely absent. There is principally to be seen skin and connective tissue. The extensor group of the forearm is preserved.

CASE I. at first showed very little reaction to any current, but with a strong galvanic current a slight reaction could be detected in the deltoid, triceps and biceps, showing that there was still a little muscular fibre left. This has increased after several months' treatment. It is not enough to move the arm as a whole. You will often find in these cases where the arm or a single group of muscles is affected, that there are remains of the paralysis in other groups. Frequently one of the effects of paralysis will be a complete absence of tendon reflex. Most all these cases of infantile paralysis occur between the first and third years.

In Case I. the paralysis affected both lower extremities and not the upper extremities. In most cases of infantile paralysis we get more or less interference with the growth of the member, from disease.

CASE IV.—You observe here a chronic shortening of the leg.

This girl is 10 years old: She had paralysis at nine

months. The other limb has been developing while the growth of this one has been retarded to a marked degree. One of the principal points of interest in this disease is the deformity which it produces. In the other case we had flat foot. Here we have not simply a flat foot but a sort of dragon foot, the posterior tibial group acting more markedly than the anterior group, which is the principal group paralyzed. We get a talipes equinus to a very marked degree, and a talipes varus to a slight extent. This child will be improved very much by an apparatus. The foot can be brought in the proper position and with an extension shoe which shall elevate the foot, she will be able to balance the body so that the spinal curvature, which is now very marked, will not produce a complete distortion of the vertebræ.

● CASE V.—Female, aged 20. Had paralysis at nine months. The anterior tibial group of muscles was involved, and we find now as a result of this deformity a very marked varus. Infantile paralysis picks out usually the healthiest children, and the deformities resulting they carry through life, as a rule, except when modified by apparatus.

Ætiology—Many cases of infantile paralysis follow acute affections, as measles, scarlatina, diphtheria, etc. As a rule it selects the healthy child. In a certain number of cases cold is an important factor in the production of the disease. Most cases occur during the warm months. It is possible that sudden chilling of the body after being overheated may explain this trouble. A certain number of cases in which hæmorrhage takes place into the cord and in which the attack is absolutely sudden, are difficult to differentiate from this condition. This was one of the first affections of the spinal cord which was distinctly localized. In 1860 the first autopsy was made describing the lesions in the anterior horns of the spinal cord. In most of the cases examined, a long period of time has intervened between the onset of the disease and the autopsy, so that secondary changes may have taken place. In all the cases the anterior group of cells is affected, the large cells, frequently called motor. They are the cells connected with the anterior roots which go to the muscles. In most of these cases which have been examined a certain amount of sclerosis of the connective tissue in this neighborhood has occurred. In many cases there was atrophy of the anterior roots and extension of the sclerosis. Where the disease has been very marked there is so much atrophy that one-half of the cord shows to the naked eye a marked diminution in size and the shrunken appearance of the horn is very well shown in some of Charcot's plates.

Charcot holds very strenuously that this lesion is primarily in the nerve cells, and that the other changes in the connective tissue of the anterior roots are secondary. Others believe that this is a simple form of myelitis, which has limited itself to the anterior horn. The absence of sensory disturbances except at the beginning, the absence of any bladder symptoms, the simple involvement of the muscles, and the changes of nutrition, lead us to limit the lesion to the anterior part of the cord.

What is the cause of the atrophy in these cases? Some writers hold that the large cells in the anterior cornua have a special function in maintaining nutrition in the muscles and in some cases of the connective tissue and even the bone. For it is evident that the bones do atrophy in some of these cases, and also that a certain degeneration of the joint takes place, not a true arthropathy but a wasting. The articular

cartilages disappear to a marked degree. The ligaments become relaxed, and we get a condition which favors deformity. The muscle and the nerve and the cells in the cord, when performing their functions normally are connected with one another, and the very fact that we have a disjointed or disconnected apparatus, must be an important factor in producing the disease. It shows, as Charcot has mentioned, that the muscle in these cases seems to be subordinate to the rest of the apparatus. In other words, we find that the degeneration does not ascend in the motor fibres, but descends. If we have a lesion in the cord affecting these large cells, or if it extends to the fibres at any point below as in the peripheral nerves, degeneration of the muscles follow, while on the other hand an injury to a muscle does not affect the parts of the nerve above the muscle. We get an ascending neuritis in cases where the sensory nerves are involved. It is not easy to admit that ascending neuritis takes place in the centrifugal paths going to the muscle. Whether this is only a condition or a specific function is not well settled. Most parties favor the view that when a muscle is disconnected, it atrophies because there is no longer excitement to keep up activity. It is interesting to note the difference between the paralysis due to spinal disease and the paralysis due to brain disease. In brain lesions the nutrition is still kept up. In regard to changes in the muscles themselves, it has been found that in the early stages very little disturbance is noted. We get a multiplication of nuclei and sarcolemma. A little later we get a granular appearance. The striation of the muscular fibres diminishes, becomes granular, and still later little fatty bodies appear in the muscular fibre. Finally the whole muscular mass disappears in this granular fatty degeneration. In the marked cases we have left only a mass of connective tissue. It is very interesting to study the question of the regeneration of muscular fibres. Meyer says that regeneration and degeneration are constantly going on in the peripheral nerves and muscles, even in healthy animals. He experimented upon a great number of animals of nearly all varieties, and found that he could detect these changes which are usually considered degenerative, but which seemed to him to be a regeneration of the nerves. This has been noticed in some other cases of old paralysis. Meyer found a more intense degeneration going on in the older animals. In the wasting diseases, there must be a certain amount of actual degeneration, particularly in regard to muscular fibres. Where the destruction in the spinal cord has been very marked, we can not expect to get a very marked regeneration of fibres. Hence the prognosis in these cases is very unfavorable where recovery does not take place in the early period. Duchenne laid down a law which has been pretty well proven. His rule was that as long as we could excite a muscle to contractility by faradism, the prognosis was favorable; but if, after a certain number of days, we found that there was no reaction to faradism, then the case was a hopeless one. Perhaps this is a little more unfavorable prognosis than some cases would warrant. It is, however, as a rule a correct statement. A certain number of these cases which will not respond to faradism will respond to galvanism, and as long as there is a galvanic reaction, we are warranted in continuing the treatment and in promising recovery.

In this case where the faradic reaction is absent, it is important to pay attention to the galvanic reaction. Normally, on placing one pole upon the thorax and the other pole upon the muscle, we find that

where the cathode or negative pole is upon the muscle, we get a normal and stronger contraction when we make a closure of the circuit than when we have the positive pole or anode upon the muscle. This is also true in regard to the nerve. In true degenerative reaction, the galvanic current applied to the nerve gives no reaction in complete form. On applying it to the muscle, the anodal closure contraction is stronger than the cathode. In another series of cases we will get a slight reaction through the nerve. Where the anode is strongest in the muscles we have the same condition of reaction. Where we get no reaction to faradism, either of the nerve or muscle, and no reaction to galvanism through the nerve, but reaction through the muscles to galvanism and reversal of formula, we have a true degenerative action. Another point is the slowness of contraction. The reaction on the right side is much slower than on the left side, and thus we have an important fact in regard to degeneration. In proportion as the reaction formula is normal, so much more favorable is it. We are liable to be disturbed sometimes by a statement made that in these conditions of degeneration the galvanic reaction is stronger than in health. It is true up to a certain point. In a great many of these old cases the formula is normal. The cathodal closure is stronger than the anodal. At the same time the reaction is less on the other side. They have acquired a normal formula again, but it is gradually diminished. In other cases the normal formula will be present, but still the reaction will be much less than in a healthy muscle. These cases are extremely unfavorable. It indicates that the muscular tissue is lessened *en masse*, and the degeneration has gone on to a more marked degree.

When we find that after a long period the reaction has gotten below the normal—in other words that there is a quantitative decrease—and at the same time we have a reversal of formula; then we have the most unfavorable conditions possible. On the other hand, if we find that the reaction is diminished and is approaching the first condition, it is an extremely favorable case. It is better to reserve an opinion until the end of the first week in infantile paralysis.

Treatment.—In regard to treatment there is little to be done after this paralysis has taken place in the way of internal medication.

In the first few days something can be done to diminish the congestion by the use of ergot and belladonna. After the paralysis has taken place in the first period of its progression, we can expect very little from internal medication, and we must resort simply to keeping the activity of the remaining tissues alive. Where a muscle is paralyzed to a large extent there is no activity as far apparently as the power of the individual is concerned. The muscular mass is not sufficient to raise the limb. To keep the muscles alive we must resort to mechanical agents—massage and passive motion. In regard to the application of galvanism and faradism in these cases where we get the faradic reaction, both currents may be used. Galvanism is the best agent in the majority of cases, and the only one that will produce any result. We can nearly always improve the condition of the patient by the use of galvanism. In the case of the little boy with the brace there is improvement in the general condition of the limb. The tissues are more solid and the circulation is better.

Erb recognized the importance of spinal application. He places one pole upon the spine and runs a current

in one direction for a short time, and then in the other direction, believing that there is no particular advantage in using one pole alone. Another method is to run the electrode up and down the spine, bringing the different parts of the cord under the influence of the electrode. In the deformities a great deal can be done in the way of orthopædic arrangements. Where you get an old cicatrix in the spinal cord, as we have in these cases, the possibility of the removal of the inflammatory products can hardly be entertained. We get paralysis from the fact that the motor cells are destroyed. If they are only affected to a slight extent the treatment by electricity and massage will probably do more good than any internal medication.

PHTHISIS COMPLICATED WITH CHRONIC DYSENTERY—ACUTE ARTICULAR RHEUMATISM—GOUT COMPLICATED WITH SUB-ACUTE SYNOVITIS—ABSCESS OF THE LIVER.

A CLINICAL LECTURE,

BY

FRANCIS DELAFIELD, M. D.,

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CASE I.—Phthisis complicated with Chronic Dysentery.—Male, aged 50, admitted October 4th. Has had cough with some muco-purulent expectoration for seven years, but this does not trouble him very much. Has had no hæmoptysis, no night sweats, pain or dyspnoea, and has been in good health in spite of the cough up to the present attack, which began five days before the fourth of October. At that time he was seized with severe pain in the abdomen, cramps in his legs, frequent movements of the bowels, and these movements were accompanied with pain. They were thin and contained mucus, but no blood. When admitted to the hospital it was found that he had the physical signs of phthisis of the right lung, and the condition of the bowels was that he still had frequent thin passages containing mucus, and after he was in the hospital, the passages continued to contain mucus and sometimes blood. Then after November the blood and mucus disappeared from the passages, but he still had a number of them, about eight or ten a day. With these passages there would be a considerable amount of pain. On November 10th the man was anesthetized, and his rectum exposed with the speculum. A few ulcers low down were touched with nitric acid, and since that time the pain has been less, and besides, not quite as frequent. The temperature has not been very far from normal. He has been treated by a variety of drugs. He has taken bismuth and morphine, castor oil, belladonna, enemata of starch and laudanum, capsicum, catechu, kino, krameria, camphor and iodoform.

Here then we have a man who has in the first place phthisis. We will accept that without examining his chest. In addition to this we find that since last September the man has suffered from chronic diarrhoea, and this chronic dysentery began as an acute attack. At the end of September the man was suddenly taken sick with pain in the abdomen. He had cramps in the legs and frequent movements of the bowels accompanied with pain. These movements contained mucus and a little later blood. Up to the present time, in spite of treatment, the man has not gotten any better

of his bowel trouble. At present he is having five and six movements a day without blood and mucus. He had an attack of acute croupous dysentery, as is evidenced by the ulcers left behind. This was succeeded by chronic dysentery. The upper part of the intestine is congested, probably with catarrhal ulceration. Assuming that the man is suffering at the present time from catarrhal colitis, involving a considerable part of the large intestine, the proper treatment is to send him to a warm climate. For the chronic dysentery we can give an emulsion of castor oil in small doses, or a number of large doses in the intervals, say every day a dram or half ounce to an ounce a week. Salicin, quinine and arsenic are all of service in cases of chronic dysentery in persons in whom there exists in addition malarial poison. A pill might be given, as follows:—

℞	Ex. belladonnæ,	gr. $\frac{1}{30}$ — $\frac{1}{40}$
	Atropinæ,	gr. $\frac{1}{30}$ — $\frac{1}{180}$
	Ipecacuanhæ,	gr. $\frac{1}{4}$

To be taken three times a day. With the dose of belladonna we could also combine strychnia, thus:—

℞	Ex. belladonnæ,	gr. $\frac{1}{40}$
	Strychninæ,	gr. $\frac{1}{40}$
	Ipecacuanhæ,	gr. $\frac{1}{4}$

One pill to be taken after each meal.

The man could be put upon an exclusive milk diet. The three best things for him are: first, send him from home; secondly, put him upon a milk diet; thirdly, put him upon the use of belladonna, strychnia and ipecac.

CASE II.—Articular Rheumatism.—Male, aged 45. Admitted to the hospital November 24th. On admission the patient stated that two weeks before that time, he was attacked for the first time with pain, heat, redness and swelling in the left shoulder, left wrist and left elbow. The right wrist and both ankles were affected in the same way. On admission the man showed the same condition of these joints. There was no cardiac or renal complication. The man at first continued in the same condition until about December 8th, when he was improving for a time, although he had a circumscribed swelling in each hand over the wrist and over the front of the ankle. These swellings have now altogether disappeared, and the man is practically convalescent.

We treat the acute articular rheumatism by local applications, applying heat or cold, and at the same time we give opium to relieve the pain. We could use salicylate of soda, or the old alkaline treatment, as the bicarbonate of soda or potash. The iodide of potassium could be used. Salicylate of soda was given him in twenty grain doses, which was not efficient, and then he was put upon the use of iodide of potassium in ten grain doses three times a day, and in the course of a few days he began to improve. There was an accumulation of serum in the sheath of the tendons on the top of the wrist and in the ankle. Apply pressure over the seat of the swelling, either with an elastic bandage or a compressed sponge, absorbent cotton or any means to get up a steady and continuous pressure. Tonics, good diet and out-door exercise, friction and passive movements of the joints, should be employed. To remove the stiffness you can use sulphur ointment or sulphur baths. You may use either iron, bitter tonics, quinine or strychnia. This man was put upon the use of quinine and strychnia, and the joints were rubbed with sulphur ointment, and the man is now nearly ready to be discharged from the hospital.

CASE III.—Gout Complicated with Subacute Synovitis.—Male æt. 38. Admitted Dec. 14. Occupation saloon-keeper. Three years ago he had an attack of intense pain in the joint of the left great toe. The joint became red, swollen, and confined him to bed. Eight days afterward he had the same attack in the corresponding knee. The whole attack lasted three weeks. From that time to two days before admission he was perfectly well. Then he began to drink and continued drinking until he developed an attack of acute alcoholism. He was admitted to the hospital in that condition. He was then suffering from this acute alcoholism and bronchitis. The former soon subsided and on December 23 the man's left knee became a good deal swollen. It was evident that the synovial sac of the left knee was distended with fluid. It was not hot or red, but swollen and painful. There was no exacerbation of temperature. He lost appetite and had some pain. This swelling of the knee with a certain amount of bronchitis and a urine of low specific gravity and which contained a little albumen and a few hyaline casts made up the symptoms from which the patient suffered after his attack of acute alcoholism had subsided. The swelling of the knee is now almost entirely gone.

Now what was the nature of the affection of the knee joint. The man had evidently had an attack of gout three years ago. This second attack, although it involved the knee and was not attended with any degree of redness, could still be ascribed to gout. This man suffered from an attack of subacute synovitis which occurred in a gouty individual. Whether the synovitis was due to the gout or not we do not know.

Having a patient with a gouty history and at this particular time with an attack of subacute synovitis involving the knee joint, what would be the proper treatment? Colchicum and the iodide of potassium internally. Pressure is of very great service locally in these subacute inflammations of the synovial membrane. The knee was thoroughly bandaged with a compressed sponge and along with the administration of potash and colchicum, the swelling entirely disappeared. In this case the chronic bronchitis from which he has been suffering has improved from these drugs, namely, the iodide of potassium and colchicum.

CASE IV.—Abscess of the Liver.—Male æt. 35. He came into the hospital January 3d. Was taken sick six weeks before admission. Then he began to have pain on the right side of the chest low down over the region of the liver. Besides the pain he had some cough. When he coughed the pain was worse, and when he took a deep breath the pain increased also. Besides the pain he had some difficulty in breathing and irregular chills, followed by fever and sweating. These chills have occurred at irregular intervals ever since, and the febrile movement has continued ever since. He has had some diarrhoeal stools since he discharged from his lungs, but not a persistent diarrhoea. The urine has been passed more frequently and in larger quantities than usual. He says that he had an attack of dysentery in 1864 which lasted for some weeks. He also gives a history of some intemperance and of constitutional syphilis. At the time of his admission the patient's appearance was that of a rather sicker man than he is now. He was more flushed and looked more prostrated than at the present time. His heart was found to be normal and his lungs were normal. The only physical signs were those over the lower part of the right side of the thorax. He also had at the time of his admission a temperature of 99 $\frac{1}{4}$ ° in the morning and 103.5° in

the evening. He went on with this sort of temperature 99° – 100° in the morning and 102° – 103° in the evening until the 7th of January. Then after that the morning temperature began to get less so that on the 8th of January he had a morning temperature of 98.5° and an afternoon temperature of 102° . Then the evening temperature began to fall again to 102° , 101° , 100° , and so there has been this fall until about the 15th of January, when his temperature was 98° in the morning and 99° in the evening. Yesterday morning the temperature was 97° . This afternoon it was again up to 102.5° . This afternoon there was sweating and a good deal of pain over the region of the liver, and there was also very well marked tenderness on percussion and pressure. In this condition the man continued until January 6. On the sixth the pain over the region of the liver had improved very much. It had nearly disappeared and this pain has continued absolute up to the present time. About four days ago the man began to have a muco-purulent expectoration with considerable amount of pus. This expectoration has a distinctly disagreeable odor.

Physical Examination.—When we examine in front on reaching the top of the fourth rib, we get dullness on percussion. Over the fifth rib we get flatness on percussion. This flatness exists all the way down to the free border of the ribs and yet you observe that just now there is no pain. Behind the percussion note is good over the whole of the chest. On the side it is flat as high up as the axilla.

Diagnosis.—This patient has abscess of the liver with perforation into the lung. He has been suffering from abscess which has formed in the upper part of the right lobe of the liver, and has extended upwards toward the diaphragm having perforated the diaphragm, and reached the lung which is adherent to the diaphragm and the man is now expectorating pus from this abscess of the liver. One attempt has been made to try and find this abscess with the aspirator. This attempt, however, was not successful. We first used simply the long needle of a hypodermic syringe and afterwards introduced the needle of an aspirator for a considerable distance into the liver, but we got nothing except blood with an excess of white blood globules. The attempt which was first made on January 6th was not repeated. The pain and tenderness have not returned and the febrile movement has been becoming less and less. The man has been doing well so that it was thought proper, in view of his good condition to leave him alone and not to make any further exploration of his abscess. The recurrence, however, of a high temperature again yesterday afternoon is a thing which brings forward the propriety of attempting to reach the abscess with the aspirator again. The man's general condition is good and he is raising a fair amount of pus through the lungs so that there must be an opening of tolerable size. The danger in his case will be that of the disease running too protracted a course. If there is only one abscess of moderate size, and if he is now getting rid of the pus from that abscess, he will after a time begin to improve and eventually get well. But if there are more abscesses than one, then the course of affairs will be more protracted. I should not be disposed to let him go on any great length of time as he is doing now unless he continues to improve. If he continues to improve, and to eat well with the general fever diminishing, then I should feel disposed to leave him alone. But if the fever comes on again in the afternoon as heretofore, and the general condition of the patient is not good, then I shall make a more energetic attempt

than I have made yet to find where the abscess is located, with the aspirating needle.

ABSTRACTS AND SELECTIONS.

COTTAGE HOSPITALS.

BY

L. W. Baker, M. D., Baldwinville.

England is far in advance of this country, in her provision for the care of the sick in small cities and towns, and the system of Cottage Hospitals there in operation, is one which we may study with advantage and adopt with great benefit to the sick.

Our large cities are in general well supplied with hospital accommodations, but the smaller cities and larger towns are lamentably deficient in this respect. Concerning the desirability of providing these places with small hospitals, there can be no question. Especially are they needed in the larger manufacturing towns in which many of the employees are without a home, living in boarding places and in case of accident or disease are but poorly provided for, and many lives are lost in consequence of improper care. Any physician practicing in these towns well knows how unsuitable are their boarding places for the care of the sick, and often finds his best efforts will be of no avail in face of the improper conditions which surround his patient. How different would often be the result, if the sick or injured could be removed at once to a quiet home-like cottage hospital, where, with a trained nurse in charge, and attended by the physician of his choice, he would also have all the resources of the hospital at his command.

The value of these small hospitals has been well tested in England, during the past twenty years, and their simplicity, the home-like surroundings, and ready adaptability to the need of country life, have won for them a warm place in the regard of the English people. Two hundred and fifty cottage hospitals are now in successful operation in that country, relieving about 50,000 patients annually, who contribute to the hospital at least one-sixth the cost of their maintenance. If this system could be generally introduced into this country its value would be incalculable, and a very large class would be provided with hospital accommodations, who are now deprived of their advantage, many of whom would be willing to pay a small sum weekly for the medical care and nursing thus provided.

A large outlay is not required, for the necessary building need not be expensive. In England, the average cost of cottage hospitals, having a capacity of about eight beds, is from \$4,000 to \$6,000 each. In my own experience with a capacity of twenty-five beds for children, \$5,000 will about cover the expense of land and building; of course the cost of construction will vary with the location, but there is surely no town of 10,000 inhabitants, and upwards, too poor to establish and maintain one of these small institutions.

A small hospital managed by ladies has been in successful operation at Pittsfield, Mass., for several years, another is contemplated at Newton, while a third, intended especially for children, has just been established at Baldwinville, in the same state. This is a work for which ladies are well adapted, and much of the energy now lying idle, or exerted in wrong directions, might be profitably expended in the establishment and support of a cottage hospital in every town of 10,000 inhabitants in this country.

The plan of operation may be very simple; a small building, in a good location, can be rented, until desirable to build, and a nurse placed in charge, with a woman in the kitchen, and such other help as may be needed. The physicians of the vicinity will, I have no doubt, be ready and willing to co-operate, and can arrange their attendance so as not to interfere with other engagements. Each physician is expected to take charge of the patient sent by him to the hospital, and in England it is customary to appoint one or more of the medical staff in rotation, whose duty it is to look after all the cases in the hospital requiring special attention in the absence of their physician. The medical director, as he is called, is not to prescribe except in an emergency, for any but his own patients, but is to carry out the wishes of his colleague, who is to visit the patients under his care daily, and order any alterations he may deem desirable.—*Woman at Work.*

UNINARY CASTS OUTSIDE OF BRIGHT'S DISEASE.

In *Lyon Medical* (July 22, 1883) we notice a report of some cases in which casts was found in the urine of individuals suffering from acute non-renal diseases, in whom an autopsy supplemented by microscopical examination confirmed the entire absence of any lesion of the kidneys. The first was a man of fifty-one years, deaf, who had pneumonia. The urine was bloody, with a considerable quantity of albumen. The autopsy showed, besides lobar pneumonia, chronic endocarditis without valvular insufficiency, atheroma of the aorta, and a slightly cirrhotic liver. The kidneys were absolutely healthy microscopically and histologically. During life the urine, examined at first without coloration, showed besides red blood globules in considerable quantity hyaline casts, very transparent, quite short, some covered with little granular deposits of epithelial detritus. The examination of the sediment stained with picro-carmin and osmic acid showed the same casts in great numbers, some absolutely hyaline, others more or less covered with granular matter.

A second patient was a man who also died of double pneumonia. The kidneys, normal in gross appearance, presented to noticeable lesion of the epithelium microscopically. During life his urine, normal in color, had shown a large disk of albumen. Microscopically, without staining, there were found in the urine numerous waxy and granular casts. The sediment, after staining, showed also many casts, some almost perfectly transparent, others formed of granular matter more or less dense, yellowish, and sometimes slightly, rose-colored.

Other cases are cited where no autopsy was had on account of the recovery of the patients, but where the author believes from the subsequent history that no renal lesion existed. One was of aortic insufficiency and cardiac irregularity with transitory albuminuria. A few waxy casts were found, but no granular ones. Another man who had acute bronchitis with tricuspid regurgitation and œdema had many casts in the urine, mostly transparent and homogeneous, but some with fissured edges, and others granular. In both the cases the albuminuria rapidly disappeared, and the patients were discharged cured.

In view of the interest attaching to such cases, it is to be hoped that further investigations will be made in a sufficient number of instances to cast further light on the question of tube casts in individuals not having Bright's disease.—*Boston Medical and Surgical Journal.*

CASES OF LESIONS OF PERIPHERAL NERVE-TRUNKS.

In the July number of the *American Journal of the Medical Sciences* Dr. Weir Mitchell contributes another of his instructive papers on nerve lesions illustrated by five recent cases, which he has very carefully noted and studied. Nothing which we know as yet explains all the clinical phenomena of these interesting cases, and, in all probability, some of the variations in the symptoms observed are to be attributed to differences in the character of the disorder affecting the nerve-trunks, or even to the nature of the causes originating the active pathological condition.

In one of the cases, among the various points of interest, none exceeds in value the abrupt extension of the areas of lessened sensation which was seen after section of the median and radial nerves. This was not to be accounted for upon any knowledge which we now have of the peripheral distribution of nerves, since in one case the dysæsthesia spread far beyond the region tributary to the nerve stretched or cut; and, in the other, in some directions did not cover the whole regions usually affected after radial nerve sections. Generally speaking the symptoms is to be considered as one of the many forms of shock. A sudden injury to a nerve already morbidly altered gives rise to an inhibition of function in certain closely related centers. The disturbance might be in the direction of motor or of sensory inhibition; and both forms are among the rarer phenomena of nerve wounds from rifle balls. The fact itself is less surprising than its permanence, nor is it easy to comprehend the precise nature of an influence which may act on such varied functions, and act so persistently.

In a case of section of the infra-orbital nerve for facial neuralgia, the remarkable feature was the fall of temperature, a symptom exceptionally rare in any form of neuritis, whether of internal or traumatic origin.

CONTUSIONS OF THE BRAIN AND SPINAL CORD.

Dr. John A. Lidell, late surgeon to Bellevue Hospital, New York, in an elaborate practical paper on this subject in the July number of the *American Journal of the Medical Sciences* discusses the clinical history, diagnosis, prognosis, and treatment of this large and very important class of injuries. While much is said in our text-books on the subject of cerebral concussion—of its dangers and of its importance—but small if any mention is made of the contusions of the brain which so very often complicate the concussions, and impart to them whatever of gravity, be it much or little, that they may chance to possess. And still less mention is made of the contusions of the spinal cord. No wonder, then that bruises of the brain-structure, and of the spinal cord-substance, occur much more frequently than is generally supposed, that the relationship which exists between these injuries and concussions is not well understood, and that the bruises of these organs often escape even all suspicion, during life.

That slight or even moderate concussions of the brain sometimes, perhaps not unfrequently, occur without being complicated with contusions of the brain, Dr. Lidell does not doubt. Contusion of the brain is, therefore, he believes, not synonymous with concussion of the brain; but, at the same time, all the evidence now collected tends to prove that the severe instances of cerebral concussion are always complicated

with cerebral contusion. Concussion of the brain, however, derives its chief importance from the fact that it is very often associated with contusion of the brain; and, in examining a case of cerebral concussion, the question of most importance for the surgeon to decide is whether or not cerebral contusion is also present.

These are points of doctrine which practically have much interest for patients as well as practitioners, because of the influence they are likely to exert in the direction of procuring a correct diagnosis and consequently, a wise treatment; for, in the disorders of no other parts of the body is it more true that an accurate diagnosis begets a wise plan of treatment than in those of the brain and spinal cord.

A DEMONSTRATION OF THE FEEBLE INFLUENCE OF IODINE OVER MALARIAL FEVERS, BASED UPON AN ANALYSIS OF 76 CASES OF INTERMITTENT AND REMITTENT FEVERS TREATED WITH THE AGENT.

There have recently appeared numerous reports from medical men in various parts of the world, reciting the virtues of iodine in the treatment of malarial fevers. It is true that these do not all agree as to the exact degree of reliance that may be placed on this agent as an antiperiodic. There are, however, those who claim for it an efficacy not less than that of Peruvian bark, as far as the immediate control of the attack is concerned; and even greater than bark in preventing its recurrence.

It must be confessed, however, that the results reported by various observers do not entirely agree. Here we find an assertion that in chronic malarial poisoning iodine does its work most effectually; there, that its value is nil; in another article we find that it is recommended to render permanent the cure that quinine has begun; in still another, that it is given in combination with quinine, arsenic, etc. On the other hand, we find that by some anti-periodic properties are denied to iodine.

Attracted by the testimony in its favor, and with the desire to definitely ascertain the powers of iodine as anti-malarial remedy, in view of the ease of its administration, and of its comparatively small commercial value, Drs. I. E. Atkinson and Hiram Woods, availed themselves of the opportunity of treating malarial fevers afforded at Bayview Asylum, Baltimore, during the late summer and autumn of the past year (1882), and they record the results in the July number of the *American Journal of the Medical Sciences*.

Their experiences leads them to draw the following deductions as to the use of iodine in *acute malarial poisoning*.

1. In intermittent fevers it has some feeble influence in controlling the paroxysms.
2. It takes usually from three to eight days to exercise this influence.
3. In *cures effected* there is great danger of a relapse; certainly as great as with Peruvian bark.
4. It is certain to add to any existing diarrhoea or nausea, and is liable to cause each, if they do not already exist.
5. In *remittents*, its effect, if any, is seen in a slow and gradual reduction of temperature, and this reduction is liable to sudden interruptions.
6. In *both forms* of malarial fever it is infinitely in-

ferior to either cinchonidia or quinine: certainly as regards the immediate control of the fever, and as far as we were able to judge, as regards relapses also.

7. From an economic point of view, the slowness and uncertainty of its action make its use in *hospital practice* fully as expensive as Peruvian bark.

8. There seems to be ground to believe that it can cause albuminuria.

9. In the large majority of cases of ordinary acute malarial poisoning it has no influence whatever.

SOME POINTS IN RELATION TO THE DIAGNOSTIC SIGNIFICANCE OF IMMOBILITY OF ONE VOCAL BAND; WITH ESPECIAL REFERENCE TO ANKYLOSIS OF THE CRICO-ARYTENOID ARTICULATION AND ANEURISM OF THE ARCH OF THE AORTA: WITH SIX ILLUSTRATIVE CASES.

Dr. J. SOLIS COHEN, in an interesting paper in the July number of *The American Journal of the Medical Sciences*, points out: 1st, that laryngoscopy may sometimes be the sole, or most efficient means of diagnosis in affections located exterior to the larynx; and 2d, that a liability to error might often be incurred, were we to place too exclusive a reliance upon the objective symptoms, as presented by the image seen in the laryngoscopic mirror.

From a study of cases under his observation he concludes:—

1st. That whenever the left vocal band is immobile in abduction, or in the cadaveric position (positions in which the patency of the glottis is not interfered with), and there is cough or dyspnoea (or both), without cardiac or pulmonary lesion to account for these symptoms, we are justified in suspecting aneurism of the aortic arch; and difficult deglutition will be almost certainly confirmatory of the diagnosis, notwithstanding the absence of tumor, pulsation, thrill, and *bruit*. The only, and exceedingly improbable source of error, would be intra-thoracic neoplasm.

2d. That ankylosis of the crico-arytenoid articulation may fairly be suspected in cases of immobility of one vocal band, not referable to mechanical interference with the transmission of nervous force; unaccompanied with evidence of central or local nervous disease; and in which failure to respond to appropriate treatment will warrant us in excluding muscular atrophy. But the diagnosis can be finally established only by the application of direct pressure to the affected arytenoid cartilage.

3d. That whenever one vocal band is immobile in the cadaveric position or in abduction, and there are no other signs or symptoms to assist the diagnosis, ankylosis being eliminated, we should not be satisfied with a diagnosis of neuropathic paralysis; but should keep the patient under observation with a view to detecting the earliest manifestation of aneurism, consolidated lung, or other mechanical cause for the impaired innervation.

A CASE OF PRIMARY MONOMANIA.

The circumstances connected with the trial of Guiteau brought prominently to notice a peculiar form of insanity, the so-called primary monomania. In view of the professional interest attaching to this variety of mental disease, the publication of the case reported

by Dr. C. B. BURR, of the Eastern Michigan Asylum, in the July issue of *The American Journal of the Medical Sciences*, is timely, and attracts attention on account of the resemblance it bears to that of Guiteau. Disregarding the moral traits of these two individuals, their cases are strikingly similar.

In contradiction of the oft-repeated assertion that the execution of an insane criminal now and then has a deterrent effect upon others of like propensities, Dr. Burr's case may well be cited, inasmuch as his homicidal assault was made less than five months after the hanging of the murderer of the President, and in face of the strong popular sentiment against the so-called "cranks" and lawless fanatics. There are few more striking illustrations of the impotency of moral and legal measures to restrain or control a morbid impulse than is afforded by this case.

REPORT OF EIGHT CASES OF COXALGIA, IN WHICH ELEVEN OPERATIONS OF SUBCUTANEOUS OSTEOTOMY HAVE BEEN PERFORMED IN THE CHILDREN'S HOSPITAL, PHILADELPHIA.

In a paper in the July number of *The American Journal of the Medical Sciences*, Dr. H. R. WHARTON records eight cases of coxalgia followed by marked deformity, in which eleven subcutaneous osteotomies of the femur were performed. The results obtained were most satisfactory, not only as regards the immunity from danger in the operation, but also as regards the correction of the deformities and restoration to use of comparatively useless limbs.

The amount of constitutional disturbance following the operations was insignificant, as little, or even less, than that which follows a simple fracture of the femur; in no case was there excessive hemorrhage at the time of operation, nor did there follow in any case marked febrile reaction or suppuration; the wounds healed as ordinary tenotomy wounds, and by the end of the first week were generally found entirely closed, so that further dressings could be dispensed with.

The facility with which the wounds healed in these cases can only be explained by their subcutaneous character, for although by the operation a compound fracture of the femur is produced, it must be remembered that the original puncture, which is made down to the bone by Mr. Adams's knife, is small, and that when the saw is introduced and cuts the bone, the wound is entirely filled by its shank, by blood and by dust from the sawn bone, so preventing the admission of air to the deeper parts.

The results of reported cases bear strong testimony to the general safety of the operation, and there is no doubt that the selection of proper cases, and care as to the position at which the section of the bone is made, will render this operation one of the safest in surgery.

The paper concludes with a full and careful discussion of the various details of the operation.

NASAL COUGH AND THE EXISTENCE OF A SENSITIVE REFLEX AREA IN THE NOSE.

Dr. JOHN N. MACKENZIE, of Baltimore, in the July issue of *The American Journal of the Medical Sciences*, directs attention to the great frequency of cough as a symptom of nasal disease, and indicates, as far as possible, the manner of its production.

The dependence of cough upon irritation of the external auditory meatus and pharyngo-tracheal membrane is well known and the term "ear" and "laryngeal" cough have passed into current use among medical men. It is also quite possible that the reflex act may originate primarily in morbid conditions of various other organs of the body, and the familiar expressions "stomach" and "liver" cough would seem to indicate that such a causal connection had been accepted as true of some of the abdominal viscera. This interdependence has, however, never been demonstrated by experiment, nor are the clinical data sufficient to warrant the unqualified acceptance of this alleged correlation.

Dr. Mackenzie has found by experimental proof that all parts of the nasal mucous membrane are not equally susceptible to the impression by which reflex cough is produced, and, furthermore, that the cough or reflex area is probably limited to the mucous membrane covering the middle and inferior turbinated bodies and the posterior half of the septum. Now this is the area occupied by the erectile tissue of the nose, and it is hard to resist the conclusion, that this structure is in some way connected with the evolution of the reflex act, and that the peculiar susceptibility to irritation is to a great extent intimately associated with its physiological functions, whatever they may be.

Roughly speaking, the greater the congestion or inflammation, the more constant the reflex obtained. He has succeeded, however, in producing violent paroxysms of laryngeal cough by simply touching, with the aid of the rhinoscope, the posterior extremity of the inferior turbinated bone in a person whose nose was free from disease.

That the sensitive area is principally confined to the parts indicated, is rendered exceedingly probable by the following clinical facts:—

1. That in cases where reflex cough exists, these are the portions chiefly, if not solely, involved.
2. That the act may be produced here at will by artificial stimulation of the parts invaded by the morbid process.
3. That it may be dissipated by local applications to, or removal of the membrane covering the diseased surface.
4. That foreign bodies, such as pins, lodging in this area sometimes give rise to cough, which latter is not observed when they become impacted in other portions of the nose.
5. That polypi give rise to reflex phenomena only when they arise from, or impinge upon the sensitive portions of the area.
6. That where complete atrophy of the turbinated structures exists, as, for example, in ozæna, reflex cough is not present, nor can it be induced by artificial stimulation.

It is worthy of remark, that in a fair proportion of cases there are few, if any, symptoms that would direct the attention to disease of the nose, and this fact emphasizes the importance of examining the nasal chambers in all cases of the kind, even though the testimony of the patient may lead to neglect of their systematic exploration.

Dr. McKenzie's clinical observation leads him to the belief that reflected irritation from nasal disease plays a not inconspicuous part in the etiology of laryngeal congestion and inflammation. The short, hacking cough and hyperæmia of the larynx which occur in acute coryza are probably more often explicable on the theory of reflex action than upon the extension of the inflammation to the laryngeal vestibule. In chronic coryza,

on the other hand, the constant laryngeal hyperæmia induced by reflex nasal irritation, augmented, perhaps, by the frequent occurrence of cough paroxysms, may, if prolonged, eventuate in catarrhal conditions of that organ. In other words, on theoretical grounds, and clinical observation would seem to sustain them, it is legitimate to assume the existence of a *reflex laryngitis* evoked through the constant irritation of the vasomotor centers from chronic nasal inflammation.

Clinical and experimental investigation would appear, then, to lead to the following conclusions:—

1. That in the nose there exists a definite well-defined sensitive area, whose stimulation, either through a local pathological process, or through the action of an irritant introduced from without, is capable of producing an excitation, which finds its expression in a reflex act, or in a series of reflected phenomena.

2. That this sensitive area corresponds, in all probability, with that portion of the nasal mucous membrane which covers the turbinated corpora cavernosa.

3. That reflex cough is produced only by stimulation of this area, and is only exceptionally evoked when the irritant is applied to other portions of the nasal mucous membrane.

4. That all parts of this area are not equally capable of generating the reflex act, the most sensitive spot being probably represented by that portion of the membrane which clothes the posterior extremities of the inferior turbinated body and that of the septum immediately opposite.

5. That the tendency to reflex action varies in different individuals, and is probably dependent upon the varying degree of excitability of the erectile tissue. In some the slightest touch is sufficient to excite it, in others chronic hyperæmia or hypertrophy of the cavernous bodies seem to evoke it by constant irritation of the reflex centers, as occurs in similar condition of other erectile organs, as, for example, the clitoris.

6. That this exaggerated or disordered functional activity of the area may possibly throw some light on the physiological destiny of the erectile bodies. Among other properties which they possess, may they not act as sentinels to guard the lower air passages and pharynx against the entrance of foreign bodies, noxious exhalations and other injurious agents to which they might otherwise be exposed?

Apart from their physiological interest, the practical interest of the above facts in a diagnostic and therapeutic point of view is sufficiently obvious. Therein lies the explanation of many obscure cases of cough which heretofore have received no satisfactory solution, and their recognition is the key to their successful treatment.

PAGET'S DISEASE OF THE NIPPLE.

Dr. LOUIS A. DUHRING reports in the July number of the *American Journal of the Medical Sciences* two cases of Paget's disease of the nipple, which he holds is not an eczema, but a peculiar disease with a malignant tendency. It must be distinguished from eczema, which it resembles, and from ordinary cancer, which it is altogether unlike in its earlier stages. It seems to occupy a ground having the characters of both diseases. The report is interesting as showing the natural history of the affection. This is peculiar. The course of the process is emphatically chronic. In both instances, moreover, the progress of the disease was insidious as

well as slow. Nothing of a malignant nature was suspected until after the lapse of five or ten years respectively. The itching, which eventually became such a marked symptom, was in both cases insignificant until the affection had existed several years. It may be said not to have manifested itself until after the process had been well established. In this respect the disease differs decidedly from eczema, where itching is one of the first signs noted. The circumscribed, sharply defined outline of the lesion, and the slightly elevated border, are also symptoms which do not obtain in eczema. The brilliant color of the lesion is striking. It is more marked than an eczema. The absence of the "eczematous surface," characterized by appreciable discharge or by vesicles, pustules, or puncta, coming and going from time to time; and the absence of exacerbations, so usual in eczema, may also be referred to. A point to which attention may also be directed is the infiltration, which is firm or even hard, but is not deep-seated. It is rather superficial. In eczema, on the other hand, it is soft.

The pains coming on later in the course of the disease, and the indurated, lumpy, or knotted lesions within the gland structure, of course point strongly to the malignant or cancerous nature of the disease, the existence of which cannot be doubted.

EXPERIMENTAL KERATITIS, ITS BEARING UPON STRICKER'S THEORY OF INFLAMMATION.

Dr. J. L. MINOR, of New York, in a brief paper in the July issue of the *American Journal of the Medical Sciences* claims the establishment of the immigration theory; because the pus cells are similar in appearance to the white blood-corpuscles; they can be traced from the corneal periphery to the point of irritation; and having also gained access to the corneal tissue through the eschar, they are most abundant immediately around this center, where we can still recognize dead, but intact, corneal corpuscles. The corneal corpuscles show signs of proliferation, some time after the cell immigration has set in; and this proliferation gives rise, not to pus cells, but to new corneal corpuscles, and they are strictly limited to the zone surrounding the dead corneal corpuscles; whereas leucocytes, or pus cells, in abundance, can be found in various parts of the cornea, at a distance from this point.

ENLARGEMENT OF THE BRONCHIAL GLANDS AS A CAUSE OF IRRITATION OF THE PNEUMOGASTRIC NERVE.

Dr. EDWARD T. BRUEN, in the July number of the *American Journal of the Medical Sciences*, discusses the effects of enlargement of the bronchial glands in producing reflex irritation of the pneumogastric nerve.

The difficulty in the diagnosis of such cases consists in separating them from cases of early phthisis. One must rely mainly on the absence of the combination of physical signs required to render the presence of incipient phthisis certain. These are impaired percussion, resonance, some form of bronchial breathing, possibly fine moist râles and increased vocal resonance. The last two physical signs are not present in cases of bronchial enlargement. Pain in the back and disturbance of the respiratory rhythm are not often present in phthisis. Hysteria, uterine, or spinal disorder may be

eliminated by careful examination. Finally, the beneficial results of treatment may be appealed to to sustain the theory of the etiology of the cases.

MEDICAL NEWS AND NOTES.

M. Pasteur having offered to organize a mission for investigating the cholera in Egypt, the Hygiene Commission has endorsed the scheme. The mission will consist of M. Roux and M. Thuillier of M. Pasteur's laboratory; M. Strauss, of the Faculty of Medicine; and M. Nolaco. M. Pasteur has written to Lord Granville to solicit the grant of facilities to the mission in Egypt.

New York Post Graduate School—Dr. A. H. Smith has been appointed Professor of Clinical Medicine and Therapeutics, dividing the chair with Dr. T. E. Satterthwaite, Professor of Pathology and Clinical Medicine. Dr. A. J. C. Skene, has been appointed Professor of Gynecology, dividing the chair with Professor B. F. Dawson.

Hypodermic Injection of Cold Water in Sciatica.—Dr. Pollak has communicated to the St. Louis Medical Society a case of sciatica, in which he injected ice-cold water hypodermically deeply into the tissues, with the effect of speedily alleviating the pain. The relief was lasting.—*Philadelphia Medical Reporter*, February 3, 1883.

The Sweats of Phthisis.—Dr. Landouzy employs a powder consisting of ten parts, by weight, of salicylic acid to ninety of talc or starch. Those parts of the body which are habitually the most frequent seats of the sweating are powdered twice a day. Almost always it gives temporary relief; and sometimes the amelioration persists for some days after the application has been discontinued.—*Journal de Therapeutique*, May 25.

Blood Pressure in Aortic Insufficiency.—At a meeting of the Société de Biologie, M. Franck made the following statement in regard to the blood pressure in aortic insufficiency, which he had produced artificially. He found that the blood-pressure, instead of being diminished rapidly, adjusted itself to the altered condition at the heart by rising to the normal degree, or even higher. He explains this on the grounds (1) that the action of the left ventricle is increased under these conditions (as proved by the experiment of fixing a manometer in one of the aortæ of a frog), and (2) that as a result of the impact of the stronger blood-wave thus produced on the small peripheral vessels there is reflex contraction of these which soon becomes a chronic condition. The researches of MM. Dastre and Morat afford examples of such diminution of arterial calibre. The pallor of aortic regurgitation, and the vertigo, and some other symptoms which accompany it, are thus explained.—*Progrès Medical*, June 9, 1883.

New Theory of Albuminuria.—At a recent meeting of the Paris Academy of Medicine, M. Semmola of Naples brought forward a new theory with regard to the causation of Bright's disease. This malady he regards as not essentially renal, but as consisting in a general morbid alteration of nutrition, and observes that albumen in such cases is not passed by the urine only, but by all the secretory organs. This alteration deprives the albuminoid materials of the blood of their power of being assimilated, and so

causes their excretion by the emunctories. The renal lesions he ascribes to mechanical irritation of the tubules of the kidney by the constant passage of albumen through them. Albuminuria is therefore a cause, not a result, of renal disease. M. Semmola founds these views on a series of experiments made on animals. He injected into the blood-vessels various substances containing albumen, as white of egg, milk, and blood serum, with the result of inducing artificial Bright's disease. White of egg was most active in this way. He therefore concluded that the more nearly albuminoids approach the character of serum-albumen, the less likely they are to injure the kidneys by irritation, and *vice versa*.—*Progrès Medical*, June 9, 1883.

Consumption of Beer in the Paris Hospitals.

—As some answer to the protests which have been made against his peremptory prohibition of beer for the patients of the hospitals, the Director of the Assistance Publique publishes some of the figures, which have justified, as he thinks, his too indiscriminate resolution. It seems that the quantity of beer consumed at the Hotel-Dieu rose from 37 litres in 1875 to 13,516 in 1882, at the Pitié from 700 to 8,995; at the Charité from 1,876 to 13,473; and at the St. Antoine from 3,768 to 14,564. The whole of the hospital establishments consumed 28,695 litres in 1875, and 151,174 in 1882. The consumption of *vin ordinaire* (which has the reputation of being very good in the Paris hospitals) rose from 1,895,128 litres in 1875 to 2,646,728 in 1882; that of Banyuls wine rose from 56,881 litres to 128,584, and Bordeaux from 78,814 litres to 103,988. There were also 1,130,531 litres of milk consumed in 1875, and 2,675,699 in 1882. The increase in the consumption of beer, therefore, has not been caused by its substitution for wine or milk, the beer being an absolute addition. "But who drank all this beer?" asked one of the municipal councillors. "That I cannot tell," replied M. Quentin; "though it is certain that all these supplementary quantities did not profit the patients."

Vaseline in Obstetrics.—The experiments of Koch, in 1881, showed not only that vaseline had no antiseptic property, but that carbolic acid, when mixed with it or oil, lost the antiseptic power which it had. But if the mixture is made in the presence of water or of tissues containing water, in abundance, about one-fourth of the carbolic acid is freed from the mixture and partly recovers its antiseptic properties. When carbolized oil or vaseline is carried by the exploring-finger into the vagina, a burning sensation is produced, much more intense with vaseline than with oil; this seems to prove that vaseline more readily gives up the carbolic acid than oil. In a gynecological or obstetrical examination carbolized vaseline or oil coming in contact, both with the finger of the examiner and with the tissues and secretory products of the vagina, exercises a certain degree of antiseptics, which, though slight, is sufficient if the hand of the examiner has been previously well washed with an antiseptic fluid. Carbolyzed vaseline then can only be replaced in obstetrical practice by some agent which may be preferable to it antiseptically, and at present there are no well-grounded reasons for abandoning it. Fehling claims many advantages for paraffin containing 4 parts to 100 of carbolic acid. It is ordinarily supposed that carbolic acid evaporates more readily from a solution than water, but Schücking has shown that this is an error. In any solution containing both water and carbolic acid the water evaporates soonest.—*Centralbl für Gynecologie*, March 10, 1883.

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"HONOR TO WHOM HONOR IS DUE."

Though the beneficent results growing out of a new discovery, whether in surgery or other fields of labor, are naturally more regarded than the question of priority of discovery, it is nevertheless only just to render all honor to him whose intelligence and skill has been instrumental in thus benefiting humanity.

In the eager race for fame and wealth into which medical men with others have been hurried, the rights due to professional brothers are too often lost sight of by the participants, and many a discovery in medicine and surgery has been heralded to the world without credit being given to its real author.

A conspicuous illustration of such an error was in the operation of skin grafting, the undivided credit of which, until recently, was given by some authors to Reverdin, of Paris.

—As a matter of justice to the real author it will not be uninteresting to quote from some of the most eminent authorities their most recently expressed opinions on this subject. It is matter for congratulation that to our own country is now generally accorded the honor of priority of discovery and application of the principles underlying this operation. The expressed belief of those authorities who were long advocates of its French origin being now united in giving the credit to Dr. Frank H. Hamilton, of New York.

In substantiation of this statement the following appears in Gross' Surgery, 6th edition, 1st vol., p. 447.

Skin-Grafting.—Cicatrization of ulcers and wounds may often be greatly accelerated by the transplantation of skin, or skin-grafting, a practice the introduction of which has been generally, but unjustly, ascribed to Dr. J. L. Reverdin, who did not call attention to it until 1869, fifteen years after Professor Frank H. Hamilton had published an account of his first operation in a paper entitled "Old Ulcers Treated by Skin-Grafting," published in the *New York Journal of Medicine* for 1854. His patient had a large wound caused by the fall of a heavy stone fifteen months previously, and attended with so much loss of skin as to render Nature unable to effect a cure. To cover this gap Hamilton transplanted a portion of integument from the opposite

limb, not sufficient, however, to take in the whole surface. In three months the cicatrization was complete, the new piece of skin having grown from its periphery in every direction, and in the end acquired nearly twice its original size. By this operation which foreshadowed the whole principle involved in skin-grafting, the New York surgeon hoped to establish, as he expressed it, "a new center of life, or an oasis, from whose outer verge a true and healthy vegetation shall advance in every direction over the exhausted soil."

"To the French surgeon, however, is unquestionably due the credit of introducing and generalizing skin-grafting, or the insertion of minute grafts at various points of the exposed surface now so generally practised."

Dr. Agnew writes as follows:—

"As far back as 1847, Prof. Frank H. Hamilton, now of New York, planned an operation for closing a large ulcer by transferring a portion of integument to the centre of its surface, believing that it would form the nucleus for the production of new skin, and in 1854 he carried it into execution..... How much the operation of this distinguished surgeon may have had to do with attracting the attention of the *interne* of La Charité, M. Reverdin, to the subject I know not, but in 1869 the latter presented to the surgical society of Paris the history of a large ulcer," etc., etc.

[*Agnew's Surgery*, Vol. I, (1878) p. 125]

Woodman, of England, in alluding to this subject says:—

"As long ago as 1847, Dr. Frank Hamilton, of New York, suggested a plan in some respects similar, which in 1854 he put into practice in the case of Henry Driscoll, who from an accident had lost a considerable portion of the integument of his leg."

"Dr. Hamilton thus proved that engrafted skin would adhere to healthy granulations, that the piece so engrafted would grow, and need not therefore cover the sore; but he failed to see that its original attachment might be wholly separated before being engrafted elsewhere. M. Reverdin, of Paris, was, without doubt, the first to discover and practically demonstrate the great fact that small pieces of skin taken from a different part of the body could be placed on healthy granulations, and made to grow there; and to him, therefore, belongs the entire credit of introducing this new process in surgery."

"If, then, to Dr. Hamilton belongs the credit of being in some measure the pioneer, and to M. Reverdin that of being the originator or discoverer of this process, to Mr. George Pollock, of St. George's Hospital, undoubtedly belongs the entire credit of its introduction into England."

(*From a paper on Transplantation of Skin*, pp. 5-6, by John Woodman, F. R. C. S.)

A number of other writers have made similar statements. Dr. Hamilton himself does not think Reverdin took his suggestion from him, but that Reverdin's discovery was far in advance of his own.

UNSANITARY HOMES.

In another column will be found a comprehensive article on this subject from the pen of Mr. Wingate whose familiarity with the practical aspects of the question of sanitation enables him to speak with authority. Certainly no subject is more pregnant with interest to those whose first aim is to prevent disease. It seems to us, however, that our sanitarians more

easily point out existing evils and the necessity for their reform than suggest practicable methods by which this can be brought about. While one sanitarian tells us that a particular method of plumbing guarantees security from the poisonous vapors arising from excreta and sewage, another demonstrates to us the diffusibility of these gases through the most dense constructing material. Who will lay the spectre of "sewer gas" and its brother of Protean form "Malaria" will have the gratitude of suffering thousands, though we wot of some doctors whose occupation would be gone with malaria no longer rampant.

ORIGINAL ARTICLES.

A CASE OF NEURO-RETINITIS WITH SUB-RETINAL ŒDEMA THREATENING DETACHMENT.

(From the Practice of Dr. C. R. Agnew and Dr. D. Webster

BY

DAVID WEBSTER, M.D.

Professor of Ophthalmology in the New York Polyclinic, etc

Miss Ella C., aged twenty, teacher, first observed that she was becoming near sighted five or six years ago. Spectacles ($-1/10$) were at that time prescribed for her by a physician whom she consulted in the west, and she has worn them most of the time ever since. The sight of the left eye began to fail about the same time that the right began to be myopic, and became suddenly much worse about a year ago.

Right eye, vision = $20/30$ with $-1/14$; left eye, vision = counts fingers at one foot in the infero-temporal portion of the visual field. The field of vision is wanting in its upper half, and contracted on the nasal side.

Ophthalmoscopic examination showed that the left eye was myopic one fourteenth, and had a small crescent of choroidal atrophy at the temporal edge of the disk. The optic disk was reddened and, apparently, slightly œdematous on its nasal side, while its temporal half lacked color and vascularity, seeming to show incipient atrophy. The retinal vessels were enlarged and their descending branches extremely tortuous and without the normal light streak. The whole fundus was slightly veiled by a delicate membrane which could be seen floating about in the vitreous humor after sudden movements of the eye.

This patient was under our care from Oct. 1. to Oct 21, a period of twenty days. A drop of a solution of sulphate of atropia (gr. iv to $\frac{3}{4}$ i) was twice applied to her eyes, and she wore blue coquilles when on the streets or in a bright light. Three leeches were applied to the left temple three times at intervals of several days. She was put upon Hydrarg. Bichlorid gr. $1/32$, with Tinct. Cinch. Comp. 3 i, after each meal, and upon nitrate of strychnia hypodermically. We commenced with gr. $1/40$ and increased the dose by $1/120$ of a grain daily until we reached gr. $1/16$. This dose produced considerable dizziness with some slight stiffening of the muscles of the legs. The dose was now reduced to gr. $1/32$, which produced no unpleasant effects. She received fifteen injections in all.

At the time of her discharge from our care she was able to read Jaeger No. 8 slowly with the diseased eye. She had recovered her visual field to nearly its normal extent. The subretinal œdema had entirely disappeared, and the whole disk was paler than

normal. The membrane in the vitreous remained unchanged.

There can be very little doubt that this patient was benefited by treatment. It is difficult to tell, however, what treatment did her the most good,—the rest afforded to her eyes by the atropine and colored glasses, the local depletion, the alterative effects of the mercury, or the stimulating effects upon the optic nerve and retina produced by the nitrate of strychnia.

It would seem that this young lady's eye trouble commenced at about the age of puberty while over-using her eyes at school preparing to be a teacher. There was, probably, at first a gradual development of myopia, with more or less spasm of accommodation.

It seems very probable that the almost constant use of glasses which were too strong for her, overcorrecting her myopia by about $1/30$, was an important factor in the causation of the disease of her optic nerve, retina, and vitreous humor. Such glasses would cause a strain upon the ciliary muscle which, in a healthy eye might produce only asthenopia, but which, in an eye the coats of which were already congested by a developing myopia, might easily stir up an inflammation with such results as were found to exist in this case. Her heart, kidneys, and uterine organs were normal, and no other causes could be assigned for her eye troubles than those we have mentioned.

LECTURES.

MITRAL AND AORTIC STENOSIS—CHRONIC BRONCHITIS, EMPHYSEMA AND ASTHMA—HEMIPLEGIA—AORTIC REGURGITATION.

A CLINICAL LECTURE.

BY

AUSTIN FLINT, M. D.,

Prof. of the Practice of Medicine, Bellevue Medical College, New York.

CASE I.—*Mitral and Aortic Stenosis.* This case, gentlemen, will enable me to say a few words on the physical signs pertaining to affections of the heart. You see at once from the patient's aspect that she is not suffering from any cardiac disturbances. The respiration is good, and there is no evidence of lividity. The heart affection from which this woman is suffering is well tolerated. When she entered the hospital a few days ago, the action of her heart was a good deal disturbed. There was great irregularity. That irregularity was not due to the valvular lesion. It was increased, perhaps, by the fact that the valvular lesion existed but the disturbance was entirely functional, coexisting with a valvular lesion of the heart, yet not produced by it. This is an important practical discrimination. When you meet with a case of valvular lesion of the heart and when with the signs which denote such a lesion you find disturbance of the heart's action such as intermittency, dyspnoea, and so forth, the question arises, is this disturbance of function due to the lesion of the heart or is it a coincidence of the functional disturbance of the organ due to other causes besides the lesion? We can study the lesion and see if it is of sufficient importance to produce disturbance of the heart. We can see if there is hypertrophy or dilatation of the heart. If you find valvular lesion with enlarged heart, then you may pre-

sume that the functional disturbance is due to the lesion. If we find enlarged heart due to liver disturbance, then we presume that it is a disturbance of a functional character. Moral causes often produce a functional disturbance of the heart. Since the heart of this patient is acting well now, it is evident that there was some functional disturbance producing the symptoms.

As I examine this patient I detect a murmur at the base of the heart with the first sound. This murmur is propagated into the carotid. Here is then an aortic direct murmur. If the heart were not enlarged, it would be a question whether this was an organic or inorganic murmur. Is the aortic valve sufficient? It is. For there is no murmur following the second sound of the heart. The second sound of the heart is not accompanied by any murmur; hence, we say there is no aortic regurgitation. Between the first and second sounds of the heart we can distinctly recognize a rough murmur. When I listen at the apex I get a murmur which has a peculiar roughness of character. This murmur precedes the first sound of the heart. This is a mitral direct or presystolic murmur. I get no mitral systolic murmur. This means a contraction which produces obstruction. It is an obstruction without insufficiency. If this valve were insufficient we would have a murmur with the first sound of the heart. When the obstruction gets to be more marked and dilatation sets in then we shall have more or less dyspnoea, and oedema of the lower limbs.

CASE II.—*Chronic Bronchitis, Emphysema and Asthma.* I wish to direct your attention first to the chest of this patient. Here is a very typical illustration of the characteristic deformity due to pulmonary emphysema—the barrel-shaped thorax. Observe that this patient is not suffering from embarrassed respiration and that the chest presents in this quiet breathing very little disturbance. The cartilages and the ribs are nearly on the same line. We would expect to find the resonance of greater quantity and quality. It is not tympanitic, that is the pitch is not raised. As yet there is no thoracic enlargement, but later on on account of the emphysema we shall have a dilatation of the heart. Then the right heart becomes weaker and there is lividity of the countenance. Later on we may have general oedema of the lungs.

This woman has chronic bronchitis and asthma. The chronic bronchitis in this case has not been of long duration. This patient has been subject to asthma for a long period and has had bronchitis for only a year. That is very strange for so much dilatation.

I would like to call your attention in this case to one point connected with the mechanism of emphysema. One view is that the dilatation of the air-cells is produced by acts of condensation in the process of expiration. This condensation occurs in the air cells in consequence of coughing and labored breathing. This irregularity in the acts of respiration, occasions the cells to become dilated. Another view is that the dilatation is due to a preceding collapse of the pulmonary lobules and that the lobules that have free communication with the bronchial tubes become dilated from atmospheric pressure. My view is that both those affections are involved in the production of emphysema to the degree that it exists here. If the emphysema is due purely to the diminution of volume of the lung resulting from collapse of the lung, you cannot understand how the volume of the lung should be increased beyond the limits of a forced expiration. If we accept the first explanation we must also assume

that the enlargement is increased by cough and forced expiration.

The important difficulty that we have to deal with here is not the pulmonary affection. In connection with this we have renal disorder. At the present time this patient passes a small quantity of urine. The urine passed is found to contain albumen and casts so that the trouble here of more immediate importance is the renal affection. This patient also suffers from gastric irritability.

The important point in the treatment here is to endeavor to affect the normal secretion of the urine. This patient should not be given elaterium or other hydragogue cathartic. These drugs produce some vomiting. You must try to solicit the action of the kidneys by diuretics and the ingestion of liquid foods. If we can cure the bronchitis, the emphysema will be diminished and there will be less liability to attacks of asthma.

CASE III.—*Hemiplegia.* This man has impaired power of the lower limb and of the upper limb on the right side. He has right hemiplegia. The impaired power is greater in the upper limb than in the lower. This is the rule in cases of cerebral hemiplegia. The face is not at present distorted. There is some little difficulty in the enunciation. There is no aphasia apparently. Aphasia is a loss of speech, not in consequence of any deficiency of the action of the muscles involved in the mechanism of speech, but in consequence of an inability to command language.

What is the history of this patient? This man came into the hospital last night. He is a man of about forty-three. He has a healthy aspect and is a ship captain. On Wednesday he was as well as usual and was engaged in his work. At about two o'clock he suddenly, without any premonition, lost power completely over the right upper and lower limbs. There was complete paralysis. There was no unconsciousness. He said he felt peculiar in his face; but he had no symptoms referring to the head. There was no vertigo and no pain. He has been improving rapidly ever since. In a very short time after the attack he began to have some power over these paralyzed limbs and the improvement has been going on rapidly. The paralysis of the face, which at times existed, seems now to be lost. He protrudes the tongue in a right line and it is not directed towards the paralyzed side.

The first practical question here is, what lesion has taken place in this man's brain? There are three things that produce a hemiplegia. One is a little extravasation of blood in the left corpus striatum in the motor tract leaving those portions of the brain which have relations to consciousness and mental function entirely intact. Another condition is the formation of a clot in a branch of the middle meningeal artery. The third is an embolus wandering from the heart or an aneurism, which, passing up into the brain and going into the left carotid, produces obstruction of one of the branches of the middle meningeal artery. I think we may throw out the thrombosis in this case, because the formation of a thrombus is not sudden. It takes a little time at least between the formation of the clot and its conveyance into the circulation. This man has had rheumatism several times. If we found a murmur of the heart it would show that there was some lesion. That would render it probable that there was a vegetation or recent clot. This became dissolved, moved off with the blood and entered the middle meningeal artery. But the absence of any murmur showed conclusively that this is not the explanation. The absence of a mur-

mur does not prove any thing against the heart lesion. The fact that this man has had rheumatism several times is to be considered; also the age of the patient. Cerebral hæmorrhage does not occur very often in young subjects, under forty years of age. This man is over forty. An embolus generally gives rise to hemiplegia. Another point is the loss of consciousness. A large clot generally gives rise to loss of consciousness. Another point in this case is the rapid improvement. In a clot, as a rule, the improvement does not take place as rapidly as in this case. When you have a clot in the brain it excites a certain amount of inflammation. This is indicated by a certain amount of pain and fever. This man has had no pain or fever in the region of the head. Here again we have points in favor of an embolism. The evidences of the embolism preponderate. The points in favor of it are: the rheumatism, the paralysis being on the right side, the occurrence of the paralysis without loss of consciousness, the speedy commencement of improvement and rapid progression, the absence of all cerebral symptoms—all showing the presence of what is virtually a foreign body in the brain substance; and yet, notwithstanding the preponderance I would not venture to commit myself positively to an opinion that it is not a small clot.

Nothing need be done here in the way of medication. The patient should keep quiet and have enough to eat. Within the last few years it has been supposed that the cause of the clot may be a microscopical aneurism. These may produce extravasations of blood; say two or three drops. If this patient perfectly recovers, it is pretty sure to be an embolism. If a patient recovers from a clot, the recovery may approximate to completeness, but it is, I believe, never absolutely complete.

CASE IV.—Aortic Regurgitation. This patient, gentlemen, I understand, is a case illustrating valvular lesion of the heart. I will examine him before you and make some remarks on what I find. He has had right hemiplegia twice, from which he recovered imperfectly. I find a murmur with the second sound of the heart. It is an aortic regurgitation. This is a lesion which is not followed by general œdema for a considerable length of time. While in mitral disease there is very little immediate danger, in aortic lesion there is great danger of sudden death. It leads to over filling of the left ventricle to such an extent that paralysis of the heart may take place in consequence of the over distention.

NERVOUS APHONIA AND SYPHILITIC NECROSIS OF NASAL SEPTUM.

CLINICAL REMARKS,

BY

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CASE I.—Nervous Aphonia.—This young woman, gentlemen, comes to the clinic to consult us regarding her loss of voice. She says that she woke up one morning and found that her voice was gone. This condition has persisted for three months. She is unable to sleep at night on account of dyspnœa.

The first thing you notice in regard to this young lady is that she has a soft whisper voice. It is not a hoarse voice, but whisper-like. I examined this patient's larynx by means of the laryngoscope, and I

failed to detect any disease of the vocal cords, in fact the larynx was perfectly normal. While making the examination, however, I asked her to phonate, and she forgot herself, or whatever it was, and pronounced the letter each time. There is no catarrhal affection or paralysis. There is no tumor growing there. We have then no organic lesion whatsoever. Hence, we are driven to the very natural opinion that the loss of voice in this case is due to that very peculiar condition in young females, which we designate by the name hysteria.

The muscles concerned in the production of vocal sounds, are the crico-thyroid and crico-arytenoideus lateralis. The crico-arytenoideus lateralis muscle, extending from the upper border of the cricoid cartilage to the external angle of the arytenoid cartilage, acts to draw the vocal cords together by pulling the anterior angle of the arytenoid cartilage forward. This muscle is opposed in its action by the crico-arytenoideus posterior muscle, which pulls the external angle of the arytenoid cartilage backwards. That is a respiratory muscle. The first is a phonating muscle. This crico-arytenoideus lateralis muscle is reinforced by the crico-thyroid. In phonation, the vocal cords are first brought together and made tense. The current of air is next forced through between the rima glottidis, throwing the cords into vibration. Tension of the vocal cords and expulsion of air by the respiratory muscles are necessary to produce a sound. If any one of these conditions fail, we have a loss of voice. If the cords are not brought together sufficiently to be thrown into vibration by the current of air passing out of the lungs; we have a whispered voice. This is precisely the mechanism of a whisper, the vocal cords taking very little share in its production. It has been said to be due to the approximation of the false rather than the true vocal cords.

The condition which simulates aphonia is hoarseness or laryngitis. This is due in the main to the fact that the vocal cords are greatly thickened by inflammation of the mucous membrane which covers them. The same thing takes place when you increase the size of a piano or violin string. By so doing you reduce the note down till you get beyond a musical note. Then you come into the region of noise.

What shall we do in these cases of functional hysterical aphonia? We must recognize first that in hysterical aphonia as in any other form of hysteria, whether manifesting itself in the larynx or otherwise, we should not regard it as a sham on the part of the patient. It is as real a disease for this young girl as if she had cancer. You must recognize that fact and actually deceive yourself. She should be treated with mild local solutions. The adductor muscles, by means of which the cords fall together and refuse to open, must be stimulated in a case of hysteria. The dyspnœa is due to the psychical cause of hysteria. In one case of hysteria which took the form of paralysis of the glottis, the patient became so bad that preparations were made to perform tracheotomy with the galvano-cautery. The sight of the red hot wires and the gathering of the surgeons, produced such a profound mental impression upon the patient that the recovery was complete before the operation was entered upon. Give preparations of acetic acid for hysteria. Keep in view whether to revert to the use of the local spray and douches. Get the patient's mind fixed definitely upon some period when she is going to be entirely relieved. You can tell her that the first operation is going to cure her. It may be the introduction of the laryngoscope. In the meantime keep up the use of the spray and douches.

CASE II.—The patient gives the history of primary

syphilis nine years ago followed by the usual history of rheumatism, eruption, sore throat, etc. Four years ago he developed a nasal catarrh which soon ran into a chronic *ozæna*. There was ulceration and necrosis of the hard palate. At present there is an opening in the hard palate, so that the turbinated bones on each side are exposed. The disease here involved the septum rather than the turbinated bones themselves. The superior turbinated bones are invisible, and they are rarely involved in any pathological condition. We have here a certain amount of hypertrophy as well as marked nasal catarrh.

This man has been fortunate in the limitation of the disease. He has had local as well as constitutional treatment. This should always be insisted upon.

CHRONIC DIFFUSE NEPHRITIS—CIRRHO-SIS OF THE LIVER.

A CLINICAL LECTURE,

BY

FRANCIS DELAFIELD, M. D.,

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CASE I. Chronic Diffuse Nephritis.—Male *æt.* 22; admitted to the hospital November 18th; was taken sick three months before admission, and the first symptom noticed was dropsy of the feet and legs. This dropsy extended up from the feet and legs and became general. At first his urine was diminished in amount. After that the quantity increased and continued to be about normal. There was no headache; no disturbance of vision. When admitted to the hospital he was still suffering from anasarca without headache or vomiting and without disturbance of urine. He was passing twelve ounces of urine in the twenty-four hours with a specific gravity 1026 containing fifty per cent. albumen, granular and epithelial casts. The patient was put upon the use of hot water baths every second day. Under this treatment his urine increased in amount up to fifty and eighty ounces. He was also taking diuretics in addition to the hot baths. The dropsy steadily diminished. The patient was doing well and passing a large amount of urine until December 9th. Then the dropsy began to return and this has continued from then up to the present time, and his urine has again diminished in amount. The hot water baths were resumed and the oedema again seemed to decrease. He passed on the 12th December 128 ounces of urine. The bitartrate of potassium was administered.

Here you have, gentlemen, a very superficial history indeed, and yet the case is a very plain one. You have a young man who dates his whole history back to three months, and then the first thing noticed was the fact that he was becoming dropsical. This dropsy began in the legs, and he was passing less urine than usual. The dropsy continued up to the time of admission to the hospital, when there was well-marked general anasarca. At present you observe that the dropsy is still pretty well marked. Except this, there have been no other symptoms. He has had no disturbance of stomach. His color is fairly good. His lips are almost as red as they ought to be. There is not a very loud murmur with the first sound at the base of the heart. The heart is not increased in size.

Here, then, gentlemen, is a very superficial history

of disease of the kidney of some kind. The man has not merely a parenchymatous but a chronic diffuse nephritis.

The one indication for treatment here is the getting rid of the dropsy. At first the increase in the amount of urine had its proper effect on the dropsy, but at the present time this effect has ceased. He passes nearly double the amount of urine which he ought to pass, and yet the dropsy is persisting so that evidently we are not getting at the dropsy in this way. The use of foot baths and diuretics which increase the amount of urine does not seem to cause the dropsy to disappear. When a patient behaves in this way and is still in a good condition as this man is, the indications are to stop the use of diuretics and use iron in some shape or other. Iron should be employed in considerable doses. While we may continue hot water or hot air baths it is better to stop diuretics altogether and commence at once with one or the other preparations of iron. If the case is not one of very long duration as with this young man, you will often get good enough results from them. If this boy had been sick for a year or two, then it would make very little difference indeed what you gave him. These older cases of large white kidney, when they exhibit the particular combination of increased amount of urine with increased dropsy, go on and do bad no matter what you do. At an earlier period of the disease, however, when the symptoms have only existed a few months, the condition of things is not as bad and it will be possible enough for this young man still to get better, although he has this combination of dropsy and large amount of urine.

CASE II. Cirrhosis of the Liver.—The patient who is coming in now, gentlemen, is a man fifty four years old. He was admitted to the hospital on the 29th of November. The man has been habitually intemperate, but still his health was considered good enough until the 19th of November, ten days before admission. Then he suddenly vomited up a large amount of blood, and for several days after this his *fæces* were of a black color as if stained with blood. This vomiting and discharge of blood with the *fæces* continued up to the time of admission to the hospital. When he came into the hospital he was very anæmic and feeble. Both his face and the mucous membrane of his lips were exceedingly pale as if he had lost a large amount of blood and he was a little delirious. His temperature was 99.5° F. His urine had a specific gravity of 1012. There was no albumen and there were no casts. He continued in this condition until about December 4th. Then the bloody movements from the bowels stopped. The delirium, however, still continued, although he was gaining strength and improving. His mental condition is better than it was, but still it is not perfectly satisfactory. He has had no return of vomiting and there are no more bloody movements. His color has become moderately good again.

On percussion we find that the liver dullness reaches from the nipple to near the umbilical cord, so that the liver is not diminished in size. The spleen is a little increased in size; the heart is in its natural position. There was no murmur except an anæmic murmur when he first came into the hospital. He has had enlarged spleen and bleeding from the mucous membrane of the stomach. The only positive thing we know is the fact that he bled pretty freely from the stomach. What was the cause of this bleeding from the stomach? Cirrhosis of the liver might very well be such a cause. Ulcer of the stomach gives rise to

bleeding, and it is possible for it to give rise to bleeding without any other symptoms; but the rule is that in ulcer of the stomach the patient has vomiting and pain besides the bleeding. The man could bleed from chronic gastritis, the result of congestion from the use of alcohol. In chronic gastritis the patient usually bleeds at different times in moderate quantity. Besides that, we are apt to have other symptoms of chronic gastritis. The man might have a carcinoma. He is fifty-four years old. Cancer of the stomach will sometimes behave in just this way. It will give no symptoms at all until the patient suddenly loses a considerable amount of blood from the stomach. Against this, however, is the absence of cachexia at the present time, and the fact that the man is improved so much since the vomiting of blood stopped. The things possible in his case then would be: cirrhosis of the liver with obstruction of venous circulation of the stomach, ulcer of the stomach, chronic gastritis and cancer of the stomach. Of these different conditions the one which I suppose is the most probable, taking all in consideration, is that of cirrhosis of the liver with obstruction of a branch of the portal vein coming from the stomach, so that you will observe that this man furnishes us with still a third variety of cirrhosis. We saw one case last time characterized by impairment of general nutrition; another case was marked by dropsy alone, with fair general health, and here this man is a good example of cirrhosis of the liver, without dropsy and without any very great interference of functions of the liver but with the one symptom depending upon the obstruction of part of the portal circulation coming from the stomach and this resulting in bleeding from the stomach, and the man's present condition is dependent upon that fact.

ABSTRACTS AND SELECTIONS.

THE UNSANITARY HOMES OF THE RICH.

Sanitary science is one of the oldest sciences. The hygienic laws laid down by Moses and Hippocrates are to-day just as applicable as they were two thousand years ago, and only need adaptation to our complex civilization. Nevertheless, progress in the practical application of sanitary principles has not been rapid. It has kept pace with the advance of knowledge, but this has, of necessity been slow and disappointing. Until newspapers began to be widely diffused there was no means of popular enlightenment, and even now people are apathetic about hygienic matters, and neglect the "ounce of prevention," nowhere else so vitally important.

It is only thirty-five years since the first comprehensive health law was enacted in Great Britain; and it was not until the criminal blundering of the Crimean war, and the death of Prince Albert, that the English public were awakened to the need of sanitary reform. Much had been previously done to improve the condition of hospitals, prisons and factories. Smoke nuisances had been abated and grave-yards in crowded cities closed. Domestic sanitation was, however, an unworked field, which is only now beginning to be cultivated. The principle laid down by Dr. Carpenter, that "the house is the unit of sanitary work," had not been accepted. Building details had been left to the architect; and it was not until medical men awoke to the alarming spread of zymotic disease, due to bad drainage, that people began to question the providen-

tial theory of disease and to raise the warning cry, "Look to your drains."

The most surprising fact is, that while the evils complained of have been found in both city and country houses, and in the homes of rich and poor alike, yet they have been most destructive to life and health in the finest residences here and abroad. The same ignorance which led Peter the Great to select a flooded marsh as the site of his imperial capital, are repeated in the arrangements of the noblest European palaces. Viollet le Duc relates that he had occasion to visit the Tuileries with an old lady of the "ancien régime," who noticed with satisfaction what to him were insufferable odors from certain sanitary conveniences in the building, and said that they recalled to her the time before the Revolution when she was a maid of honor. After the death of Prince Albert, his usual study seat was found to be directly over a cess-pool, whose emanations were undoubtedly the cause of his disease. The almost fatal illness of the Prince of Wales at Sandringham was ascribed to a like cause. The ancient palace at Darmstadt, where the Princess Alice was carried off by diphtheria, was afterward found to have many leaky drains and unventilated cess-pools. Within a year Badgshot Park, the newly built residence of the Duchess of Connaught, supposed to be perfect in its sanitary arrangements, has been discovered by Dr. Playfair to be filled with sewer-gas. These experiences of royalty show in the most vivid way how little attention has been given to the sanitary arrangement of the costliest and most palatial dwellings. Mr. Rawlinson, the eminent English engineer, declares that Belgravia is the worst sewered part of London, and that the drainage of the Government offices and official residences in Downing street is so indescribably bad that he would rather resign than live there.

These statements are sufficiently startling, but they are no worse than the known facts about the finest residences in the United States. Much has been written and said of late years about the wretched homes of the poor of New York, their squalor, their filth, and the moral and physical degradation of their occupants. All are familiar with the harrowing description of the barracks and slums in which a large proportion of the metropolis live and in which so many of them die. Little, however, has been heard of the unsanitary homes of the rich; and it seems paradoxical to declare that the defects of the costliest houses on Murray Hill rival those of the tenements of Baxter street. New York is the commercial center of the country. The daily transactions of its clearing-houses mount up to millions. Its docks swarm with shipping from all parts of the world, and its warehouses overflow with merchandise from the Ganges, the Thames, the Golden Gate, and the Amazon. Millionaires jostle each other in Wall street, and bonanza and railway kings are as common as blackberries there. To house the possessors of this wealth, the finest dwellings that architectural taste can design are being erected all over Manhattan Island, many of them of imposing dimensions, palatial in their adornment, and seeming to lack nothing to promote comfort, enjoyment and health. Yet I venture to say that a large number of these houses are mere whited sepulchers, and their luxurious inmates are exposed to constant risk of disease and death. The story of the rich man who tore down his barns and built greater ones, has a parallel in hundreds of cases, where the possessor of wealth, acquired by years of persistent labor in mining, manufacturing, commerce or speculation,

comes to New York to enjoy his gains, buys a mansion, adorns it in æsthetic style with costly frescoes, rich upholstery, elaborate carving, and bric-à-brac, and then has some member of his family stricken with sickness, due to sanitary defects in or near the dwelling.

If we critically examine one of the palatial residences on Murray Hill, what do we find? Instead of being spacious, as if the owner liked ample room both for his comfort and to dispense a liberal hospitality, it is long and narrow, as is inevitable from the contracted site. The windows have little, if any, outlook, as the view is shut in by the adjacent houses. Each owner seems determined to cover every inch of his land with brick and mortar, leaving only a paved patch some fifteen feet square for a yard to dry clothes. The bit of grass-plot and grape-arbor, with an occasional fruit or shade tree, formerly in vogue have gone out of fashion. Rich New Yorkers no longer care for such commonplace things. Their children do not require a play-ground. The family are content with an outlook of bare walls and neighbors' windows. Such yards as may be seen are so shut in as to appear like prison grounds. As the sunlight rarely enters such homes, the long three-deep suits of rooms never seem bright, sweet or fresh, and there can be no free circulation of air. Such air as does enter the seldom opened windows is redolent with scents from stables, soot from elevated railroads, vapors from factories, or odors from Hunter's Point refineries; the careful housekeeper therefore closes the windows tightly, and the sole source of air is the furnace register, which is supplied from a leaky cold-air box, filled with cellar-damp and street-dust. When ignited the latter smell like burnt feathers, and on analysis it yields twenty per cent. of organic matter. Yet air of this composition is the chief lung food of nine-tenths of the people of the metropolis. After passing through the furnace registers, it mingles with the vapors from the kitchen and laundry, or with gases from leaky drains or foul plumbing fixtures and the products of combustion from scores of gas-jets, forming what Professor Huxley aptly calls "a stirabout of solid particles," and a poor substitute for nature's atmosphere.

Ventilation is decidedly one of the lost arts, and in most houses there is hardly a pretense of providing it. The sole dependence for fresh air is usually windows and open fire-places, the latter of which are becoming common. Where flues are provided to carry off foul air, they are so small and so roughly lined as to be of little utility. Ventilating shafts are little better, as they are seldom provided with proper openings at the roof, while the skylights over halls are in hundreds of cases tightly sealed. In a vast majority of houses, the air from the lower floors stagnates in the rooms next the roof, whose occupants are in a constant state of stupor from the impure atmosphere. The increasing prevalence of catarrh and pneumonia is pronounced by many physicians as due to the unwholesome air which our people breathe.

Two thousand years ago, Hippocrates said a dry soil is essential to health. A damp cellar is one of the least desirable features of a dwelling. Yet, Professor Chandler declares that not one house in a hundred, in New York, has a properly constructed cellar, which explains the large proportion of deaths from consumption, and the prevalence of rheumatism in the metropolis. In the main part of the occupied portion of Manhattan Island there is no soil drainage. Sewer connections are usually made with tile drains, which are rarely tight, and hence they seriously pollute the

soil. There is a lack of ventilation and sunlight in cellars, which are crowded with wood and coal bins, wine closets, and domestic rubbish. Householders should follow Professor Chandler's advice and inspect their cellars once a month.

In the best houses, the provisions kept in refrigerators are exposed to the chance of contamination when the drip-pipe connects directly with the house-drains. Frequent cases of sickness have been traced to this cause. Water tanks and cisterns connected with soil-pipes are exposed to like contamination. The space behind the wood-work of basins, sinks, and other fixtures is almost invariably foul. Slop sinks are sources of offensive odors, and all these evils are intensified by the lack of water for flushing purposes, owing to the deficient pressure.

The multiplication of servants, and the lack of responsibility for domestic details, have an important sanitary bearing. In houses which have the largest number of domestics, there is often the least attention given to cleanliness. In one of the worst dwellings I have had occasion to examine, and where a death occurred under peculiarly tragic circumstances, there were nine servants, and if the number had been larger, I fear the whole family would have been carried off. In proof of the correctness of these assertions, I may cite the steady advance in the death-rate of New York City; the statements by official inspectors of the Board of Health of the amount of bad plumbing found everywhere; the evidence of other professional observers, like Col. Waring, that defects in house drainage are prevalent in the very best houses; "almost without exception;" and the testimony of physicians like Dr. Fordyce Barker, Dr. Willard Parker, Dr. Frank H. Hamilton, and others, based upon wide experience and extensive practice. If other evidence were needed, it might be found in the number of practicing physicians in New York City, the drug stores on every corner of the leading thoroughfares, and the large outlay for medical attendance and drugs in most families.

But this state of things is not confined to the metropolis. From Brooklyn, Boston, Philadelphia, Washington, St. Louis, Chicago, Cincinnati, San Francisco, and other cities, large and small, the same story is heard. The trail of the serpent is over them all. Wherever "Jerry" builders, ignorant plumbers, and unscrupulous owners or speculators are found, the same deplorable condition of things exists. In Brooklyn, the finest homes on the Heights have been polluted with sewer-gas, despite their superb situation overlooking New York Bay and swept by winds from every quarter. At the time of the Rockwell case, in 1879, a dozen houses on Montague Terrace were visited by diseases due to bad plumbing. Few of the houses have any barriers against sewer air. During the extensive epidemic of diphtheria in 1881, defective plumbing was found in the majority of the houses where cases occurred. In Washington, the sanitary defects in the White House, which are believed to have contributed to President Garfield's death, are equaled by those in several public buildings, where trapless water-closets, leaky drains, furnaces with polluted air-supply abound. Mr. C. A. Robinson, Inspector of plumbing of the District of Columbia, records a number of similar evils, many of them in "good houses, some among the finest in the city."

In Boston, many fine residences, especially in the fashionable Back Bay region, lack sanitary safeguards. Thousands of houses are built upon piles in made ground. In the process of settling, which may con-

tinue for years, the drains are inevitably dislocated, and this permits sewage to saturate the foundations and subsoil. I have known seventy-eight cart-loads of earth polluted in this way to be taken from under a building. This condition of things may exist for months, and even years, without a suspicion of harm, until serious sickness breaks out. Mr. Theodore Clarke says: "In my experience, defects of this kind are far more common than leaks in iron soil-pipes, imperfect traps, or other defects attributable to the plumber." The thickest concrete flooring is no barrier to drain-air, which, after entering the cellar, readily finds its way through the recesses in walls where plumbing pipes and furnace flues are carried to the remotest point of the building. An official examination of three hundred and fifty-one houses, made in 1878, showed that fifty-five per cent. of the drains were imperfect. In Chicago, out of seventy-five houses where diphtheria occurred, only four were found in a sanitary condition. In St. Louis, Health Officer Moore stated, in 1879, that there was probably not a single house with perfect drainage, while in the vast majority every sanitary maxim is violated.

As may be inferred, if plumbing in these localities is so bad, it is still worse in small cities and towns. In such places, men of wealth aspire to build residences rivaling those of the great cities, and with all modern improvements. Neither the architects, however, nor the plumbers on whom they rely, have hitherto been equal to the task. The former are no better informed than their city brethren, while the latter are mostly tinsmiths who have had no practical training in plumbing and who make extraordinary blunders. The most carefully drawn specification will hardly restrain an ignorant or unscrupulous mechanic from scamping his work. Hence, hundreds of examples of criminal blundering may be found in these places. In St. Paul, Minn., galvanized iron is invariably used for ventilation pipes. The rest of the plumbing is on a par with this practice. In Rochester, I am told that there is only one practical plumber among the thirty men in the business there, and when tinsmiths have contracted to plumb a fine residence they have had to borrow a journeyman plumber to make the wiped joints, as tinsmiths can only make "bolt" joints. In another city in the center of New York State, a fine mansion which cost seventy-five thousand dollars had such small chimney flues that not one of them would draw, while the plumbing was simply wretched. A bath-room in the center of the house had no ventilation except through a transom window which opened over the head of a bed. The occupant of that bed died of typhoid fever. Another bath-room was ventilated by a small pipe into a chimney flue, and the odors passed into the dining-room on the floor below, causing so much offense that the fire-place had to be bricked up.

Three causes have contributed to the prevalence of defective house drainage. First, plumbing practice has not developed so rapidly as other useful arts. Houses built only a few years since lack many sanitary requirements. Since 1878, a revolution has been effected in methods of work and in the character of plumbing appliances. A large manufacturer of plumbing supplies states that his sales of fine goods of this class during the past three years exceed the total sales of the previous thirteen years. The widespread agitation by the press and by technical journals has made the public appreciate the necessity of having the best plumbing in their houses. The time is not distant when people will be willing to make a reasonable out-

lay to meet the sanitary requirements of dwellings. Second, the number of plumbers competent to do good work is small. The great majority have had to depend upon contract work, which of necessity is cheap and inferior. Few of them have had opportunities to execute work of the best kind. They have been snubbed by architects, cramped by customers, their motives distrusted and their intelligence belittled. A plumber who is conscientious and disposed to render a fair equivalent for his pay cannot compete with unscrupulous rivals and must be content with a limited business. The mass of the trade are grossly ignorant of scientific principles, and are influenced too strongly by mere considerations of profit. If a customer does not want good materials or the best workmanship, the ordinary plumber furnishes a poor quality of both, suiting his service to his pay. Even when the owner is wisely liberal and desires to have the best that money can supply, the plumber, from ignorance, may be incapable of meeting his wishes, and one constantly finds houses in an execrable condition when no limit has been placed upon the cost. Again, some plumbers who have gained a reputation for good work will deliberately trade upon this reputation, and by employing a few good workmen and a larger number of inferior hands or boys, will strive to make the skill of the former supply the deficiencies of the latter.

It might be expected that our architects would give special heed to sanitary requirements, but thus far they have been too busy with the æsthetic side of their profession, simply because this is what their clients expect from them. Hence the plumbing and drainage of a house are usually left to the wisdom and care of the builder or plumber, with what results the public too well know. Any one who has had occasion to read the plumbing specifications drawn up by the average architect will be filled with amazement at their crude, incomplete, and unsatisfactory character. Even where, as in New York, printed blanks are provided by the health authorities, a large proportion of the plumbing specifications have to be returned for revision.

As human nature is constituted, and while men must live and carry on business under severe competition, it is only to be expected that plumbers will be governed by self-interest; but householders may avoid being victimized by employing only men of intelligence and standing. There is a strange delusion on the part of the public that a plumber who works himself and has a shop in a cellar must, of necessity, be more intelligent and cheaper than a workman employed by a reputable firm who can afford to have an attractive shop in a good locality. Hence one constantly finds the most stupid and rascally fellows admitted into the best houses, and allowed to do as they please with the drainage. Some one has said that a man cannot handle lead without moral deterioration. A more rational explanation of the deficiencies of plumbers would be, that where men's pecuniary interests are opposed to their sense of what is right they become what is called "business honest," and sacrifice others' interests to their own. The day of retribution, however, is fast coming to the men who have done inferior work in this line.

Another cause of the unsanitary condition of modern houses is the parsimony or false economy of their owners. There seems to be a special temptation to skimp and save in plumbing. Yet it constantly happens that the whole drainage arrangements of a house are spoiled by such a penny-wise policy. It is always cheapest to have good work, and the cost of tearing out and correcting defects is usually three times the

outlay for making work perfect at first. As Emerson remarks: "The difference between what is good and the best is sometimes as great as between what is good and what is bad." A slight flaw in the drainage of a house may ruin the whole. As a chain is never stronger than its weakest link, so the most elaborate system of plumbing depends for its security upon the perfection of every detail.

Furthermore, householders must learn to distinguish between things which are essential and those which are merely ornamental. They must not consider a stain on a marble slab or on the lining of a bath-tub a more serious offense than a soil-pipe full of sand holes or one jointed with cement and putty. Neither must they take it for granted that because the visible work about a house is neatly and carefully finished, the work hidden under floors or behind casings is of equal quality. When one reads descriptions of the gorgeous sanitary arrangements in certain London artists' homes, where lavatories are fitted up with coral, silver, crystal and marble slabs, inlaid with uncut gems and ornamented with silver and gold, he cannot but wonder, in view of the shocking sanitary defects in the homes of the English nobility and of royalty itself, if the rest of the work is scientifically planned and executed.

Often the cry is raised that people should abolish plumbing altogether in houses. Such radical measures, however, are needless and unwise. Good plumbing is healthful, convenient, and comfortable, and it is absurd to talk of abolishing it as of abolishing cleanliness, sunlight, or fresh air. Many persons try half measures and remove basins from bedrooms, but ignore the more obvious and serious defects of pan water-closets, foul slop-sinks, and other fixtures which are found in the very finest houses in close proximity to living and sleeping rooms. Still others have recourse to devices for excluding or destroying sewer-gas, so widely advertised of late, but which have justly been described as humbugs and frauds upon the public.

Thus far I have referred specially to houses owned by their occupants. There is a still larger class, that of leased dwellings, owned by individuals or by large proprietors, as the Astor, Rhinelander, Goelet, or Lorillard estates. They are situated in fashionable sections, and command a high rental. The plumbing is often elaborate, and was originally of average good quality. Sanitary science, however, has made such rapid strides of late, that the materials, appliances, and methods of ventilating fixtures and pipes in use ten, or even five years ago, to afford security against sewer-gas, are now obsolete. Plumbing practice in the past was based on English experience, and has been largely modified to suit our climate and domestic habits, while experience has shown the necessity of using heavier material, better and more costly fixtures, and more elaborate methods of trapping and ventilation. As the lead soil-pipes, brick and stone drains, and cheap and inferior fixtures, to be found in most leased dwellings a decade since, have yielded to the wear and tear of time landlords have made improvements, but in an economical fashion, having always their own interests in view. It is but natural that property owners should be slow to spend money for the benefit of their tenants. They usually employ a plumber who has sufficient discretion not to put his customer to excessive expense, by doing everything a tenant may want or which his own judgment may tell him should be done to insure safety. The result is systematic patchwork and deception, by which the tenant is frequently led to think that everything has been made right, although dangerous defects

still exist. Often, only through the intervention of the Board of Health can landlords be forced to provide improvements. Again, even where a tenant himself pays for needed alterations, the plumber is ashamed to stultify himself, and hence omits to completely cure existing defects. Flagrant cases of this kind have come up in my experience. A gentleman rents a house in the belief that it is in good sanitary condition. He is assured by the landlord, that all sanitary safeguards are provided, in time bad orders are noticed and sickness breaks out. The landlord, when applied to, sends his plumber, who makes some slight changes, pronounces everything all right, and goes his way. Again trouble ensues, the same course is repeated, and finally the landlord declares that nothing more can be done. Recourse may then be had to the Board of Health, whose inspectors will suggest some additional changes, or may not find anything to correct. Finally, a sanitary expert is called in, who usually discovers some serious defects in the drainage arrangements. The tenant is naturally indignant, and asks an explanation. The landlord refers to his plumber, who, when brought to book, admits that he has considered the interest of his employer alone, and made only such improvements as he thought the latter would approve and pay for.

Within a few years there has been a popular *furore* in favor of apartment houses, and numbers of flats of colossal proportions and costly construction have been built and quickly leased at high rentals. These buildings, however, are often no better in their sanitary arrangements than the average private dwellings. As a rule, they are overheated, especially the halls; usually there is inadequate ventilation, dark rooms abound, and the plumbing, while claimed to be of the best, is lacking in many essentials. Lastly, there is great danger from fire in these buildings. In more than one large apartment house wooden stair-ways surround elevator shafts, which, as repeated experience has shown, will serve to convey a fire almost instantaneously from cellar to roof. Again, the very care taken to deaden floors and prevent the transmission of sound will make it difficult to alarm the tenants in case of fire. The fact that insurance companies consider apartment houses as extra hazardous risks tells its own story; and the possibility of a fire in some of these huge structures must be anticipated with a dread which the late conflagration in the Cambridge flat more than justifies.

The sanitary condition of the summer homes of our wealthy citizens at the sea-shore and other health resorts is on a par with that of their city residences, with this difference that the drainage arrangements are usually executed by country plumbers, who are even inferior to city mechanics, while the universal dependence upon leaching, and unventilated cess-polls in proximity to wells and cisterns, is a constant source of danger. The repeated epidemics of typhoid fever and malarial diseases in localities where such conditions prevail, and the fact that visitors are seized with these maladies after their return to the city, are ample evidence of the unhealthfulness of summer resorts. Despite the outdoor life and the exercise which visitors enjoy, it is beyond dispute that the health of the city as a whole is higher than that of the country, and that the risks of a summer spent at so-called health resorts are of a serious nature.

After seeing the ills which beset our wealthy householders in their domestic surroundings, if we visit their counting-rooms and offices, where the male members of the family amass the wealth so lavishly displayed in their homes, still further surprise is experienced.

Take any one of the huge buildings down-town, where hundreds of firms, with their clerks are daily absorbed in business affairs, and what do we find? Into a vast number of offices the direct rays of the sun never enter, and they are dimly lighted by shafts, by reflectors, or by gas. Their sole dependence for air are windows, which are rarely opened, and which look upon small, dingy courts or narrow, gloomy streets, from which lofty adjacent buildings exclude all light. Ventilation is scarcely known in these places. Elaborate and costly devices are often provided to carry off foul air, but they constantly fail to act, as there is no provision for pure air or providing heated currents to carry away the impure atmosphere. In the private offices of the heads of firms open fires may give some relief, but steam coils are the main dependence for warmth, and slowly and remorselessly roast the occupants with their dry, unvarying, and debilitating temperature.

Many offices are situated in basements, just over damp cellars; others are off dark, dank halls in close proximity to foul plumbing fixtures; while everywhere the unwholesome fumes from gas-jets, the burnt dust which settles on steam-coils, and the impalpable impurities from samples or goods stored near by, contribute to pollute the atmosphere. Any plumbing is thought to be good enough for business buildings. The wear and tear to which it is exposed from careless clerks and boys, and the neglect of janitors, with the absence of water for flushing, all contribute to make it unwholesome. Furthermore, the sewers are often very bad, in many cases, stone drains roughly constructed, without proper pitch or ventilation, and with no means to keep them free from deposits. They were originally intended to carry off surface water, and are wholly unsuited to convey sewage. There is no barrier to prevent sewer air from finding its way into buildings, nor are soil pipes carried through the roof, of full size to permit its escape into the atmosphere above. Hence such buildings are found saturated with sewer-gas, and their occupants, too absorbed in business cares to heed their unsanitary surroundings, learn only too late what are the physical effects of such exposure.

These conditions undoubtedly explain the worn, weary, blanched, and prematurely aged look of so many business men. The wholesale introduction of steam for heating office buildings threatens to increase the crop of evils just pointed out, and to intensify the nervous strain which Dr. Weir Mitchell and other specialists note as so destructive to health. Our people are starving for want of fresh air and it is no wonder that the tired broker or merchant, after a toilsome day in his stuffy office, seeks relief in stimulants or becomes the victim of chronic dyspepsia, nervous exhaustion, insomnia, and brain paralysis. Some of the most remarkable examples of unsanitary conditions in my experience have been in business offices, and in more than in one instance in new buildings supposed to have perfect plumbing. In the directors' rooms of wealthy corporations and the private offices of bank and insurance presidents these evils are found in their worst form.

Here, then, are certain facts which are sustained by the steady growth of zymotic disease and by the evidence of many observers, who have had like opportunities with myself to inspect dwellings. The question may pertinently be asked, What are our wealthy citizens going to do about it? Will they continue to pursue the ostrich policy which has prevailed of late years with such direful results? In other instances, when large numbers of people have been threatened

with danger, societies have been formed to diffuse knowledge and inaugurate reforms. It would, therefore, seem timely to found an Association for Improving the Condition of the Rich, to send missionaries and to diffuse tracts among the benighted class, who, as has been shown, are exposed to such dangers. Undoubtedly the whole community would be interested in so benevolent a movement, and would contribute liberally toward its support. CHARLES F. WINGATE.

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PETTENKOFER'S THEORY OF CHOLERA INFECTION.

Amongst the most recent contributions to medical literature in Germany is Dr. Pettenkofer's article in the *Neusten Nachrichten*, on the situation of Munich with respect to cholera. He asserts that in its epidemic diffusion, cholera is not only dependent upon an infection capable of being spread (or a cholera germ) but is further aggravated or modified by the susceptibility of various localities. Some cities have always enjoyed a practical immunity from cholera, as for instance, Stuttgart, Salzburg, Lyons, and Versailles. The susceptibility of places not enjoying this local immunity, however, is not always alike. Thus, Munich has since 1831 only had three outbreaks of cholera, while Berlin has been subjected to the visitation more than twice as often during the same period; thus, the predisposition of a city for cholera arises from a combination of circumstances of place and time. Dr. Pettenkofer quotes several instances from the medical history of India in proof of his theory, as to the localization of cholera infection in certain places, in contra-distinction to its emanating from cholera patients.

The arguments deduced from the fact of cholera being met with in ships, which move from place to place, are met with the assertion that ships have a right to be included amongst the localities enjoying that practical immunity to which reference has been made. It is remarked that according to the usual custom, if a ship is in an infected harbor and cholera makes its appearance on board, all intercourse with the shore is interrupted, and the vessel removes to the open sea, where the cholera usually becomes extinct. Statistics of an interesting character are quoted, with a view of showing that the cholera at sea (though attracting, when it occurs, an important share of public attention) really bear an extremely small proportion to the vast number of cases in which no such attacks take place. During the year 1873 there arrived at New York 152,135 persons from the continent of Europe, and the total number of deaths from cholera, on the way or during quarantine, is said to have been 8, of which 4 occurred on board one ship amongst the members of two families, who seem to have been already infected when going on board. The whole of the 11 persons were attacked, but the remaining 7 recovered after reaching land.

It is admitted that vessels have sometimes been obliged to turn back on account of the disease having attacked relatively large numbers on board, but it is pointed out that in such cases the common local origin of the disease has been clearly demonstrated; having been traced to certain lodging-houses with respect to emigrant ships, and to certain garrison towns where the outbreak has occurred on board war-transports. An instance is quoted of six companies of English soldiers having been sent by one steamer—three of them

from a barrack, and three from a camp. Cholera broke out some days after the steamer was at sea, and numerous fatal cases occurred, but only amongst the men from the camp—those from the barrack as well as the crew, not having been attacked. A cholera germ may, it is asserted, be brought on board a ship; but in order to multiply and become infectious it requires to be brought on land again. Thus, when a certain time has elapsed, the germ usually dies; and it is to this circumstance that Dr. Pettenkofer attributes the fact that cholera has never been brought to England from India (notwithstanding the enormous shipping trade between the two countries) but has always reached England from the Continent of Europe.

With special reference to the history of the disease in Germany, account is taken of the fact that the epidemic development of cholera requires a certain time; the statistics referring to Saxony illustrating this principle by considerable mortality in any given year having been preceded by a much smaller number of deaths in the previous year. It is likewise asserted that the germ of cholera, when once sown in a place, does not in all cases manifest itself at once—the epidemic of 1854 at Munich having appeared during the autumn in certain portions of the city which had been free from it during the summer outbreak; the simultaneous nature of the original infection of the city being assumed.

The practical inferences which Dr. Pettenkofer deduces from the above facts differ to some extent from certain generally received opinions. While admitting that the keeping out of cholera germs or their disinfection and annihilation are radical measures of undoubted efficacy, he questions the possibility of these objects being carried out in their entirety. He disapproves of the systems of quarantine and of military cordons as being inefficient and as only resembling—even in their most perfect form—the means adopted by governments to prevent smuggling. The fact is, however, that smuggling does take place (though even on a small scale) in most countries. The evil to be guarded against is, however, very different in the instance of cholera infection, by reason of the rapid multiplication of the germs; and Dr. Pettenkofer argues that were dutiable articles endowed with this property of multiplication, fiscal suspension of the nature alluded to would never have been established, or would have been long since abandoned as useless. Details of the outbreak at Malta in 1865 are cited to illustrate these arguments.

It is further remarked that the present epidemic in Egypt is fully two weeks later than that of 1865, and the assertion is made that if the cholera localities in Egypt, and on the Mediterranean Sea have the necessary predisposition of season (as previously explained) the disease will again manifest itself in spite of all quarantine regulations; while if this predisposition does not exist, they will remain free from it, even if cholera patients arrive there. At the same time, reference is made to the fact that neither in Egypt nor in Malta has a winter epidemic ever been recorded.—*Med. Press and Circular.*

THE SUBCUTANEOUS LIGATURE OF VARICOSE VEINS.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Liverpool,

August, 1883.

BY

W. H. FOLKER, F.R.C.S.,

Senior Surgeon to the North Staffordshire Infirmary.

Varicose veins so very commonly come under the notice of every surgeon, and at times give rise to so many troublesome affections, that any improvement or simplification in their treatment is a matter of interest.

Formerly, I generally adopted the method of treatment by a potassa fusa and lime eschar, strongly advocated by the late Mr. Skey, and found it always both effectual and safe, though I must also admit that it was troublesome. This method, however, together with the subcutaneous division of the vein suggested by Sir Benjamin Brodie, are now things of the past; the only treatment now adopted being ligature or suture.

Either of these, which are applied merely till a clot is produced in the vein, and then removed without completely dividing it, I consider not only unreliable, but dangerous, as clot might subsequently become loose, and be carried up the vein.

Whatever method is adopted, it is absolutely necessary that a complete division of the vein should be effected; but, that accomplished, I think the more formidable operations of slitting up or dissecting out portions of the vein are then quite unnecessary.

A hare-lip pin passed under the vein, with silk twisted over it, is effective if allowed to cut its way through; but it is clumsy, and also very uncomfortable to the patient to have three or four needles in his legs, with the cut ends projecting, however carefully they may be dressed.

The brooch with pad and screw only serves to stop circulation in the vein till a clot is formed; but it does not sever the vein completely, and is, therefore, not to be depended upon.

The plan I now venture to bring before the meeting is that of subcutaneous ligature of the vein; and, I trust, it will be found safe, efficacious, and very simple and easy to apply. It is safe; for the ligature is applied with the slightest possible disturbance of the surrounding parts. It is efficacious, as it completely stops all circulation in the vein for ever afterwards; and I think you will admit that the operation is extremely simple and easy to be performed.

A very small incision is made on each side of the vein of the width of a tenotomy-knife. The ligature is then passed under the vein with a curved needle, which is made to enter at one incision, and is brought out at the other and withdrawn, leaving the ligature under the vein. The straight instrument, which is just sharp enough to go through fat and cellular tissue, but not sharp enough to endanger a vessel, is passed from one incision to the other between the skin and the vein; it is then threaded with the ligature and withdrawn. The ligature now encircles the vein, with both its ends through the first incision. It is tied as tightly as possible, and the ends cut off closely. If a spot of blood remain, it is to be sponged away, the skin dried, and the incisions pencilled over with collodion, and the operation is complete.

Of course I do not pretend to say there is anything new in tying a varicose vein subcutaneously, though I

wish to suggest its more general adoption, as being thoroughly effectual; and I believe that by using the little instrument now shown, the operation may be performed in the easiest manner possible, even by any one not much accustomed to operating. There is nothing unsightly for the patient to see; and the part may be easily and comfortably dressed.

This last may be considered by some a trivial matter, but many of the patients will be induced to submit to this, who would be frightened at the idea of a cutting operation.

[The instruments were made by Messrs. Weiss & Son.]

Mr. J. R. Humphreys (Shrewsbury) said that he had applied the various methods for the relief of varicose veins, and amongst them the method of subcutaneous ligature; but of late he had cut down on the vein, and tied it below and above, about an inch apart, and cut the intermediate portions. He had had some troublesome cases of varicocele which he had readily cured by this means, and had no bad result.—*British Medical Journal*.

ON SOME POSTEPILEPTIC PHENOMENA.

In a paper read in the Section of Medicine, at the Annual Meeting of the British Medical Association at Liverpool, August, 1883, Julius Althaus, M. D., M.R.P.C.Lond., Senior Physician to the Hospital for Epilepsy and Paralysis, Regent's Park, makes the following introductory observations before describing a series of cases. "I wish to draw attention to certain either acute or chronic alterations of the mental faculties which have fallen under my notice, as direct consequences of epileptic attacks. I shall purposely exclude, in discussing this matter, any cases in which epileptiform seizures took place in consequence of gross organic lesions, such as tumor of the brain, chronic inflammation of the membranes and the gray surface of that organ, blood-poisoning of various kinds and other diseases in which the convulsive paroxysms were only one symptom amongst many others; and I shall confine myself strictly to the consideration of those cases in which epilepsy occurred as a true neurosis, that still mysterious and unexplained functional disease of the gray matter of the brain, which is possibly owing to some kind of imperfect nutrition, but certainly not to any such structural alterations as would reveal themselves to our present means of research.

The paper is based on an analysis of the cases of 250 epileptic patients which have been under my care, in private and hospital practice, during a period of six years. Amongst these cases there were 89, or 35.6 per cent., in which no perceptible temporary or permanent alteration in the mental condition, which could be ascribed to the epilepsy, was to be ascertained; while in 161 cases, or 64.4 per cent., such alterations did occur. Of the 89 cases which escaped mental deterioration, 61, or 68.5 per cent., were instances of nocturnal epilepsy, while in 28, or 31.4 per cent., attacks took place in the daytime. All, however, which escaped were cases of typical convulsive attacks; while, in all cases of loss of consciousness without convulsion or *petit mal*, and epileptic vertigo or automatism, a more or less permanent mental alteration was induced. Amongst the 161 cases which were followed by mind-affection there were:

- 123 cases (or 76.5 per cent.) of typical convulsive attacks;
- 26 " (or 16.1 per cent.) of *petit mal*, and
- 12 " (or 7.4 per cent.) of epileptic automatism.

Amongst these patients there were 91 males, or 56.5 per cent., and 70 females, or 43.5 per cent. The ages of the whole series varied from 5 to 62; and when these were distributed over decades, it appeared that the decade from 5 to 15 was at the bottom of the list with 10.5 per cent.; while that between 15 and 25 headed the list with 24 per cent., the other decades being very nearly even, with a medium of about 16 per cent. The hereditary influence was marked in 66 cases or 40.9 per cent. The nature of the other predisposing or exciting causes, as far as they could be ascertained, did not appear to have exerted any special influence, since they were much of the same kind as in those cases in which the mind was not affected. I will, in passing, remark, that I have excluded from the present considerations those cases which were apparently owing to injury to the head, syphilis and masturbation, as these are of a complex character.

The cases, therefore, which form the groundwork of this paper, are only such where epilepsy was the primary event, and where some mental disturbance was observed subsequently, to, and as a direct consequence of, the attacks. There are two forms of this disturbance; viz., an acute one, where mental symptoms occur soon after attacks and disappear again after a certain time; and a chronic form in which there is a gradual and permanent loss of mental power consequent upon attacks.

The characteristic feature of the acute form of post-epileptic mental affection is its periodicity. Identical, or at least highly similar, symptoms are seen to occur year after year, and gradually become intensified, unless they be checked by active treatment. They do not always occur immediately after attacks, but occasionally a day or two afterwards, and last a variable time, but rarely longer than a week. After such an attack is over, the patient has mostly no recollection whatever of what has occurred."—*British Medical Journal*.

MEDICAL NEWS AND NOTES.

A Result of the Guiteau Trial.—The following instructive incident in connection with the trial of the late assassin, Guiteau, has been communicated to the *Boston Advertiser*.—P. J. Sheahy, who served as one of the jurors in the Guiteau trial, has become insane, and will be conveyed to an asylum. His insanity has been gradually developing ever since the hanging of Guiteau, which event seemed to have a powerful effect on a mind that before that time never showed the slightest symptom of weakness. Before the trial he frequently expressed the greatest repugnance to serving on a jury that was to try a man for his life, and after the trial he became morbid on the subject of being in part responsible for a hanging.

The exact figures of the death rate for this summer as compared with last emphasize the comparative healthfulness of the present cool season. During June, 1882, the total number of deaths in this city was 2,880; during June of this year, 2,704. During July, 1882, it was 4,498; during July, 1883, 4,050. During four weeks of August, 1882, the number was 3,222; during four weeks of the present month, 2,739. The totals are, respectively, 10,600 and 9,493, showing an average decrease this summer as compared with last of about 100 deaths a week.

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INTESTINAL OBSTRUCTION.

Apropos of the discussion on this subject before the British Medical Association at their recent meeting, the *Lancet* very opportunely remarks:—Before we can begin to speak of putting the treatment of intestinal obstruction upon a scientific and satisfactory footing, the process of separation must be carried throughout the whole series of cases; and to assert that the diagnosis of the different forms of internal obstruction is impossible and unnecessary is to show a singular want of scientific appreciation. What we need is to be able to separate at least four groups of cases: (1) Cases due to growths in or around the intestinal wall and stricture; (2) those due to paralysis of the intestine; (3) those due to simple obstruction by blocking of the canal; (4) cases of strangulation of the vessels and nerves of the part. To a large extent this is practicable now, and it is a slight upon our zeal and acumen to suppose that conditions so different will be forever undistinguishable to us. This being so, it is eminently unscientific to laud any one mode of treatment as a specific for intestinal obstruction, or as the right one to be adopted in all cases. In the recent discussion, some spoke in favor of operation, others against it; some in favor of certain efforts at arriving at a diagnosis, others against them. All were right, and all were wrong. It would be as rational to perform suprapubic puncture of the bladder in every case of retention of urine, as to open the abdomen and make an artificial anus at the presenting coil of intestine in every case of intestinal obstruction. No doubt a certain number of cases would be relieved by each procedure, but many of them would be grossly maltreated. In dealing with cases so different in their essence as are those of intestinal obstruction, the mere citing of plans of treatment which have proved successful in certain cases is of very little value, unless we know how the treatment succeeded, and therefore can tell when it should be employed. To vaunt any one procedure as alike applicable to all cases is the method of quacks, and not of surgeons; and we hope the time will soon arrive when surgeons will cease to discuss the treatment of intestinal obstruction as a pathological entity, and speak rather of the treatment of the different conditions of which it may be a common symptom.

ORIGINAL ARTICLES.

REFLEX AND OTHER PHENOMENA DUE TO NASAL DISEASE.

BY

LOUIS ELSBERG, M. D.

Some of the phenomena connected with nasal disease which I am about to mention are not precisely reflex; but most of them are, and I consider it of advantage clinically to bring the former to your notice together with the latter.

More than twenty years ago I noticed that the subjects of rhino-pharyngeal disease, especially in case of considerable congestion and thickening of the mucous membrane, suffer peculiarly from more or less loss of memory and mental depression. This led me to the intimate vascular and nervous relations of the pituitary mucous membrane and the brain.

In 1863 a very remarkable case of chorea came under my observation:

S. Van H., a well-developed, intelligent girl, fourteen and a half years old, had for over seven months been suffering from fearful choreic movements, especially of the tongue, face, and hands. She belonged to what may be called a "catarrhal family," but until recently had herself been entirely free from the family complaint. She had two brothers and three sisters, and had always been healthier than either of these or her parents. She had passed through whooping-cough and scarlet-fever with impunity, had not had croup or measles, and began to menstruate at the age of thirteen, having been regular ever since. Nearly a year before consulting me, while sleigh-riding, the horses ran away, the sleigh upset, and she caught a very severe cold. The acute coryza had become chronic, the tip of her nose had become quite red, and the least exacerbation of catarrh produced intense sneezing fits and epistaxis. The chorea, though it came on very gradually, was greatly increased whenever she took cold, so that at such times the movements continued even during sleep.

Without giving the further details, it suffices for my present purpose to state that the chorea so obviously seemed to be influenced by and to depend upon the nasal disease that I directed my attention exclusively to this, and that *pari passu* with the cure of this the chorea completely and permanently disappeared.

Since then, during a period of twenty years, my own experience and the recorded observations of others have shown a number of other morbid conditions to be due to nasal affections that were not previously suspected to be so caused. These are, besides 1, melancholia; and 2, chorea:

3. Reflex epilepsy.

4. Neuralgia, especially supra-orbital, headache, migraine.

5. Gastric disturbances and diseased conditions of the upper digestive tract, as reflex pharyngitis, uvulitis, tonsillary enlargement, etc.

6. Uterine disorders and affections of the genito-urinary mucous membrane.

7. Pain and disordered function of the organs of sense, especially of smell and taste, but also of hearing and sight.

8. Numerous affections of the extra-nasal respiratory tract and organ of voice, among which are especially prominent the various alterations of the speaking and singing voice, laryngeal cough, glottic spasm, and bronchial asthma.

I could relate cases of patients illustrating the different morbid conditions enumerated under these eight heads ; but this is not necessary on this occasion, as those of you who have had any similar experience can contribute it, without such relation, to the discussion which to evoke is the object of this enumeration.

In speaking of Miss Van H., the choreic patient, I mentioned that the outside of her nose had become red. This redness was relieved with the intra-nasal disease. I have had a number of such cases in my practice. External redness of the nose, especially diffuse redness, often depends upon chronic nasal catarrh, a point to which Bresgen has recently publicly called attention, and which I can confirm from many years' experience.

En passant, I wish to mention the case of a man affected with chronic nasal catarrh, who was seized with the most violent fit of sneezing during every coitus.

Finally, I wish to refer to the case of a girl between sixteen and seventeen years of age, who is still under my care for nasal disease, whose development is so retarded that most persons would suppose her to be only eight or nine years old. She has no hair either in the axilla or on the pudenda, has not menstruated, and is in every way stunted in growth. With the improvement of her nasal disease, her general health and development are ameliorating.

To account for the intimate connection between affections of the mucous membrane of the nose and cerebral affections, Dr. Jacobi, in a recent communication to the New York Obstetrical Society, drew attention to the following three points: "In the first place, the trigeminus with all its branches is subjected to direct or reflex irritation arising from the inflamed condition of the nasal mucous membrane. Secondly, the thickening of the mucous membrane in the narrow nasal passages of the child [and the same thing is more or less the case in the adult], and especially the presence of a polypus, seriously interfere with respiration, and the result is the accumulation of carbonic acid gas in the brain, particularly about the respiratory centre at the medulla oblongata. Thirdly, the lymphatic system of the nasal mucous membrane and that of the dura mater and the arachnoid membranes are in intimate relation with each other, which is so close that they can be injected from either side."

BOOK NOTICES.

A Text Book of General Pathological Anatomy, and Pathogenesis. By Ernst Zeigler, Professor of Pathological Anatomy in the University of Tübingen. Translated and Edited for English Students by Donald McAllister, M. A., M. B., Member of the Royal College of Physicians; Fellow and Medical Lecturer of St. John's College, Cambridge. New York, William Wood & Co., 1883.

The importance to medical men of a knowledge of pathological anatomy, by which skill in diagnosis is developed, render practical works on this subject essential to a doctor's library and to that of the medical student.

The knowledge on this subject is, however, in so kaleidoscopic a condition, with the exception of some well established facts, and the deductions from them; changing, as it does, with each new discovery or theory

of pathologists, that the crystallized well established knowledge could be presented in very small compass.

We question the propriety, therefore, of writing books whose chief claim to originality and acceptance depends upon the exposition of some favorite unsubstantiated pathological theories of their authors.

In view of the fact that English readers have already at their disposal some excellent practical text books on this subject, translations of German works, however well done, unless they can add something of value to the already existing knowledge of pathological anatomy, or render it less chaotic or more intelligible, have little excuse for their publication.

This book does not seem to us to fulfill these indications. It is not in itself a complete exposition of the subject, the translator intending it to be supplemented by a further translation of the second part of the German original on special Pathological Anatomy.

Training Schools for Nurses. With Notes on Seventy-two Schools. By W. G. Thompson, M. D. G. P. Putnam's Sons, New York. 1883.

In these days when the value of trained nurses is appreciated as it has been at no other time, this little monograph, embodying notes and information of the schools in existence, together with a comparison of old and new systems of nursing, and a description of those adopted in Europe, is of practical interest.

It points out the importance to women of this new field for remunerative employment, and describes the course of instruction in the schools and the prerequisites for admission.

When our government, which presumably represents public opinion, awards the same financial recompense to the nurse as to the physician, (as was the case in dividing the appropriation for Garfield's attendants), it may interest physicians to know how to become nurses. This little book will furnish this information to those who desire it.

LECTURES.

CHRONIC BRONCHITIS.—CIRRHOSSIS OF THE LIVER.—CHRONIC GASTRITIS.

A CLINICAL LECTURE.

BY

FRANCIS DELAFIELD, M. D.

Professor of Pathology and Practical Medicine College Physicians and Surgeons New York.

CASE I.—You observe, gentlemen, in looking at this man's chest, considerable emaciation and depression below both clavicles. The resonance on the left side is good. It has not exactly the pulmonary quality. It is a little dull on the right side. The expiration is a little prolonged at the right apex. The heart sounds are natural. It beats a little too fast but the rhythm is good. The resonance is a little exaggerated over the chest behind, but this may be partly due to the emaciation. The breathing is good except at the point below the angle of the scapula where I get a sort of friction sound produced by the creaking of old adhesions. The liver seems a little diminished in size and the spleen also is a little enlarged. The examination

of the chest was negative except for the existence of old pleuritic adhesions on the left side.

Here then you see we have a man about fifty, who has been a gauger by occupation and has been a little intemperate until within a moderate length of time. He tells us that he has never been a very strong man, and never had much appetite. Some five or six years ago he had an attack of illness which confined him to bed attended with swelling of legs and said by the doctor who attended him to have been an affection of the lymphatic glands. He probably at that time had either thrombosis of the femoral veins or possibly lymphatic inflammation.

For the last year or so he vomits almost every morning his breakfast. After this he eats another breakfast which stays down. For the last four or five months he has been losing flesh and strength and now he is greatly emaciated. The vomiting has continued and continues to be the only very prominent feature. He has cough with muco-purulent expectoration which is sometimes streaked with blood. The cough with expectoration and vomiting seem to be the most marked features about the case. With these we have a very decided effect upon the general condition. The physical examination shows the heart to be normal. The lungs show very little resonance. It is a little duller at the right apex than at the left and there are evidences of old adhesions on the right side. He has piles which bleed a good deal and there is disturbance of the bowels so that he does not have natural movements, but passes a considerable amount of mucus. He has cirrhosis of the liver and chronic gastritis. He has chronic bronchitis and I suspect that he has chronic miliary tuberculosis. From such a history I think there are nine chances out of ten that he is suffering from chronic miliary tuberculosis with chronic bronchitis indicated by the cough and muco-purulent expectoration. He has that form of cirrhosis which does not produce dropsy but has its effect upon the general condition of the patient. The change in his nutrition is very marked.

Treatment.—The man having chronic gastritis with cirrhosis of the liver can not be cured at his age. You can try and improve the nutrition. Try first the use of a milk diet for a month, then go back to the ordinary food and give medicine to help the digestion. We must give the stomach rest just now.

The prognosis is altogether bad. He is too far advanced in his disease. He does not look as if he were likely to get better. I should be afraid that he will simply go on from bad to worse, no matter what you do.

CASE II.—*Aortic stenosis with dilatation of the ventricles.*—Male, æt 50. Has distress about the lower part of the breast and shortness of breath. His feet are swollen and he cannot lie down or sleep. Has been able to attend to his work until six weeks ago. He is a truck-driver by occupation. Two years ago he had an attack of rheumatism. Except that he has been strong and well and able to work until six weeks ago. Then without any warning he woke up suddenly in the night and found that he was very short breathed and had a feeling of distress about the præcordial region. This shortness of breath and distress have lasted from that time to this. He has not been able to work principally on account of dyspnœa. Two weeks ago his feet began to swell and they are still swollen. He thinks that he is passing a little less urine than normal. The urine contains no albumen. During this six weeks he has lost flesh and strength.

He complains of nothing but præcordial pain and distress and swelling of the feet.

Physical Examination.—You observe that the heart beats too forcibly and that there is pulsation of the large arteries of the neck and subclavian arteries. The apex of the heart is a good deal to the left. It is well marked and at the same time there is a diffuse impulse given to the whole of the lower part of the chest. The enlargement of the heart is very considerable. There is a loud double murmur heard all over the heart, especially below, and this is transmitted above the sternum and along the clavicle; there is nothing heard over the lung.

The examination thus reveals an enlarged heart. It is both dilated and hypertrophied. The dilatation is altogether out of proportion to the hypertrophy. This dilatation affects both the right and left ventricles. He has a loud double murmur, heard loudest at the base of the heart, up and down the sternum, which indicates insufficiency of the aortic valves, i. e., either stenosis or roughening of the aortic valves.

Here then is a history and condition of things which do not seem altogether to fit each other. The man is suffering from organic disease of the heart. He has dilatation with a little hypertrophy of both ventricles of the heart and with a roughening of the aortic valves. How can a man suffering with that sort of organic heart disease give such a short history as this, the symptoms coming on suddenly in the night without any cause and at once changing his condition from that of a strong man able to work, into a man suffering from great dyspnœa and distress, and unable to work? He might have chronic diffuse nephritis. The cavities of the heart begin to dilate and they dilate very rapidly, that is, the ventricles. This may occur in persons who previously have been perfectly well. There is a form of rapid dilatation of the ventricles of the heart which causes urgent dyspnœa and urgent symptoms of obstruction of venous circulation. In this man's case I should assume that he had his lesion of the aortic valve and a moderate degree of hypertrophy up to within six weeks and that latterly there has been suddenly developing a rapid dilatation of the ventricles of the heart. How this takes place we have no knowledge, but as a matter of fact we have opportunities of observing it. In this man's case we have to assume that his previous occupation is a possible cause of his trouble. Whether this man has or has not been developing kidney trouble in addition to the change in the condition of the heart, I should not feel certain. This man wants to go into a hospital where he can be kept quiet and have regular diet. The next thing is to put him under the old remedy of iodide of potassium. This acts by diminishing the arterial tension and increasing the flow of urine.

CASE III.—*Chronic diffuse nephritis.*—Male, æt 40. Has swollen feet for the past four weeks. He has had asthma for twelve years. Cannot lie down but has to sleep in a chair. His urine is of a red color. There is a very large amount of albumen and a specific gravity of 1018. The man's heart is normal; there is no murmur. The lungs, if emphysematous, give no physical signs. This man has evidently developed kidney disease. He has a complication of old emphysema. Has he developed an acute kidney disease or has he been suffering from kidney disease for some time which has now shown itself for the first time? The man has a chronic diffuse nephritis of the atrophied form. When a man suddenly develops an increased asthma with œdema and has a great deal of albumen in his urine, the strong

probabilities are not that he has got up an attack of acute nephritis, but has had a chronic diffuse nephritis for a long time, having now suddenly developed an exacerbation of symptoms.

CHRONIC ARTHRITIS OF THE KNEE JOINT— CARIES OF THE METATARSAL BONES— NASAL POLYPUS—INCISED WOUND OF THE FOREARM.

A CLINICAL LECTURE

BY

THOMAS M. MARKOE, M. D.

Professor of the Principles of Surgery College of Physicians and Surgeons, New York, etc.

CASE I.—Chronic Arthritis of the Knee Joint.—This boy, gentlemen, has disease in the neighborhood of the knee joint, which is said to be necrosis. He had a sore finger some time ago and when he recovered from that he complained of pain in the knee. There was inflammation at the lower part of the femur. From the beginning to the end the case was one probably of severe arthritis. The boy had delirium, which was simply symptomatic and within three or four weeks an abscess broke and discharged. He got great relief from the opening of the abscess. Then he began to improve and remained in a tolerably good condition during the process of sequestration. There is only one opening now, and I notice the pouting granulations at the orifice. There is some mischief going on at the upper part of the popliteal space and lower end of the femur. I find the fistula with pouting granulations attached to the posterior surface of the femur. This is a peculiar case. In the first place there is no imprisonment of the sequestrum. It is not inside of the bone, but superficial to it. It is a necrosis of the posterior lamina of the lower part of the femur which looks into the popliteal space and forms the anterior wall of that space. This posterior lamina of the femur is extremely liable to necrosis. It does not involve the cancellous structure so that the thin plate dies in consequence. The ligamentum posticum is apt to become involved in this long wall of the popliteal space. The knee joint is likely to become stiff. Sometimes this dead lamina is enclosed partially in an involucral action which takes place in the bone. Here we are in danger of hæmorrhage. The involucrum can travel out from its bed and may encounter the popliteal or femoral artery.

I would advise the popliteal space to be opened and carefully searched for fragments of dead bone, which should be removed. You may have to chisel away a considerable portion of bone as you must go behind the popliteal artery and vein.

CASE II.—Caries of Metatarsal Bones.—This patient is a man who had his foot injured two years ago. As you observe, gentlemen, the external aspect of the metatarsal region is very much thickened from above downwards and from side to side. In the midst of this thickened mass there are two or three ulcers. The foot is in an inflamed condition. I suspect that this man has caries of some of these metatarsal bones. There is a central inflammation which has involved the whole region of the foot. That inflammation is now exacerbated perhaps by want of care and cleanliness and by use of the limb. He should be purged and put upon proper diet and have poultices applied to the foot. We can then probe into the parts that are not tender and see

if any caries or necrosis of some of the metatarsal bones exists. There may be no dead bone at the bottom, and possibly the whole of this inflammation and tenderness is superficial.

CASE III.—Nasal Polypus.—This patient is a female, and is suffering from a nasal polypus. The entire structure of the nose is infiltrated with serum, caused by extended inflammation of the mucous membrane of the turbinated bones. Nasal polypi are never attached to the septum of the nose, but always to the outer wall. Sometimes they grow so large as to press backwards into the fauces, and sometimes they press forward into the anterior nares. They are generally attached by a small pedicle to the turbinated bones, and the best treatment is by avulsion. Pass your instrument along in the middle meatus and catch the polypus. It is a fishing sort of operation. If you happen to tear off a bit of mucus membrane, or a piece of the turbinated bone, it does not do any harm.

CASE IV.—Incised Wound of the Forearm.—This man had a cut inflicted with a knife on the under surface of the right forearm. We are likely to have a phlegmonous inflammation following a wound, which is often confounded with erysipelas. Erysipelas is a skin disease which produces blistering superficial ulceration, and sometimes desquamation of the skin. Here is a destructive process in which the parts between the skin and the tendons are involved. There is adhesion between the tendons and granulation substance. There has been inflammation of the areolar texture underneath the skin. The inflammation of the subcutaneous areolar texture allows more distension about the swelling. This swelling sometimes produces partial inflammation, which is of a low grade, particularly where associated with phlegmonous erysipelas. We have then sloughing of the tissue, and extensive infiltration of inflammatory material. One of the elements so injurious to the progress of the case, is pressure which must be taken off by a liberal incision. The consequence of this action has been that the cellular tissue has sloughed, suppurated and ulcerated to a certain extent, and now the process of granulation has commenced. In consequence of the failure of the wound to heal, we have the granulations presenting a weak appearance. The wound, in order to have a proper cicatrix, requires first stimulation, and secondly pressure.

HOSPITAL RECORDS.

NEW YORK HOSPITAL, NEW YORK.

AMPUTATION OF LEG FOR SARCOMA OF FOOT.

SERVICE OF

GEO. A. PETERS, M. D.

Pt. D. D., native U. S., aged 25, single, seamstress. Admitted September 18.—A sarcomatous tumor was removed from the foot of this patient about eight months ago, but the tumor returned after operation and is now about its original size. She suffers much pain at the present time, and is unable to use her foot. She attributes her trouble to wearing a stiff slipper which she says bruised the heel.

Admission.—General condition good. No cancerous cachexia. All the organs found on examination to be healthy. An ulcer remains in the region of the ankle where the end of the drainage tube emerged after the former operation. Deformity and swelling slight.

Pain and inability very marked. Ordered leeches around the ulcer and a blister to the heel.

Oct. 9th.—Operation.—Ether. Dorsal decubitus, parts shaved, washed in carbolic solution 1 to 20. Leg amputated in middle $\frac{1}{3}$, lateral flaps and coaptated with silver sutures—fenestrated drainage tube inserted. Lister dressing applied and patient sent to ward.

Patient's history subsequent to operation was uneventful. The wound healed kindly, and patient was discharged cured December 13th.

The pathologist's report of examination of tumor is as follows, viz. :—

Beneath the cicatrix and extending thence backwards and forwards over a space irregularly circular with a diameter of $1\frac{1}{2}$ inches is a new growth. It is soft, friable, of a reddish-gray color, and contains numerous small spots of hæmorrhages. It lies beneath the skin and spreads deeply downwards, involving the sheath of the tendons. Underneath the os calcis it invades the tissues of the bone to the depth of $\frac{1}{4}$ inch. These masses of new growth are discrete, being separated by an area of tissue, to all appearances healthy. The tissue of the new growth examined microscopically is found to be rich in the characteristic spindle cells.

ABSTRACTS AND SELECTIONS.

REMARKS ON A CASE OF SO-CALLED HYSTERIA.

BY

J. B. FOOTNER, F.R.C.S., Eng.

About eight months ago, a well-nourished though somewhat anæmic young woman, unmarried, aged twenty-five, came to me for advice. She said that she had recently lost the use of her right thumb, and that her right arm was weaker than the left. She could not account in any way for this. About a year previously she had had sores on the right wrist, which, she said, took a very long time to heal. Apart from this her general health was fair, with the exception of some slight dyspeptic derangements. On examining the right arm, it was not found to be wasted as compared with the left; the muscles of the ball of the thumb were, however, distinctly so, probably from disuse. I treated her by the application of the interrupted current to the muscles of the arm and thumb, and gave her arsenic internally. The arm and thumb soon began to improve under this treatment.

About a month after her first visit she informed me that some sores similar to those which she had had a year ago had broken out on the back of her right hand and wrist. These sores presented a peculiar appearance, quite unlike any normal pathological process. They were about three-quarters of an inch in length and one-quarter of an inch in breadth, longitudinally oval. They resembled very much the appearance produced by a blister with the cuticle entirely removed, and no sign of it left, but only a bare raw surface bathed in serum. There were next to no traces of inflammation. The sores were four in number, each of similar size, shape, and appearance, and in the long axis of the limb. I ordered the application of zinc ointment.

She returned after a few days. The sores were no better, and had evidently been irritated. Having no doubt of this latter fact, it seemed to me the best plan

would be to cover the sores with strapping extending continuously from below the situation of the sores to above them, as one straps an ulcer of the leg. This was done, and as she could not get at the sores they quickly healed. The strapping was continued for a fortnight afterwards. The ulcers were very soon reproduced, and also another of exactly similar appearance longitudinally over the insertion of the right deltoid. Strapping was again applied, and continued for four weeks, in the hope that by this time the patient would have forgotten about the sores. After this, for a week or two no ulcerations appeared; but soon she came again, with similar productions round the mouth just bordering on the lips. It was manifestly impossible to apply strapping here, so lunar caustic was freely rubbed over the raw surfaces, hoping that the pain would act as a deterrent, and it did. She continued free from sores after this. Her right arm and thumb are now as strong as the left.

Quite recently she has reappeared with sores on the same wrist as before, for which I am adopting the same treatment. Had this been a hospital case I should probably have been able to discover how the sores are produced; but as she has a father a chronic invalid and a mother just recovering from hysterical paraplegia and aphonia (a bad nervous family history, be it remarked), it was useless to expect any assistance from them, and quite possibly they would not have believed that their daughter was the originator of the sores. I think the best course was to endeavor to outwit the patient.

A very interesting case at the North-West London Hospital of a somewhat similar character is reported by Dr. T. Colcott Fox in *The Lancet* of Dec. 30th, 1882. In his case the girl confessed she had produced the sores partly with her nails, but mostly by continual rubbing with the tops of her fingers. It seems probable that the cause in my case is similar. Her right arm being weak, it can be readily imagined that she would use her left arm to produce these phenomena. She is not naturally left-handed.—*London Lancet*.

SCARLET FEVER IN ITS RELATIONS TO THE PUERPERAL STATE.

BY

J. T. BURGESS, L.R.C.P., L. R.C.S., Edin.]

The two following cases are interesting, and, I trust, worthy of record as illustrating a connection between the scarlet and puerperal fevers. They at the same time throw some light upon the questions relating to the period of incubation and to the vitality of the contagious principle of the former disease. Lastly, they painfully demonstrate the fearful responsibility that devolves upon the medical practitioner towards his lying-in patients during the time he is in attendance upon scarlatinal cases.

On Nov. 20th, 1882, Mrs. A—, aged twenty-two, residing temporarily in an isolated cottage in a sparsely populated district, was delivered of a first child. The labor was tedious, and eventually was terminated with forceps, the child being stillborn. The mother, however, progressed satisfactorily until Saturday, Nov. 25th, when she became somewhat feverish, and complained of sickness and diarrhœa. The next day (26th) the throat was sore, temperature 102° and a slight rash was noticed on the upper parts of the body. This, during the next few days, became of a bright uniform scarlet, ran the usual course of a scar-

latina eruption, and was followed by free desquamation. Thus far no other complication had arisen, but on Wednesday (29th) a change for the worse occurred, the temperature, which had become almost normal, rose to 103° , the body became tympanitic, lochia slightly offensive, and intellect clouded. A hospital nurse was at once sent for, and the next day a consultation was held with a neighboring practitioner. Symptoms of exhaustion, however, such as muttering delirium, picking at bedclothes, dry brown tongue, &c., set in, and the tympanites increased. Patient sank on Sunday morning, Dec. 3d, thirteen days after delivery, the temperature, as taken by the nurse shortly before death, having reached 106° . The origin of the poison in this case was at first difficult to discover. There had been no recent case of scarlet fever in the neighborhood, and I failed to trace any exposure to infection on the part of patient, nurse or medical attendant. The following is the only solution of the problem, which, after most careful inquiry, presents itself. The patient, upon marriage, was compelled to make temporary use of a cottage which had been empty for some time, and was condemned to be pulled down. The occupants of this cottage, who left it twelve months previously, had all suffered from scarlet fever, and the house had never been disinfected. The bedroom in which my patient was confined had to undergo a certain amount of preparation immediately before the event came off, and amongst other things, in order that the fireplace might be available, a quantity of old sacking was removed from the chimney. To this disturbance I am inclined to attribute the setting free of scarlatinal poison.

Whilst in attendance upon the above, I was called upon, Dec. 1st, to attend M. G—. This patient resided seven miles distant from the previous case. There had been no scarlet fever in her village, nor, as far as could be ascertained, could she have had communication with anyone suffering from that disease. M. G— was twenty-two years old, unmarried, and was prematurely delivered in the early morning of Dec. 2nd of a small weakly child which died during the day. About 11 A.M. the patient had a slight convulsive seizure, to which no importance was attached, as the girl had frequently shown symptoms of hystero-epilepsy during the two previous years. On Monday, Dec. 4th, however, a severe rigor took place in the afternoon, followed by a feverish state at night. A dose of castor oil was administered, after which a troublesome diarrhoea persisted for about a week. On the 5th the throat became sore, and the feverish state continued. On the 6th I was called up at midnight, and found the patient delirious and more feverish, the throat much inflamed, but no appearance of rash. On Saturday evening (8th) the patient was decidedly worse. Irregular patches of dull red eruption were visible on various parts of the body, delirium had increased, the abdomen was greatly distended, and exhaustive symptoms were becoming prominent. During the next week there was very little change, except that desquamation manifested itself and went on freely. The urine, though at first scanty, was passed in fair quantity, but was slightly albuminous. The diarrhoea ceased, and it became necessary to administer aperients. All this time the body remained much distended and painful in the hypogastric region. On the 16th the patient complained of pain in left side of thorax, which was easier on the 17th, but worse on the 18th, when the respiration was 38, pulse 158, and temperature 103° . There was some dullness at the left base and a slight rubbing sound above, proba-

bly pleuritic. The next two days saw symptoms somewhat better, but on the 21st there was a decided change for the worse. Pneumonia and the greatly distended abdomen were together telling upon the respiratory function, respiration being 48, pulse 174, and temperature 104.6° . The skin was pale, lips livid, and face anxious-looking, though the delirium had passed away. After again rallying on the 22d, the patient sank from exhaustion on the 25th. On the 17th, a younger sister in the same household, who had been in close attendance upon the patient, became feverish. On the 18th rash appeared, accompanied with slight sore throat, and during the next few days she passed through a mild attack of scarlatina.

That the foundation disease in both these puerperal cases was scarlet fever can scarcely admit of doubt. The clinical history of the first case was well high typical, and any shade of hesitation about the second was dispersed by the appearance of the disease in the younger sister. Had this second case stood alone, the real nature of the foundation disease might possibly have been overlooked, owing to the irregularity of the eruption, both as regards time and appearance, notwithstanding the presence of sore throat and subsequent desquamation. The more important complications appeared to take the form of serous inflammations, and to be exaggerations of the after-consequences rather than of the primary symptoms of the disease. If we accept the theory that the first case received its contagion from the cottage itself and on the day of confinement (Nov. 20th), we find a period of five days to have elapsed before the first manifestations of symptoms. In the second case, supposing the medical attendant to have conveyed the infection at the time of parturition, the period of incubation was only three days. In the young girl's case it is difficult to state any definite period of incubation, since it is impossible to fix the exact date upon which she received infection. In the absence of other explanation the first case tends to prove that the vitality of the scarlatinal germ may, under favorable circumstances, continue for at least twelve months, a period much beyond its usually allotted span. It is needless to add that, as soon as the suspicion of the nature of the second case dawned upon me, I at once gave up attending puerperal cases and continued to do so till a month after the death of the patient. During that time I thoroughly fumigated all clothing, instruments, etc., and submitted myself frequently to disinfectant baths. I am thankful to say that, on renewal of midwifery practice, no further calamity has occurred.—*London Lancet*.

ON THE TREATMENT OF LARGE NÆVI.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Liverpool, August, 1883.

BY

EDMUND OWEN, F.R.C.S.,

Surgeon to St. Mary's Hospital; and to the Out-Patient Department at the Children's Hospital, Great Ormond Street.

The nævi which form the subject of this communication are not of that variety which may be readily or effectually obliterated by the use of ethylate of sodium or nitric acid; they are vascular tumors, varying in size from a dried raisin to a ripe fig, and which, situated in and beneath the skin or mucous membrane, are growing steadily, usually to the alarm of the parents,

and sometimes to the embarrassment of the medical attendant.

Marvellous in their ingenuity are some of the snares and ligatures which have been devised for a subcutaneous attack upon them; but, even if the surgeon should have happily succeeded in tightly knotting together the right ends of the ligatures, certain portions of the vascular mass were almost certain to have escaped effectual obliteration, and to have been apparently stimulated by the surgical interference into renewed and vigorous growth; so that the poor child had to be again subjected to a long course of irritation and exhausting suppuration. A great uncertainty, too, attended the treatment by setons of silk or worsted, which had been saturated with a solution of perchloride of iron. Their mode of action was by setting up an active suppurative inflammation; but it happened from time to time that, when the operator had been induced, by the auspicious intensity of the local disturbance, to withdraw some or all the threads, he experienced the inefficiency of the treatment. The disfigurement, also, which followed on the seton-treatment, was apt to be a serious matter.

Oftentimes, large nævi may be removed by the aid of the scalpel and forceps; but there are certain situations in which such a line of attack is impracticable; as when the whole thickness of the lip is implicated, or when the inside of the cheek, or vulva, or eyelid, is the seat of the growth. The many sittings, and the length of time required, are a serious objection to the employment of electrolysis in all these cases.

When a nævus is large and growing, some prompt and effectual treatment is demanded—one on which thorough reliance may be placed. It is a great point if the surgeon can almost promise that a single operation—and that not of a cutting nature—will be all that will be necessary.

In my experience, all the demands are supplied, and most of the objections avoided, by the treatment of large nævi by that useful instrument, the thermo-cautery of Paquelin. I show you the two blades which I employ; the larger is the nævus, the larger the heated point. This small needle-blade is very efficient in dealing with small nævi, or nævoid staining. The vapor of benzine, pumped through the hollow stem with the India-rubber hand-ball, is ignited at a low temperature, and keeps the point of the blade at any desirable heat throughout the whole operation.

Having been heated to a dull redness, the blade is thrust through the skin in as many places as may be considered necessary, and the point directed to all the regions of the vascular mass: central, deep and peripheral; each district must be searched out and invaded. The skin-punctures should be made well within the limits of the tumor, as the effects of the cautery necessarily extend beyond the limit of the tissues actually traversed. By the slow and cautious withdrawal of the blade, the small eschars are permitted to remain, sealing the wounded vessels, and thus not a drop of blood need be lost. A few black sinuses, surrounded by a ring of skin which has been reddened by the scorching, remain after the operation, and the tumor is found smaller and firm from coagulation having taken place throughout the entire mass. Oiled lint may be used as a dressing.

For the next few days the part looks angry and swollen, and is evidently painful. Then a slight amount of sloughing takes place, and, in a few days more, some small clean ulcers mark the dwindling mass. The ulcers heal, and cicatricial contraction, taking place throughout the entire mass, determines the process of

shrivelling. The integument does not perish, except where wounded; but it loses its old purple staining, from the obliteration of the vessels which formerly brought to it the unsightly injection.

It is unnecessary here to particularize the various situations in which one has thus destroyed nævi; but I may perhaps remark that the most unequivocal successes have been obtained with those tumors which occupied the entire substance of the lip (of which there were several examples); in these, by attacking the tissues deeply from the dental surfaces, one was enabled to reach their dermal limit without implicating the skin in the least. And, whereas the lip had previously protruded greatly, the subsequent cicatrization of the mucous membrane brought it into the natural position.

A flat bleeding nævus, which occupied almost the entire extent of the mucous lining of the cheek of a grown girl, was treated in much the same manner, and was obliterated in a single operation; indeed, I am at a loss to know by what other means such a nævus could have been effectually dealt with.—*Brit. Med. Jour.*

CARE OF THE CITY INSANE.

The municipal authorities ought not to delay further the purchase of a farm, to be used in caring for the insane. An appropriation for that purpose was made last December, and any doubt as to the power of the municipality to use its funds in that way was removed by special act of the Legislature. The purchase of such a farm has been urged by Dr. Macdonald, Medical Superintendent of the City Insane Asylum, and by the State Board of Charities. There are now under the care of the Commissioners of Charities and Correction over 300 insane persons for whom inadequate provision has been made. The rapid and sure increase in that number makes the need of more room a pressing one, particularly as the overcrowding of an asylum is an injury to all the patients, while it is no economy to the city.

Out door labor, which is so beneficial to the health of the sane, has been found equally efficacious in the case of the insane. Hence there is no difference of opinion about the advisability of purchasing a farm and erecting thereon comparatively inexpensive structures, to which the harmless and physically strong insane can be transferred. In that way their happiness and chance of recovery will be improved. The advantages of this plan have been generally recognized in the treatment of lunatics, but its application has been limited in the city asylum by the lack of ground to cultivate. The small farm on Ward's Island has given employment to 120 patients and has proved of importance to the asylum both as a source of pecuniary income and as a curative agent. The labor list of the asylum last year, on the farm and in the shops, averaged 400. Dr. Macdonald reported that there were 800 patients able and willing to work. The necessity of providing systematic employment for that number is an additional reason why the farm should be purchased at once, as occupation is necessary for the welfare of the patient's mind and body.

Dr. Macdonald thinks that 1,000 patients are as many as should be placed in one institution. In excess of that number there are now 353 in the Ward's Island and 455 in the Blackwell's Island asylums. This surplus could probably best be provided for in buildings erected on a farm. The late Dr. Beard, who made a study of this subject in Europe, said

that the best asylums were not enormous or imposing buildings, but a series or collection of small or moderate sized, unimposing cottages or houses. He regarded this scattering of the insane over a wider area of great practical advantage to all classes of lunatics.

The practice in this country has been to erect large buildings. There is no doubt that American asylums are sometimes too much given up to costly arrangements for the convenience of administration at the expense of the patients' welfare. The appearance of confinement is avoided in asylums of recent construction in Europe. Two-storied buildings are provided with home-like arrangements, as far as such are admissible. Grated windows and spring locks are used only in refractory wards. The city authorities should inquire carefully into this subject before erecting any more costly buildings.

The rapid increase in the number of insane in the city makes this question of their care one of growing importance. On December 31, 1871, there were 1,535 insane confined in asylums in this city. In eight years the number had doubled, and to-day it reaches about 3,600. In seven months there has been an increase of 121 patients in the male asylum on Ward's Island, and of 110 patients in the female asylum on Blackwell's Island. There is 1 lunatic to every 360 inhabitants in the city, while in the Nation the average is 1 to 779 of population. The increase of insanity in the whole country has been 60 per cent. in ten years, the population having increased 26 per cent. in the same time. The ratio of increase in the city is much greater than in the Nation, but there are special reasons for it. Many lunatics in neighboring towns and even States are shipped to this city and abandoned in the streets, and as their former places of abode cannot be traced it falls to the lot of the municipality to provide for them. This is the more unjust from the fact that the city cares for all of its own insane, and at the same time is made to pay nearly one-half the expense of maintaining the State asylums, to the population of which it contributes not a single patient.

One reason for the increase in the number of lunatics is found in the fact that the range of mental diseases has been enlarged by medical science. Time was when only furious frenzy or complete idiocy or imbecility was recognized as cause for calling a patient insane. Now there are many distinctions and numerous classes, the number of which appears to increase in proportion to the number of insane. At the present rate of increase the city will have to care for about seven thousand lunatics in 1890, and in the interest of humanity, as well as that of the taxpayers, the subject of their care should receive earnest and careful attention.—*N. Y. Tribune.*

THE COMPARATIVE ADVANTAGES OF SCRAPING AND SCARIFICATION IN THE TREATMENT OF LUPUS VULGARIS.

In a paper read in the Section of Surgery, at the Annual Meeting of the British Medical Association in Liverpool, August, 1883, by Malcolm Morris, F.R.C.-S.Ed., Surgeon to the Skin Department of St. Mary's Hospital, Mr. Morris speaks highly in favor of free erosion by means of a blunt spoon. He continues—"The plan I adopted was, with a few minor modifications, identical with that originated by Volkmann in 1870. With a large spoon all scabs are thoroughly removed, and with them the great bulk of the superficial deposit; and after drying the surface, the minute nodules which are deeply lodged in pockets of the corium, are dug out with smaller and pointed scoops. The

margins are also vigorously scraped. The spoon should be applied till the whole of the soft friable lupus-tissue has been removed and only the firm resistance of the sound parts is met with. Though the greater portion of the disease may be removed at one operation, some of the smaller deep-seated nodules which have escaped will reappear in the scar, and require subsequent treatment. After the healing of the wound produced by the operation, a scar with more or less loss of substance is left.

The great advantage of this treatment is the rapidity with which a cure can be obtained; and if a large surface be affected, in a position in which a scar is of no consequence from its appearance, it is, on the whole, the best that can be recommended. On the face and other exposed parts the appearance of the cicatrix is a matter of some importance, and it is here that the other mode of operation, scarification, yields better results. I would here mention, that in lupus of the mucous membrane I have had the most satisfactory results from scraping.

The method of multiple punctures, as suggested by Veiel of Cannstatt in 1871, is effective but tedious in application, and I have preferred to practice linear scarification with a narrow triangular-pointed knife, as used by Professor Vidal of St. Louis Hospital, Paris. The little operation is performed by pressing the sharp point of the knife which should be held like a pen, on the sound skin at the edge of the lupus growth, and quickly drawing it across the mass to the healthy skin on the opposite side. In its course it should penetrate the entire thickness of the morbid nodule, dividing at its base the fibrous bundles of the corium. Other incisions, parallel to this, should be made as close as possible, and these should be crossed by others at right angles. The blue bag, which is slight, is easily checked by a compress of cotton wool, and the little cuts heal rapidly. After a week's interval the operation should be repeated. Occasionally two or three operations are all that is needed, but more often it is necessary to repeat them several times. The scar left is smooth, supple, and usually distinguishable from the healthy skin only by its paler color, being a little if at all depressed.

In the severer ulcerating form of lupus, especially in lupus exedens, the one alluded to in the opening of the paper, scarification, to be of service, must be used more boldly. We have sometimes to plunge the whole blade of the knife into the mass for a depth of one-half to three quarters of an inch to incise it in all directions, leaving the part in a condition literally of mincemeat, but without removing any portion of the tissue. This plan, I can state from my own personal experience, is most effective, and fully merits the favorable recommendation of Vidal.

In comparing scraping and scarification, the former, though it has the advantage of rapidity in the character of its scar is much inferior to the latter. Scraping is, after all, a destructive method, similar to, though milder than, the older forms of treatment, as it mechanically removes the diseased material, whereas scarification is essentially conservative in its action. The incisions, by cutting off the blood-supply, modify the nutrition of the new growth, and lead to its atrophy with a minimum loss of substance. In addition, in the severe forms of lupus exedens, in which scraping fails, or even aggravates, scarification acts most rapidly and completely. A further though minor advantage is, that scraping, on account of the pain, requires an anæsthetic, which can be dispensed with in scarification."—*British Medical Journal.*

WOOD-WOOL, A NEW SURGICAL DRESSING.

Notwithstanding the great success that attends wound treatment in modern times, thanks to Listerism, it has still been felt that there was room for improvement. Although it may not be possible to improve much on Listerian dressings in the matter of results, all are agreed that if we can get as good results with a simpler and cheaper form of dressing, a great step in advance will have been made. As we heard remarked the other day by a busy surgeon "although I adopt the Listerian treatment when possible, I have to do an enormous amount of surgical work in the alleys and back streets of the town, and if I practiced strict Listerism I could not possibly do the half I am called upon to do." What has been wanted is a dressing that can be applied in as short a time as any other, but which will at the same time assure, as much as is possible, an aseptic course of repair in the wound.

In Germany, at any rate, the reign of carbolic acid is over, and corrosive sublimate, or sublimate as it is there called, reigns in its stead. Many substances impregnated with sublimate, such as glass-wool, ashes, sand, etc., have been employed as attempts at permanent dressings with greater or less success. Something has still been wanting, something that will absorb a large quantity of discharges, and at the same time remain aseptic.

With efforts directed towards the discovery of such a material Professor Bruns, of Tübingen, has hit upon something to which he has given the name of wood-wool (Holzwolla). It is finely ground wood, such as is extensively used in the manufacture of paper. It is a clean looking, delicate fibred, soft, yellowish-white substance, having an odor of fresh wood, and it has the characteristic of being able to absorb an immense quantity of liquid.

The best wood-wool, *i. e.*, that possessing the highest absorbent properties, was found to be that which was obtained from the *Pinus picea*. The wood-wool thus procured was first pressed, passed through a sieve, then dried and impregnated with a solution containing half per cent. of sublimate and 10 per cent. of glycerine. The processes were first carried out under the personal supervision of Dr. Bruns, but it was soon found desirable to put the preparation of the dressing into the hands of a regular manufacturer. It was accordingly put into the hands of P. Hartmann, of Heidenheim (Württemberg), whose preparation gave every satisfaction. The wood-wool, impregnated with 5 per cent. of glycerine or not, may be now procured from him.

The advantages claimed for this dressing are numerous. It is cleanly, fresh, and of a whitish color, it is at the same time soft and delicate in texture as cotton, and "extraordinarily cheap." The actual price is, however, not stated. It possesses some antiseptic properties naturally, has an agreeable odor, and is exceedingly elastic even in thin layers, so that bandages can be put on more lightly with this than with any other dressing. Its absorbent properties are so high that it takes up twelve times its own weight of water, so that ten grms. of well dried wood-wool after complete saturation attain a weight of 130 grms.

Dr. Bruns claims that high absorbent qualities in surgical dressings are of vast importance, "as primary wound healing takes place the more readily, the more completely the discharges are conducted from the wound—the drier the wound and its vicinity are kept—as it is under these circumstances that decomposition processes are most securely excluded. If the dressing

has absorbed the secretions of the first few days, the evaporation and drying up of the contained moisture should be permitted; then, as the discharge from the wound diminishes, the dressing, now dry, can remain a considerable time as a permanent one. With this object in view, it is indispensable to omit the occlusive layer of the typical Listerian dressing, as the drying of the dressing is prevented by it. With the same object in view I prefer the covering of the wound with glass-wool, in place of the protective, as under this the suture line is of necessity kept moist."

In his own clinic the mode of dressing is exceedingly simple. After the wound has been disinfected by copious irrigation with a 1 per cent. (.1 per cent.?) solution of sublimate, and the drainage tubes have been placed in, the suture line is covered with a layer of glass-wool. Upon this is placed a sufficient quantity of wood-wool either simply wrapped in sublimate gauze or sewn up in the form of a pillow. The latter form is preferred for hospital use. He considers it best then first to place on the wound a small pillow, then a larger one that will widely overlap this in all directions. These are to be fastened on by a firm binder. He summarises the results obtained by him with this dressing between the dates November 1st, 1882, to March 15th, 1883. 180 considerable operations and wounds were treated with sublimate antiseptis, the majority with wood-wool. In the case of those treated with wood-wool the first dressing with few exceptions remained from one to four weeks untouched. Occasionally patches of moisture were visible on the dressing on the earlier days, but within a short time these became dry and remained so, and when the dressings were changed the wounds without exception were absolutely dry and free from irritation. With the exception of one case of erysipelas no complication was observed throughout.—*Med. Press.*

LEAD POISONING.

The conveniences and elegancies of modern civilized life are in too many instances obtained at a cost involving a considerable sacrifice of human life and comfort, being dependent on the development of manufacturing industries, the workers in which are necessarily exposed to dangers inseparably associated with their employment. It is, however, an evidence of hastening progress that the number of such dangerous occupations is being certainly, if not rapidly, reduced; and we may confidently anticipate that the time is approaching when improved methods of production will effectually obviate the worst dangers with which we are familiar in this connection.

Such an Utopian period has, however, not yet dawned in regard to the white-lead industry, which affords employment to large numbers of men, and still larger numbers of women, in different parts of the United Kingdom, and which is annually chargeable with a perceptible proportion of the deaths which go to make up the yearly mortality of the country. The subject has been frequently dwelt on by official writers, and in the columns of the professional press; and wishes have constantly been expressed to the effect that some means of averting the dangers in connection with this manufacture could be devised. The nature of the process whereby white lead is produced is such that those associated in making it are subjected to its toxic influences throughout their daily labors; and, as is well known, innumerable suggestions have been made—and often enough adopted—with a view

to minimizing the evil consequences attending it. Thus, frequent washing, free ingestion of acidulated drinks, protective clothing, respirators, ventilation of an effective description, and other precautionary measures have been liberally resorted to, and it may fairly be said that employers of labor have shown commendable alacrity in carrying out one and all of these means of prevention as far as they have been able. They have, however, to deal with the least easily influenced classes of the population, for the majority of those who pursue the occupation of white lead making as a means of livelihood are either too careless or too callous to observe a systematic adherence to measures for preserving their own health. Consequently, the staff of every hospital situated near any centre of the industry is distressingly familiar with the symptoms presented by sufferers from this particular kind of poisoning; and the mortality of such institutions is swelled by the additions it receives from this unfortunate class of patients.

In a pamphlet published by Messrs. Hamilton, Adams, and Co. this subject is discussed, and the attempts made to remove existing abuses are illustrated by quotations from official correspondence, &c. The object of the author, however, is twofold. In addition to showing the extent of injury produced by the present system of manufacture, he essays to find a remedy for it, and this he conceives to be in an improved process invented by Professor Gardner, and in use at Deptford. Anything in the nature of a substitute for the material itself has but little chance of being successfully introduced, attempts in this direction, however assiduously prosecuted, having been hitherto uniformly failures. It is a result of experience that nothing so admirably serves the requirements of a "body" for paints as white-lead, or combines at once the characteristics of durability, economy, and appearance so completely. Mr. Gardner's process provides for the preparation of lead carbonate in closed chambers, the agency by which the conversion is effected being electricity in the presence of carbonic acid generated by a special apparatus; and the whole time occupied in the conversion being very much reduced in comparison with that now in vogue. The principal feature of the new process, however, is the arrangement whereby all necessity for operative manipulation of the material is done away with, and all risk thus avoided of lead-poisoning by those engaged in the manufacture. If it should eventually stand the test of commercial competition, there can be no question that white-lead so produced will be preferred to that which can only be made at the expense of human suffering, and often enough of human life also.—*Med. Press.*

A CASE OF ADDISON'S DISEASE CLOSELY RESEMBLING IDIOPATHIC ANÆMIA : WITH REMARKS.

BY

G. HARRISON YOUNGE, L.K.Q.C.P.I., etc.

Army Medical Department.

In July 1880, I was asked to see Mrs. A. W., aged 40. She was married, and had six children. She stated that her illness had commenced three years previously. At that time she had given birth to her youngest child, and had had a very difficult and prolonged labor; but there had been no hæmorrhage. Convalescence had

been very protracted, and she never regained her wonted strength. Before the present attack, her health had always been good, and she had led an active life. From her last confinement, however, her health had begun gradually to fail, and she had become weak, debilitated, and unable to attend to any domestic duties. About two years previously, the menses had ceased; but she afterwards suffered, at irregular periods, from attacks of menorrhagia. Latterly, however, even these had not appeared. She was naturally a tall stout woman, and had been plethoric, but now was very anæmic. The face was of a pale waxy appearance; the conjunctivæ were pearly white; and the mucous membrane of the lips and eyes had a bloodless appearance. The body showed but slight wasting, although the tissues were flabby and relaxed. There was slight œdema of the ankles; but this usually disappeared when the recumbent posture had been maintained for some time. She had never been exposed to the influence of malaria, nor to any unsanitary conditions that would account for the development of anæmia.

The patient complained of great breathlessness on exertion. Languor and a dislike for all exercise were marked. The most troublesome symptom, however, was pain and tenderness in the epigastrium. The pain was always excited on taking food; but was brought on equally by fluids as by solids. Position had no effect in relieving this; and although vomiting had occasionally taken place, the vomited matter never contained any traces of blood. The tenderness was marked, but it was diffused over the entire epigastric region, and also extended into the right hypochondrium.

Dyspeptic symptoms were present, but these had developed after the pain had set in. Constipation was also a troublesome symptom, and the tongue was flabby and coated with a thin white fur.

The most careful examination failed to detect any disease in the heart, liver, lungs, or spleen. There was, however, a hæmic, basic murmur heard on auscultation over the heart, and murmurs were also present in the large veins of the neck.

The pulse was soft and compressible, and ninety-eight per minute. The temperature was normal on each occasion on which it was taken. The urine was normal in color and quantity, and contained neither sugar nor albumen.

Believing, from the above symptoms, that the case was one of idiopathic anæmia, I determined to examine the blood. This I found of a paler color and less consistence than normal. Under the microscope the red corpuscles were seen to be much diminished, and generally smaller in size than normal. The white corpuscles did not appear to be increased; but, in addition to these, there were present a considerable number of micocytes, and also several curious shaped bodies resembling distorted red cells.

From this appearance of the blood, and from the symptoms present, I diagnosed the case as one of idiopathic anæmia; and, therefore determined to adopt the treatment that had proved so successful in the hands of Drs. Finny and Bramwell, viz., liquor arsenicalis. A mixture was ordered containing four minims of liquor arsenicalis, and a drachm of tincture of calumba. This to be taken four times a day.

Under this treatment and a carefully regulated diet, the patient began to improve, and when I was leaving the district she was able to sit up, though still complaining of a certain amount of languor and debility. In six months afterwards, I again visited the same district, and was asked to see the same patient. I found

that, after my leaving, she had discontinued the treatment, and that the symptoms had gradually returned.

Those now present generally resembled those above-described; but there was now superadded the peculiar bronzed appearance of the skin so characteristic of morbus Addisonii.

The symptoms gradually increased, the integumental discoloration became more pronounced, and the patient succumbed in spite of all treatment. Unfortunately, no *post mortem* examination could be performed.

REMARKS.—The above case suggests some interesting points for consideration. When first seen, the symptoms strikingly resembled those present in cases of so-called idiopathic anæmia. This resemblance was seen in the profoundly bloodless appearance presented by the patient; in the pearly whiteness of the conjunctivæ; in the flabby, though not emaciated, state of the tissues; in the epigastric pain and tenderness; in improvement under the administration of arsenic; and, lastly, in the characters of the blood, which characters have been looked upon as pathognomonic of idiopathic anæmia. In the later stage of the disease, however, the appearance of the characteristic discoloration of the skin proclaimed the case, beyond a doubt, one of morbus Addisonii.

The case has led me to conclude that idiopathic anæmia is in some way connected with disease of the suprarenal capsules. Indeed, I am inclined to look upon it as only a primary stage of Addison's disease, or as that disease *minus* bronzing of the skin. If we compare the descriptions of that great physician, we will see how exactly alike they are in both cases. Thus, in speaking of idiopathic anæmia, he says: "The countenance gets pale; the whites of the eyes become pearly; the general frame flabby, rather than wasted; the pulse, perhaps, large, but remarkably soft and compressible. . . . There is an increasing indisposition to exertion, with an uncomfortable feeling of faintness and breathlessness on attempting it; the whole surface of the body presents a blanched, smooth, and waxy appearance; the lips, gums, and tongue seem bloodless; the flabbiness of the solids increases; the appetite fails; the debility becomes extreme. . . . The patient can no longer rise from his bed; the mind occasionally wanders; he falls into a prostrate and half-torpid state; and at length expires."

Compare this with his description of the disease that bears his name, and the resemblance is seen to be striking. "The patient gradually becomes languid, weak, and indisposed either to bodily or mental exertion; appetite impaired, or entirely lost; the white of the eyes becomes pearly; the pulse small, perhaps soft and compressible; the body wastes without presenting the dry shrivelled skin and extreme emaciation usually attendant on protracted malignant disease; slight pain and uneasiness is from time to time referred to the region of the stomach; and there is occasional actual vomiting; and it is by no means rare for the patient to manifest indications of disturbed cerebral circulation."

Such precisely similar language could scarcely be used in describing dissimilar diseases. Indeed, these read as two descriptions of the same disease, only written at different periods; and the passages might be transposed, and yet the description would be accurate.

But how are we to account for the anæmia? and in what way does disease of the suprarenal capsules influence the blood? To answer this, we must briefly glance at the physiology of these bodies. Many physiologists believe that the atrabiliary bodies are con-

nected with the sympathetic nerves, being, if I may so express it, head-centres of the abdominal sympathetic system. But the most approved, and most probable, theory is that suggested by Kölliker, viz., that the cortical portion of these glands is connected with the elaboration of the blood, while the medulla is the centre of the sympathetic system. When, therefore, these bodies become the seat of disease, the blood becomes impoverished on account of one of its sources of elaboration being cut off. At the same time, the abdominal portion of the sympathetic is thrown into a profound state of disorder, which reacts injuriously on the functions of digestion, secretion, and excretion. At one and the same time, therefore, the blood is rendered impoverished and impure; and this state of things has only to continue for a short space of time to beget a profound state of anæmia and general disorder.

The severe pain and tenderness in the epigastrium, frequently experienced in this disease, also point to a nervous disorder; and the remarkable and sudden rises of temperature often witnessed, together with the extreme languor and depression, apparently unconnected with any serious anatomical lesion, can be satisfactorily accounted for in the same way.

As regards treatment, there can be no doubt that arsenic is the great remedy in so-called idiopathic anæmia. The cases recorded by Drs. Finny and Bramwell conclusively prove this. Arsenic acts, I believe, in some inexplicable manner on the suprarenal capsules, checking the diseased action that is taking place in them; and it is the only remedy on which any reliance can be placed in these cases.—*British Med. Journal*.

MEDICAL NEWS AND NOTES.

Congenital Unilateral Atrophy.—The *American Medical News*, for August 11th, contains an interesting paper by Dr. S. Pixley, descriptive of a male child, now more than seven years old, and who exhibits the extremely rare deformity of complete unilateral atrophy. The right side of the head is much smaller than the left, and the superior and inferior maxillary bones of the right side are so diminished in size, that the teeth do not touch within one-sixteenth of an inch. He is right-handed, his tongue when protruded, points to the right; and during the erection of the penis the organ points to the right side. From birth onwards the boy has enjoyed perfect health, but has preserved the same peculiar one-sided deformity in all stages of his growth. The present dimensions of the two sides are thus given at various points: From sternum to spine round point of shoulder, left $13\frac{1}{2}$ inches, right $11\frac{1}{2}$ inches, length of left humerus $9\frac{3}{4}$ inches, right 9 inches. Whole arm, left $17\frac{3}{8}$ inches, right $15\frac{5}{8}$ inches, circumference of fore arm, left $8\frac{3}{4}$ inches, right $7\frac{3}{8}$ inches. Whole leg, left $23\frac{1}{4}$ inches long, right 22 inches. Circumference of abdomen over umbilicus, left $13\frac{1}{8}$, right $12\frac{3}{8}$ inches. Similar examples of a symmetrical development, though very rare, have been occasionally recorded, about a dozen cases being accessible. From a study of these it does not appear that one side is more frequently atrophied than the other. Dr. Pixley's is a well-marked instance of the deformity, and it is to be hoped it will be kept carefully in view in the future.

Beer versus Water.—Advocates of the virtues of water as compared with those possessed by beer when employed as articles of diet during labor will be much chagrined at the result of a remarkable contest, waged recently, with a view to determining the respective merits of the two beverages. The scene of this curious trial was a farm near Amesbury, in Wiltshire, where, under the auspices of the Church of England Temperance Society, two farmers competed against one another with a view to decide which could do the greatest amount of harvest work within a given time, one drinking beer and the other water during the contest. The arrangement was entered into at a public meeting at Salisbury, when Mr. Terrill, a Wiltshire farmer, and the champion of beer, challenged Mr. Abbey, an Oxfordshire farmer, and the champion of water, to a day's labor, the stake being £5 a side. At the end of the time "beer" was declared the winner by more than one acre, the surfaces cleared having been, by Mr. Terrill (beer), 15a 3r. 16p.; by Mr. Abbey (water), 14a 3r. 0p. It is of course to be assumed that all other circumstances were as nearly as could be equal on both sides, for otherwise it would hardly have occurred to the temperance advocate to suggest the competition; and this being admitted, an unmistakable victory would appear to have been secured by beer over its opponent water as a supporter of stamina during labor.

Nothnagel on the Treatment of Chorea.—

In the course of a clinical lecture on chorea, Professor H. Nothnagel remarked that when the disease followed articular rheumatism, salicylate of soda was given; but this treatment had to be pursued empirically and carefully, as nothing was yet known of the nature of the disease. Opiates had no effect, neither had Calabar bean. Now-a-days potassic bromide was almost always given, but without any good result. As calmatives, and for the purpose of procuring sleep, morphia and chloral might be given. He had convinced himself by numerous experiments that propylamine was useless. Arsenic, in the form of Fowler's solution, was still the most effective remedy. It could be given by itself or in water. He suggested the following: ℞ Liq. Fowleri, grm. v.; aq. destill., grm. xv. M. Five drops to be given in a tumbler of water immediately after meals, and the dose to be increased by three drops every day until it reached thirty drops, after which it was to be slowly diminished. The constant current was another effective remedy in chorea, combined with tepid bathing, or the application of ice-bags to the spine.

Use of Sand for Ulcers.—A writer in *The London Practitioner* remarks that the application of a specially prepared sand to granulating sores has been tried for some time with success, and that it possesses the advantage, since it absorbs the discharge, of seldom requiring removal, so that healing can proceed without interruption. This sand is prepared as follows: It is first heated to a temperature capable of destroying all organic particles; it is then soaked in a solution of one part of bichloride of mercury in one thousand parts of water; after this, the mixture is placed in bottles, and can be used as required. This mode of treating ulcers is, however, not new, the sandy earth of the termite ants having, it is well known, long been used for this purpose by the natives on the west coast of Africa. But whether this termite earth possesses any antiseptic properties derived from the white ants is an interesting question not yet decided.

Telegraph Strain.—The *Boston Medical Journal* directs attention to the great demands made by telegraphy upon the nervous systems of those who follow it. The first-class operators all read by sound, and in a large office where a hundred or more receivers are all buzzing at once, the strain upon the organ of hearing, as well as upon the cerebral centre of audition, protracted as it is through ten hours daily, is very great. To discriminate between the longer and shorter dashes in an instrument clicking at the rate of a very large number of words per minute, involves a very close exercise of the attention. The nervous and muscular energy expended by a rapid sender is very great.

South America is going to work in earnest to increase the production of quinine. President Barrios has brought over a great planter, Forsyth, from Ceylon, to manage the enterprise, who has already ridden over 1,000 miles to select good sites and arranged for the planting of 5,000,000 cinchona trees. It is intended to try the experiment both in South America and Mexico. An English authority states that the culture of the cinchona has been so profitable to the British Government in India that in the three years since the trees were first set out the original investment of \$750,000 has been repaid, but the trees have reached the value of \$5,000,000. Has the experiment ever been tried in Florida? We see no reason why it should not succeed in the damp glades of the interior of that State, as they possess the two requisites of an almost tropical climate and a heavy rainfall.

The following circular, the object of which will be apparent to our readers, has been received by the GAZETTE:

WAR DEPARTMENT, SURGEON GENERAL'S OFFICE,
WASHINGTON, D. C.

Congress having appropriated a small sum for furnishing special Surgical Appliances to those disabled in the military or naval service, your co-operation is respectfully invited in order that this relief may reach the class of persons intended to be benefited.

This office is desirous of obtaining authentic information regarding all existing cases of severe and unusual injuries. Should you have occasion to report such, it will be found useful to bear in mind the following points:

1. As no money commutation is authorized, only such cases need be presented as offer a fair prospect of being relieved by surgical or mechanical appliances.
2. Artificial limbs and apparatus for disabled limbs being otherwise provided for, by law, the injuries here in view are almost exclusively those affecting the head, face or trunk.
3. As trusses are furnished under special legislation, hernia, when not complicated with other injuries, is not to be understood as covered by this appropriation for SPECIAL appliances.
4. As the appropriation is small, it is proper that it be expended only on the most meritorious cases. It is therefore not intended to furnish appliances which are ordinarily within the means of the individual, nor those that are of a character so perishable that it would be difficult to keep up the supply. Regard is to be had chiefly to the severity of the injury, and the ability of the sufferer, unassisted, to procure relief.

Very respectfully,

Your obedient servant,

C. H. CRANE,
Surgeon General, U. S. Army

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SANITARY INSPECTION OF HOUSES.

It was recently inquired in the House of Commons, London, whether there was any rule under which a house-holder or other person could apply to the local sanitary authority and obtain, for a reasonable fee, an inspection of a house and a certificate as to its drainage and general sanitary arrangements. Apropos of this inquiry, which could not be affirmatively answered, the *Lancet* remarks: "It is notorious that the houses both of the poor and of the rich are in many instances in need of radical structural alteration in order to constitute them wholesome dwellings, and it is well known that many persons, after entering a newly acquired house, have been stricken with disease and death because the sanitary arrangements of the dwelling have been such as to ensure the contamination of air or water, or both, with sewage emanations. And not only so, but the ordinary public are necessarily quite unable to judge as to the quality of the sanitary arrangements, most of which are buried beneath the foundations or hidden away in obscure corners and places difficult of access. There is hence a very natural demand for some official assistance in the matter. The subject is by no means an easy one to deal with. Skill in testing the efficiency of a drain and of its connections with the internal fittings of a house on the one hand, and with the sewer on the other, is only acquired as the result of such experience and tuition as could hardly be procured until within recent years, and the dangers or the reverse attaching to the different forms of water fittings are perhaps even more difficult to master, except as the result of constant practice." It then goes on to deplore the insufficiency of the present sanitary inspection, and more particularly the want of provision for such inspection in the homes of those too poor to pay the sanitary expert.

The same question could be asked in our own country, and the same remarks and lament applied to the condition of sanitary inspection here. Outside of the general supervision of the Health Board, the people beyond the few able to pay the sanitary expert have no reliable means of determining the sanitary security of a proposed home.

Ignorance of the existence of professional sanitary experts is no doubt a cause among some of lack of care in this direction. While doubtless there are many so

little aware of the value of good sanitary surroundings, or so careless of their importance as not to avail themselves of means of inspection that are or could be provided. The majority however are, we believe, alive to the importance of this question, and if a reliable certificate could be secured for a moderate fee would, no doubt, obtain it.

Where are our sanitary experts? A little business push and energy will increase their incomes and the health of the people.

ETIOLOGY AND PATHOLOGY OF SUMMER DIARRHŒA.

In a recent editorial review of a paper on this subject presented by Dr. Ballard the *British Medical Journal* remarks:—

What is summer diarrhœa? According to Dr. Ballard, it is something more than a simple dyspepsia; it is a disease of a general character, with well-known symptoms. Changes of a most extensive nature are produced in the organs of the body, and these changes are so rapid, that its pathology seems somewhat analogous to the pathology of cholera. On this part of his subject, Dr. Ballard was necessarily brief, for reasons explained; he had not been able to collect sufficient material to verify this provisional hypothesis.

On the subject of its etiology he was more exhaustive. By a division of the alleged principal causes, we may be able to narrow down the points at issue, and, by a process of exclusion, to wipe out certain causes which are not generally concerned in the production of summer diarrhœa.

1. *Neglect of Infants in Large Manufacturing Towns.*—This cause is not the efficient one. In Leicester, Nottingham, Oldham, Preston, Rochdale, and Halifax, women are largely employed in factories, and the neglect of children is pretty much the same; yet the death rate in Oldham, Rochdale, and Halifax, is very low, while that of Leicester, Preston, and Nottingham is exceptionally high.

2. *The Use of Dirty Feeding-Bottles.*—This cause may also be looked upon as not exclusive. At Leicester, exceptional care seems to have been taken of the feeding-bottles. Again, such feeding-bottles are used all the year round, so that, if this were the cause, the disease should prevail at all times, in all places, and at all seasons.

3. *Temperature of the Air and Drought.*—This cause is negatived by facts. Mr. Turner of Portsmouth stated that he could predicate, by certain formulæ, what the amount of mortality would be in any particular week from the temperature of that week, and that summer diarrhœa was associated with a high temperature. His evidence is counterbalanced by the general experience of other epidemics. The acme of diarrhœa is not always at the acme of temperature; the acme of diarrhœa is reached before the highest rise of temperature. Temperature is not, then, an essential condition.

4. *Sewer-Exhalation.*—Facts are opposed to this cause. Summer diarrhœa prevails in towns without sewers. For instance, it prevailed extensively at Winchester in 1876, a town then without sewers. It is well known to exist in country villages where sewers are unknown.

5. *Filth, and Especially Excremental Filth.*—Facts again are opposed to this cause. In Nottingham, there is less excremental filth-nuisance than in any

town in England, yet summer diarrhoea has been very prevalent. There is scarcely any town in England less careful about surface-pollution than Helston, in Cornwall, yet in Helston summer diarrhoea is not prevalent. Plymouth is filthy, yet summer diarrhoea does not occur in the same degree there as in other towns. In Leicester, Dr. Ballard stated that it occurred in families whose sanitary surroundings were good.

6. *Foods*.—A. *Artificial Food*.—In Leicester, of 341 fatal cases, only 2 per cent. were suckled from the breast alone. The majority of them had some kind of artificial food.

B. *Cow's Milk*.—In Leicester, 60 per cent. used cow's milk. As Cardiff has a very low prevalence of diarrhoea Dr. Ballard asked the health officer how it was that diarrhoea was so slight, and especially amongst the Irish people. The reply was, that the Irish of Cardiff got very little cow's milk, and the infants got no cow's milk.

Dr. Fowler, of Wakefield, told Dr. Ballard, that he had invariably found that the milk supplied to children having diarrhoea had been from cows which had been fed on sour grain. When a child had diarrhoea in his practice, the first thing he said was: "Change your milk."

In the subsequent discussion, several speakers advanced facts which would seem to support a milk-contamination theory. The evidence of Dr. Howie, of Liverpool, is very striking in this connection. About nine years since a patient of his died, after being fed on goat's milk. The goat also died the same night. This convinced him that the child was poisoned by the food it received from the goat. Since then he had always acted on the principle that, in the majority of instances, the immediate cause of summer diarrhoea was to be found in the food. He told his patients, whenever they found diarrhoea beginning in a child, to starve it for twenty-four hours, and afterwards to use condensed milk. He was now rarely called in for an attack of summer diarrhoea.

Dr. Oxley, of Liverpool, believed that something was due to the change which took place in the water or food—particularly food—which was liable to decomposition, and nothing was more liable to rapid decomposition than milk. Dr. Kealy, of Gosport, has also found that in cases of children brought up by hand, and fed on milk from cows fed on grains, diarrhoea was very common. Over and over again he had proved diarrhoea to have proceeded from the milk of cows fed on mangolds. In the paper read by Dr. Morison, special stress was laid upon milk in its relation to a high summer temperature, the closeness of dwelling-rooms, and other states which conduce to the fermentation of milk. It would seem, *prima facie*, that the solution of the problem was to be found in the milk-supply of infants.

Accepting this theory, it would appear comparatively easy to account for all the phenomena attendant on summer diarrhoea.

If there were a specific organism or microphyte at the root of this disease, knowing the peculiar receptivity of milk for this class, and the power of milk in spreading typhoid, scarlatina, etc., we might be all the more tempted to cut the knot and to accept the milk-theory. There cannot be a question that in a very large number of cases of diarrhoea, when the milk is changed, the diarrhoea abates. Unfortunately, we cannot so summarily solve the problem. There are certain grave difficulties in the way, which have first to be cleared up. Whatever explanation may be given of infantile diarrhoea, it must be an explanation which

will apply to adult diarrhoea as well. The cow's milk theory does not affect the diarrhoea of adults.

SUING FOR A DIPLOMA.

A case so unique as to be unparalleled, we believe, is reported by the *Maryland Medical Journal* to have lately been brought before the Superior Court of that city. A young man, a member of the class of 1883 at the College of Physicians and Surgeons at Baltimore, who was among the rejected applicants for the diploma of that medical school at the end of the last session, petitioned the court to issue a writ of *mandamus* upon the Faculty that they should issue to him a diploma, and alleged that its non-issuance had damaged his character to the extent of 2,000 dollars. Through counsel, the Faculty filed a demurrer, which set forth that the Faculty had the right to deny its diploma upon any grounds whenever it saw fit; that it was, so far as that went, the supreme tribunal; and that no court of justice could control such action. After argument before the court, the sitting judge decided in favor of the demurrer. An appeal was taken. Looking at the subject simply from an educational standpoint, and leaving the particular facts in this case aside, the *Maryland Journal* suggests that the fact of a student of any school, college, or university appealing to a court of justice for satisfaction against such school, college, or university, must strike at every element of our educational system. If it be in the power of a medical student to sue out a writ of *mandamus* upon a medical school, no matter if he have attended twenty sessions of that school, and oblige the Faculty, by mandate of court, to give him a diploma, every small free-school scholar, freshman, or third-class man, has the same right; and, by authority of such court, must, whether worthy or not, be sent up higher. In other words, the schoolmaster, school-board, board of examiners (such as we have at our military and naval schools), and the various Faculties of our universities and seats of learning, must consider their action in any case subject to the revision of a tribunal not one whit more capable of deciding the point (and, indeed, we may truly say not at all as competent), and upon which tribunal no larger powers have been conferred by legislative action. The examining body of any institution is, we contend, so far as that individual body is concerned, whether it consists of one schoolmaster or twenty professors, final, and any decision arrived at by such body should not even be discussed by any outside party. The scholar, when he enters any school, is supposed to consider himself as subject to all the rules and decisions of his tutors, and, unless such rules conflict with good morals, personal health, or national polity, has no redress. As well might he appeal from the decision of the Supreme Court of the United States.—*British Med. Journal*.

BOOK NOTICES.

The Treatment of Wounds. Its Principles and Practice, General and Special. By Lewis S. Pilcher, A.M., M.D. Member of the New York Surgical Society. With one hundred and sixteen Wood Engravings. Wm. Wood & Co., New York, 1883.

The volume before us which forms one of the latest additions to Wood's Library of Standard Medical Authors, the author has aimed to state "the principles upon which the treatment of wounds should be based;

to describe the means which are available to the surgeon for satisfying the demands of these principles; and to point out the particular modifications which the peculiarities of special wounds may require."

There is little that is original in the book, though it gives evidence of careful research and superior discrimination in separating from the mass of material relating to this subject in the standard text-books that which is most available for the needs of the surgical reader, and which has best stood the test of practical experience. It is a compilation from the various authorities assimilated by the author and presented in his own language.

It simplifies to some extent the study of the treatment of wounds and emphasizes points in the fields of wound repair and wound disturbance which are too often lost sight of, and should meet with acceptance. It is readable and not too confusingly theoretical.

A Treatise on Therapeutics, comprising Materia Medica and Toxicology. With Especial Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. Wood, M.D., Professor of Materia Medica and Therapeutics, and Clinical Professor of Diseases of the Nervous System in the University of Pennsylvania, Physician to the Philadelphia Hospital, Member of the National Academy of Science, etc. Fifth Edition, Revised and Enlarged. J. B. Lippincott & Co., Philadelphia, 1883.

This standard work, which has become a classic, is doubtless already well known to our readers. The fifth edition, published so soon after the fourth, has rendered mostly unnecessary those changes in the text due to lapse of time and comparatively little alteration has been made.

The merits of the book are manifold, and are well appreciated, as is indicated by the rapid sale of the fourth edition.

It is a work almost unique in the exhaustiveness with which some subjects are considered. Its success is alike gratifying to its author and his edified readers.

LECTURES.

UNUNITED FRACTURE OF THE TIBIA— ABSCESS OF THE THIGH—EPITHELIOMA OF THE TOE.

A CLINICAL LECTURE DELIVERED AT THE COLLEGE OF
PHYSICIANS AND SURGEONS.

BY

HENRY B. SANDS, M.D.,

Professor of Practice of Surgery, College of Physicians and
Surgeons, N.Y.

CASE I.—Ununited Fracture of the Tibia—This patient hurt his leg seven months ago, receiving a compound fracture, the evidence of which still exists in the resulting cicatrix. He was treated for two months by rest and application of splints, and was allowed to get up and go about until a month ago when he became unable to bear his weight upon the limb. He comes here in consequence of the disability produced by the accident. You observe the shrinking of the muscular tissue of the leg. There is a great deal

of deformity seen along the tibial side opposite the compound fracture. The prominence is made more evident by the sinking in of the parts below this point. This prominence is due to the presence of callus developed in connection with the upper and lower fragment, and on examining the leg by manipulation, I discover a point of motion. I do not find bony crepitus, but it is evident that the continuity of the tibia has not been restored, and we have here a case of ununited fracture. This non-union of the fracture of course disables the patient to a great degree and compels him to walk upon crutches. What has been the cause of non-union in this particular case it is difficult to say, but it is not infrequent to have such an accident in fracture of the leg. It is more apt to be induced in cases of compound than in cases of simple fracture. Probably it does not depend in this case upon the presence of a fragment of bone or a piece of dead bone, because in either case the external wound would not have been likely to have healed. Probably the discharge has had something to do with preventing the repair of the parts. Nothing can be done but to put this man in bed. It is hardly probable now that this fracture will unite. Something must be done to stimulate the parts. We must set up a certain amount of inflammation. This is the tendency of all methods adopted for the cure of ununited fracture, and they are very numerous. Of the methods that are not operative counter-irritation applied to the surface, and friction of the bones by forced manipulation—such as in the lower extremity is to be gotten by the act of locomotion—are the chief and simplest means of cure. The last mentioned mode of treatment, viz., that of having the patient go about upon the limb so as to set up inflammation and then apply splints, to prevent mobility and guard against a second accident, has resulted in the majority of cases, in my experience, in the cure of ununited fracture of the limb. The man should be allowed to walk without crutches, and after a month this limb will be more solid. An osseous deposit will take place in the fibrous medium which now unites the broken ends. If that should fail the best thing to do next would be to drill the bones. This was first done by the late Prof. D—— of Chicago. He ran a drill through both ends of the bones. If all other means should fail, we may resort to the operation of refracture, which should always be avoided if possible, and especially in the cases where there are two bones to be dealt with and where it is difficult to secure apposition.

CASE II.—Abscess of the Thigh—Female aged 50. Thirty years ago patient had hip disease. She got well of the disease except that the limb remained $1\frac{1}{2}$ inches short. In consequence of this about $1\frac{1}{2}$ years ago she fell and hurt her hip. She was treated in a hospital in New York for some time. Recently she has observed a gradually increasing swelling on the front and outer side of the left thigh. It is hardly possible in your presence to conduct such an examination as will disclose this to you, for she is not willing to submit to any exposure. This was diagnosed as a case of knee-joint disease. This swelling is soft and fluctuating, and is situated on the anterior aspect of the thigh extending from the line drawn above the flexion of the synovial membrane of the knee-joint to the junction of upper, with the middle third of the thigh, or perhaps a little higher. The swelling is soft, distinctly fluctuating and devoid of heat. We think that there is little doubt that the swelling is caused by an accumulation of matter. In other words here is a probable example of what is known as cold abscess as distin-

guished from those abscesses which are acute and which are accompanied by the ordinary signs of inflammation such as pain, heat, etc. We have here a swelling with little pain, with no redness and no heat that I can appreciate by applying the hand over the tumor. Assuming that the diagnosis of cold abscess is correct, the next point to determine is, What is the origin of the abscess? Cold abscesses may occur spontaneously or as the result of injury. They may occur in connection with dead bone. As a rule cold abscesses, except those found sometimes in the neck from degenerated lymphatic glands, are connected with caries of the bone. In this woman's case it will be necessary to investigate the matter very carefully with regard to the subject of hip disease as the cause of abscess. An abscess occurring in this situation might depend upon disease of the thigh or might possibly depend upon disease of the spinal column. In the latter case the abscess could be traced up into the pelvis. It is probable that this abscess is connected with the hip and it is rather remarkable that it should reach so low. In Mr. Erichson's work on surgery you will find an account of a case which he saw where an abscess connected with hip disease was opened by the side of the tendo Achilles; with disease of the hip, however, it is common for cold abscesses to present at a higher point than here. Suppose the diagnosis be made, what shall be done? It is rather difficult to decide this point. If we let the abscess alone it is possible that the fluid contents may be absorbed, leaving nothing but solid matter, and if that were the case, the disease, so far as the abscess is concerned, might be said practically to be cured. Although absorption may possibly occur it is by no means probable. We should not hesitate for a moment to treat these cases by incision, if it were not for the fact that when a cold abscess is opened, unless at the same time the bony disease upon which it depends can be controlled, the patient is apt to be made rather worse than better. This statement was perhaps more strictly true in former times than now. Because if cold abscesses are opened with strictly antiseptic precautions, it sometimes happens that the discharge does increase as it would otherwise, that even when the bony disease is not cured, the sinews contract and the discharge is very slight and the patient's condition is ameliorated. But unless the bony disease can be reached and cured there is hardly hope that the opening of the abscess will result in a cure. I fear if left to itself that it will grow larger. I should therefore feel warranted to recommend this woman to submit to an operation for emptying the abscess. If possible by the exclusion of air. Or to empty it and wash it out well with antiseptic solutions and drain it thoroughly, and make the dressings as antiseptic as possible. This is a case in which the experiment can be made of injecting iodoform into the interior of the wound. Another mode of treating these abscesses is by aspiration. But usually the accumulation speedily occurs again, and a free opening is at last necessary to effect a cure.

CASE III.—*Epithelioma of the Toe*.—Female, æt. 22. Has had trouble with the great toe of right foot for two months. It became swollen on the side and very painful. Here is a very curious case, gentlemen. I have never seen one like it. Dr. Abbe made a cast two weeks ago of this woman's toe, and we can, by examination, get a very fair idea of the appearances now presented. We had occasion at the last clinic to study a very common painful affection of the great toe, caused by ingrowing toe nail. In that case the disease was situated on the outer side of the toe. In this case

the disease is situated on the inner side. This is not a case of ingrowing toe-nail. There is quite a soft spot one quarter of an inch in diameter, where a horny, sensitive-looking mass like granulation tissue protrudes through the aperture left by absorption of the nail. This growth has increased in size since the cast was made two weeks ago. Although this is a singular case, I do not think it is one which is very difficult to understand. Evidently something has developed beneath the nail which has caused absorption of the nail and obliterated it. Several things are possible here. First, the formation of corns under the great toe-nail. Secondly, we may have an exostosis accompanied with the rise of the nail from its bed. It becomes detached and causes great pain. In this case, however, the growth has neither the characteristics of a corn nor of an osseous tumor. It is a soft mass, vascular and quite sensitive. It is also situated in a singular place at the middle of the anterior and posterior margins of the nail. This growth which has evidently been developed from the matrix of the nail, I have little doubt, is either one of two things. It is either a papilloma, that is, a tumor consisting of large papillæ of the matrix of the nail, or else it is a tumor of an epithelial character.

I believe that in all probability the latter is the case, because I doubt very much if a simple papillary growth would cause absorption of the nail covering it.

Dr. Abbe has had this woman in charge. She has been taking Fowler's solution, eight drops three times a day. The dressing with ointment has rendered it painless. If it were my own toe that were the seat of this disease, I have no doubt as to what I should do. I should have this growth removed. If this is a papilloma it may subside without extirpation. If it be epithelioma, the sooner it is dealt with the better. I should recommend early extirpation of the growth. I do not think it would be necessary to resort to amputation in this case. I should split the nail and take away the tumor, being careful to scrape the bone if necessary in order to make the removal complete.

Dr. Abbe proposes to remove the growth if the arsenic fails. Certainly the case is a remarkable one. There is no syphilitic or other cachexia connected with the case.

HOSPITAL RECORDS.

NEW YORK HOSPITAL—NEW YORK.

INSUFFICIENCY OF SPHINCTER ANI—PHTHISIS PULMONALIS—OPERATION.

SERVICE OF

ROBERT F. WEIR, M. D.

Pt. M. F., U. S., æt 22, single, servant, admitted Jan. 9. Patient was treated seven months ago for fistula in ano, for which an operation was performed. In this operation part of the external sphincter was divided. The fistula healed up entirely, and has remained so. Since then she has had only partial control over fæces. She has some control over solid movements but none over fluid.

Admission—Fairly nourished.

Examination—Shows the sphincter ani much relaxed, easily admits the finger. There is the cicatrix of the old fistula on both sides of anus, and a small fistulous opening exists about one inch from anal margin on each side. A probe can be passed so as to connect these

openings and also to a third opening just without the external sphincter.

Jan. 13, Operation—Ether. Director passed through the three sinuses successively, and the tissues lying over it consisting of skin and areolar tissue cut with bistoury. Hæmorrhage slight, controlled by pressure. Packed with iodoform gauze.

Jan. 15.—Very little pain from operation. Discharge slight. Packed with lamp wicking and carbolized oil.

Jan. 21.—Wound granulating from the bottom, balsam of Peru dressing.

Feb. 3.—Wounds have nearly healed. Much more control over bowels.

Feb. 15.—Wounds have cicatrized. Almost complete control over movements. Patient has been troubled of late with a cough, pain in the chest, and night sweats. Physical examination gives the usual signs of a cavity in left apex. Advised to leave the city. Discharged improved.

ABSTRACTS AND SELECTIONS.

THE CLIMATE OF SANTA BARBARA, AND THE NORTHERN PACIFIC COAST. By R. W. BURNET, M.D., M.R.C.P., Physician to the Great Northern Hospital.

The subject of climate is one that, both in its general bearings and in relation to individual places, has engaged the attention of the profession to a very large extent. Much has been written about special climates, to the exclusion, perhaps, of a broader view of the whole subject, although no one can deny that different places known as health resorts have features differing in kind as well as in degree. When, however, one sees cases that in all their main characteristics are very similar, doing apparently as well in one place as in another, it becomes difficult to believe in the specific virtues of any one place, and we are driven to ask what is it after all that we seek and expect in the places to which we send patients? In the first place, I suppose we generally desire to effect as complete as possible a change in the manner and mode of life; and, secondly, to protect the patient from extremes of temperature. We seek also to place him in such circumstances as shall, especially in the case of chest affections, secure a plentiful and continually changing supply of fresh air, with a maximum amount of sunshine. Speaking in reference to consumptives, the late Dr. Parkes, whom we all recognize as an authority in such matters, said, "The best climates phthisis are, perhaps, not necessarily the equable ones, but those which permit the greatest number of hours to be passed out of the house." The late Dr. Hughes Bennett also expressed the opinion that the climate which enabled the patient to spend the greatest part of his time in the open air was the best, and that its advantages should be considered as largely dependent on exercise, and on the stimulus given to the nutritive functions rather than its influences on the lungs directly.

The climate of a district and of a place is of course largely dependent on the physical characters of the country, the kind of soil, the relation of the mountain ranges and their height, the nearness or distance of the sea and its temperature. Thus places in very different parts of the world, but resembling one another in physical characters, may present much similarity of

climate. Compare, for example, the Riviera, lying on the shores of the Mediterranean, and the Santa Barbara valley in California, lying along the Pacific Coast. In both we have a plain, with a southern exposure, more or less sheltered from the north, northwest and northeast by high mountains, and stretched along the shores of a comparatively warm sea. What do we find? We see that these two places, lying as they do widely apart, have not at all dissimilar climates.

The county of Santa Barbara is about seventy miles long from east to west, and thirty-five miles wide from north to south. The coast here runs for about 100 miles almost due east and west, and that part of the country lying between the Santa Ynez Mountains and the sea is called the Santa Barbara Valley. It is thus sheltered by mountains and has a southern exposure. Moreover, a chain of islands lying off the coast at a distance of some twenty miles, and rising to a height of from 2000 to 3000 feet, serve to protect it from ocean gales. The town of Santa Barbara lies on the shore about 285 miles southeast of San Francisco and about 100 miles northwest of Los Angeles. The whole of California was peopled by Indians up till the time of the first Spanish missions, about 100 years ago—the mission of Santa Barbara dating from 1786. It consisted of a few priests and a company of soldiers to protect them from Indian raids. Many of the present inhabitants are descendants of the soldiers of that garrison and of the early settlers who followed the establishment of the mission. The old part of the town still presents many characteristics of its Spanish origin, but its present flourishing condition is to be attributed mainly to the high repute it has gained as a sanatorium. This, in addition to a more or less fluctuating winter population, drawn chiefly from the eastern States, has attracted many permanent residents who have made the place their home. Here you find Englishmen, Canadians, and Americans, many of whom have acquired land in the district and have taken up, both as an occupation and an investment, the raising of stock, and the cultivation of grain, of the orange, the olive, and the almond, all of which seem to do well. This is certainly a great advantage, especially to a young man who has to leave home for health's sake; who is sent away as a precaution, but who does not feel ill, and is not sufficiently ill to be classed with invalids. To have some out-door occupation and interest is, in such a case, more than half the cure, and this can, of course, be obtained only in a new country.

Of the climate we can speak from personal experience of only a short period in December and January, but at that season it was exceedingly pleasant; brilliant sunshine day after day, with a cloudless sky and a clear bracing atmosphere. The rains were late, and consequently the country was somewhat brown and dry, but towards the end of the year we had a thunderstorm followed by two days of much-needed rain. The average annual rainfall is not more than sixteen or seventeen inches, and it comes chiefly in November, December, January and February. All through the winter months roses, geraniums, verbenas, etc., flourish and bloom in the open air and without shelter, while strawberries ripen up till December, the grape ripens freely in the open, and the orange, the lemon, the Japanese persimmon, and the olive are seen in full fruit in January. The summers are dry, but not very hot, the thermometer very rarely rising to 90° F. The average temperature for July is 68°, and that for January 53° F., giving a difference of only 15° F. Snow never falls, and even slight frosts are rare.

The nights are cool all the year through, but never very cold, the average difference between the warmest part of the day and the coolest part of the night being reckoned at 12° F. The winter months average 54° F., the spring 60°, the summer 68°, and the autumn 63°. In his statistics of temperature and the climate of the Riviera, Dr. H. Hassall gives in round numbers the following: Winter 55°, spring 50°, summer 63°, and autumn 72°, the average for the year being a little over 60°. These figures apply chiefly to San Remo, the numbers given for Bordighera and Mentone being a little higher, and those for Nice a little lower. At the outset I alluded to the advantages of those climates that permitted the greatest number of hours to be spent in the open air. The following computation was made by a patient staying at Santa Barbara. During the year (Feb. 1 to Jan. 31) there were 310 pleasant days, when an invalid might be out five or six hours with safety and comfort; ten windy days and five wet ones, when he would be kept indoors all day; the remainder cloudy and showery days, on which he could be out part of the day with comfort. A feature of open air life that has been largely tried, and with the best results, at Santa Barbara is camping out. Patients living there get into the habit of being so much out of doors that the transition to camp life is easy, and has been by some carried on for four or five months continuously. In California horses are plentiful, and everybody rides. The "vacquero" spends his life in the saddle. Mere children are seen mounted on a good-sized mustang, which they manage with the ease of perfect horsemanship. Visitors buy or hire horses for the season, and the invalid, too, enjoys his morning ride. As the place has grown, so pleasant society has increased, while good shops, a club, and good hotels have rapidly sprung up.

Los Angeles, which I have already mentioned, lies a little off the coast, about a hundred miles southeast, and has a climate rather warmer and drier than Santa Barbara. It is a town of considerable size, and is the center of a large orange-growing and wine-making district. A hundred and twenty miles further south lies San Diego, with an annual mean temperature of 26°, and a rainfall rather under eleven inches. Going northwards from Santa Barbara we have Monterey, a favorite resort with the people of San Francisco, from which it is distant a little over a hundred miles, and is prettily situated on a bay opposite to Santa Cruz. At certain seasons San Francisco is much exposed to cold winds off the sea, and to escape these people betake themselves to Monterey, with its cedars and cypresses, and its sheltered situation. In December the climate of San Francisco was delightful, far more pleasant than in September, being moderately warm and equable. In summer the early part of the day was often very hot, but towards noon a cold wind would sweep inwards off the sea with chilling and penetrating force. Passing to the northward of San Francisco we have, in Western Oregon and in Washington Territory, a lower temperature and a long wet winter, with a rainfall of as much as forty-five inches or more. This district lies to the west of the Cascade range of mountains, and extends as far north as Puget Sound. Immediately to the north of this are the Straits of San Juan de Fuca, separating British from American territory. On the northern shores of the straits, at the southeast corner of Vancouver Island, the town of Victoria, capital of British Columbia, is picturesquely situated.

It is surprising, at first sight at least, to find, nearly a thousand miles north of San Francisco, a climate

closely resembling that of the English south coast, having a winter average temperature of 42° F., and a summer of a little over 60°. This mildness, which extends more than three hundred miles north of Victoria, is attributed to a warm stream called the Japanese current, which strikes the Queen Charlotte Islands and flows southerly along the shores of Vancouver Island. Victoria bids fair to become a favorite winter residence and sanatorium, for in addition to the beauty of its surroundings, the fact that it has such a mild and equable climate, will, especially when the railway now in process of construction over the Rocky Mountains and through the magnificent cañons of the Fraser River is completed, attract many inhabitants of the cold northwest to take refuge on its sunny shores.

In conclusion, I would only remark that while this Pacific Coast, with its unsurpassed beauty of scenery and attractions of climate, is by distance and difficulty of travel shut off from many classes of invalids, to those who have to seek an early and permanent residence abroad it undoubtedly presents many advantages.—*The Lancet*.

A CASE OF EPIPHYSAL NECROSIS OF THE HUMERUS, FOLLOWED BY CONSIDERABLE SHORTENING OF THE ARM. Read in the Section of Diseases of Children. By JOHN H. MORGAN, M.A., F.R.C.S. Eng., Assistant-Surgeon to Charing Cross Hospital, and to the Hospital for Diseases of Children, etc.

In a paper in vol. 45 of the *Medico-Chirurgical Transactions*, Professor Humphry mentions the case of a woman, aged 70, who was injured at the shoulder when six months old. There resulted a shortening of the humerus to the extent of three inches (8 to 11), with prominence at the line of junction of the epiphysis with the diaphysis. Another case is mentioned of a boy, aged 3, who was injured at the upper epiphysal line of the right humerus; suppuration followed; an abscess burst, and healed spontaneously in about a year, leaving a deeply indented cicatrix. The humerus was an inch shorter than its fellow, but movement of the joint was not lost. At nine years of age the difference in length remained the same; showing that, though the growth was impeded during the progress of the disease, it had proceeded as well as in the opposite limb since the part healed. In his work on *Diseases of the Bones*, Stanley mentions the case of a child who had an abscess in the upper part of the tibia, accompanied by partial separation of the epiphysis; the bone several years afterwards, was one and a half inches shorter than the opposite tibia.

Inflammation, and even necrosis, of the epiphyses of the long bones, is not uncommon; but it so frequently tends to involve the neighboring joint that the results of its necrosis are frequently involved in the more severe ones which follow implication of the articular structures. Paget has pointed out the lengthening which sometimes results from the excessive vascularity of these structures; but the contrary condition, which follows the death of the parts to which the addition of length to the bone is mostly due, is not often seen. The principal lengthening of the humerus takes place at the upper extremity, the ossifying centre of which appears in the second year, and continues active until the twentieth. The line of junction of the epiphysal cartilage with the shaft of the humerus has only a small portion of its inner part included within the cavity of the synovial membrane, and hence the joint may escape

disease which severely injures the growing part of the bone.

The following is an instance of considerable shortening of the humerus which followed abscess and necrosis in the upper epiphysis. A boy of not markedly strumous habit, and with a good family history, was brought to me at the out-patient room of the Hospital for Sick Children, having a swelling over the upper part of the arm, which had appeared as the result of a fall on the shoulder. This presented in the axilla, and was opened, and the boy improved for a short time. Before long, however, a second abscess formed in the same situation, which was allowed to burst, and he was admitted to the Hospital, where I removed some crumbs of necrosed bone from the sinus. This continued to discharge for a year, when some more small portions of dead bone were taken away, and the sinus in a short time closed.

He has been under my observation for more than three years, and I first noted the difference of length of the humeri in February 1882, when, the disease having existed a year and a half, the affected bone was found to be an inch shorter than its fellow. In the following October, the two bones measured respectively, left $8\frac{1}{4}$ inches, right 7 inches, showing a difference of $1\frac{1}{4}$ inches; and in May last, the humeri measured, right $7\frac{1}{4}$ inches, left $9\frac{1}{4}$ inches, showing a difference of two inches, and proving that no growth had taken place in the diseased bone. The sinus had then closed, and the boy's health improved; and the respective lengths at the present time (August 1st) are 8 inches and 10 inches respectively. Thus, it would seem that, while the disease was in progress, little or no growth took place in the affected humerus, but that, so soon as it had ceased, the growth in the diseased was *pari passu* with that in the healthy limb.

The casts exhibited have been quite recently made, and show the very great contrast in the length of the two limbs. There is some nodular projection at the upper part of the bone, but the movements of the shoulder-joint are not affected, and the full power of using the arm is only limited by some thickening of the parts about the sinus. There is no muscular wasting, and the general thickness of the two bones seems equal. The case thus fully bears out the truth of Professor Humphry's observations.—*British Med. Journal*.

ON THE NATURE OF PURPURA. Being an Introduction to a Discussion in the Section of Medicine. By STEPHEN MACKENZIE, M.D., F.R.C.P., Physician to, and Lecturer on Medicine, at the London Hospital, etc.

In concluding his paper, Dr. MacKenzie summed up as follows:—

"If we agree, as I hope many here will, to regard purpura purely as a symptom, it is still convenient to endeavor to classify the conditions under which it occurs. This has been done by Dr. Du Castel in a recent and very admirable essay, to which I have already several times referred. He would make the following varieties: 1, Purpuras rheumatismaux exanthématiques (exanthèmes rhumatismaux hémorrhagiques); 2, purpuras cachectiques; 3, purpuras toxiques; 4, purpuras mécaniques; 5, purpuras consecutives à une lésion du système nerveux. I have, in a paper, read some time ago, suggested a somewhat similar, but less logical arrangement, possessing some clinical advantages. I think, however, some slight

modification of Dr. Du Castel's classification useful for arranging the cases of purpura we see, into something like order, and would suggest the following:

1, Vascular purpura; 2, toxic purpura; 3, mechanical purpura; 4, neurotic purpura.

Under the head of vascular purpura, I would place all cases in which there is some known or supposed primary blood-disorder, so that this group would include the specific blood-diseases; diseases in which the blood-disorder seems primary or most important, as profound anæmia, leucocythæmia; conditions in which some constituent or constituents of the blood are wanting, as scurvy; and conditions in which some constituent is present in excess, or super-added, as bile, urinary constituents, etc.

In the category of toxic purpura (drug-purpura), I would place all cases in which the purpura arises from adventitious matters entering the system, such as phosphorus, mercury, mineral acids, salicylic acid, quinine, iodides, venom. We do not know the exact mechanism by which the purpura is brought about in this group; but it is clearly advantageous, clinically, to keep them apart, though logically they may be said to belong to the hæmic group.

Under the third variety, purpura from mechanical causes, we should place the cases of purpura arising in connection with heart-disease, a feeble circulation, from varicose veins or paroxysms of coughing, as in whooping-cough, from thrombosis of venous trunks, and, probably, senile purpura.

Into the last category, purpura of nervous origin, would fall the cases in which the nervous system is primarily at fault, and thus it would include cases of tabetic purpura, purpura in connection with neuralgia and with disease of the nervous centres, purpura urticans, and neurotic eruptions (as herpes) becoming hæmorrhagic.

This arrangement is, I am aware, by no means faultless, for it might be difficult to say in which category we should place certain cases; but some arrangement is useful in investigation, in the same way as we speak of dropsy being renal, cardiac, local, or due to hypalbuminosis; and, with increased knowledge, no doubt, a better classification could be devised."

—*British Med. Journal*.

A CASE OF MALIGNANT GOITRE.

By CHAUNCEY PUZEY, L.R.C.P., M.R.C.S. Eng.,

Surgeon to the Northern Hospital, Liverpool.

In the *Journal* for June 23rd appeared the account of a case of a large bronchocoele, for which an operation had been performed by Mr. Bennett May, at the Queen's Hospital, Birmingham.

Ten days before this, there had been admitted under my care into the Northern Hospital, Liverpool, a case which must have presented such similar appearances, that a short history of it appears worthy of publication, if only for the sake of comparison; for my case may, to a certain extent, be described in Mr. May's own words.

The patient, a married woman, 55 years old, had been the subject of a (goitrous?) swelling in the front of the neck for many years, without much discomfort. Last Christmas, it began to grow suddenly; but as for years past it had appeared to her sometimes to increase, and then to diminish, she delayed seeking advice until she presented herself at the hospital, on June 13th, on account, principally, of increasing dysp-

noea. The tumor presented all the appearances of an unusually large bronchocele, filling up the neck completely in front, so that neither thyroid bone, thyroid cartilage, nor trachea could be felt. On the right side, the outline of the tumor could be well defined posteriorly, and the carotid artery was felt pushed outwards by it; but, on the left side, no defined margin could be made out, and the great vessels appeared to pass deeply behind, even if they were not involved in it. On this side, moreover, the tumor overlapped the clavicle, and the skin over the lower part was dusky red, tense and adherent. She was unable to lie down on account of dyspnoea. During the day, she was tolerably easy; but at night, or rather early in the morning, she had severe paroxysms of dyspnoea, caused, apparently, partly by direct pressure on the trachea, partly by implication of the laryngeal nerves. Her voice was faint and husky.

The history of the case, and the appearance of the tumor, led to the diagnosis of malignant disease arising in an ordinary bronchocele; but the question of treatment was more difficult. There appeared to be three methods of active treatment to consider: (1) the removal of the tumor; (2) the tapping of it with trocar or aspirator; and (3) tracheotomy; the last two courses being, of course, only palliative measures for the relief of dyspnoea. The first course was considered as precluded, not so much on account of the evident extent of the growth, as because of the impossibility of estimating the limit of the disease; its almost certain malignancy, the infiltration of the skin, and probably of deeper parts, rendering it likely that such an operation, if not immediately fatal, would in no way improve the condition or comfort of the patient. With regard to tapping, there was reason to fear that, although fluid might be drawn off, it would come from some vascular cavity which would speedily fill again, and, perhaps, give rise to troublesome oozing; the result being no relief, but rather the reverse. Tracheotomy did not appear urgently demanded; and it was a question whether it was even possible. A little to the right of the middle line of the neck, there was a slight depression, apparently marking the interval between the two lobes of the thyroid gland, but no trachea could be felt; the isthmus of the gland was clearly enlarged, and filled up this space completely. It was impossible to feel sure where the trachea was, or whither it might have been pushed. In one place, somewhat to the right of the middle line, something like the prominence of the thyroid cartilage was felt, and below this a line was drawn with marking-ink, for guidance, in case threatened suffocation should demand an attempt at relief. But, as regards present treatment, it was decided that operative measures were not desirable. Frequent doses of the ethereal tincture of lobelia were taken by the patient with considerable apparent advantage.

The woman gradually became weaker, but the dyspnoea became no worse, although the left lobe of the tumor increased in size. But on June 24th, her condition became much worse; dyspnoea was rather more troublesome; but, in addition, she seemed to have lost the power of swallowing, and her voice had completely gone; her face was rather dusky in hue. Towards the evening she gradually became unconscious, and died quietly and painlessly, probably from slow asphyxia, without any of those distressing symptoms which accompany suffocation from laryngeal obstruction.

At the *post mortem* examination, the first incision made was as for tracheotomy, along the line marked out

before death. On dividing the deep fascia, thick creamy fluid oozed out, and no trachea could be felt. The fact that tracheotomy would have been a hopeless failure having been demonstrated, the mass was dissected out together with the larynx, trachea, oesophagus, and large vessels, in the course of which process a large cavity in the left lobe gave way, and some ounces of thick chocolate-colored fluid escaped. On the right side, as anticipated, the mass could be fairly well enucleated, but on the left the growth was found adherent to, or even blended with, muscle, cervical fascia, and the periosteum of the clavicle, and so overlapping and surrounding the large vessels of the neck, that it would have been impossible to clear the growth from them. It was evident that any operative measures could only have "made bad worse."

The contents of the tumor being principally semi-fluid, or soft solid the mass was, without further examination, immersed in spirit, and sent to the museum of the Royal Infirmary School of Medicine, in order that it might be thoroughly examined by the curator, Mr. Frank T. Paul, to whom I am indebted for the accompanying report. Some secondary growths which were found in the lungs were also forwarded for examination.

"The tumor consists of two principal masses, the larger of which is very soft throughout, and has, in its centre, broken down, thus giving rise to a large ragged cavity. In front are some portions of the muscles of the neck adherent to it, and the anterior jugular vein is seen filled with new growth. Posteriorly, the left carotid artery is somewhat flattened by pressure, but not infiltrated, but the internal jugular vein is entirely filled with soft growth. The pneumogastric nerve does not appear to have suffered. There are several cervical glands slightly enlarged. The lesser mass is encapsuled, and has the appearance of soft sarcoma, and can be apparently dissected free, or almost free, from the right lobe of the thyroid, which it indents. The larynx and trachea are bowed to the right, having been displaced about three inches from the middle line of the neck. The pharynx and oesophagus are similarly displaced, but none of these parts are infiltrated by the growth. The growths in the lungs present the same soft sarcoma-like appearance.

"The larger mass of the tumor may be supposed to represent the primary growth in the left lobe of the thyroid, and the lesser a more recent infiltration of the isthmus. The specimen is not yet in a suitable condition for thorough microscopical examination; but a recent section taken from the lesser mass shows it to be freely vascular, and to consist, over the greater part of its area, of elongated cells, which have a general tendency to become broad and spindle-shaped, with large nuclei, and often with two nuclei. But at one part there is a small area consisting entirely of distinct carcinoma, composed of delicate vascular fibrous alveoli, filled with cubical epithelial cells, larger than those of the normal thyroid; and near this is a tract of healthy thyroid tissue.

"There is no doubt that all these elements are present in the growth, but further details cannot be given until sufficient time has elapsed for the preparation of good sections."—*British Medical Journal*.

PASTEUR'S PRECAUTIONS AGAINST THE CHOLERA.

M. Pasteur has given the following instructions to the members of the mission sent by the French Government to study the present epidemic of cholera. These instructions all relate to the contingency of resisting the maximum amount of causes of contagion, and are framed on the hypothesis that cholera does not enter the animal economy by the respiratory passages, but by the digestive tract only, except in very exceptional cases. They are contained in the *Revue de Hygiène* for August 1883. 1. The drinking-water of the locality where the mission settles to undertake researches should not be used without having been first boiled, and shaken, when cold, for two or three minutes in a phial or bottle, half filled and stoppered. The water of the locality may be used if it be drawn at the source itself in vessels which have been exposed some moments to air heated to about 150° Cent. (302° Fahr.), or, better still, to a higher temperature. Natural mineral waters may be used with advantage. 2. Wine which has been warmed in bottles to from 55° to 60° Cent. (131° to 140° Fahr.), may be drunk in glasses which have been warmed in a similar way. 3. Thoroughly cooked food only should be used, or raw fruit well washed in water which has been boiled, and which has been kept in the same vessels in which it was boiled, or which has been poured from those vessels into other heated vessels. 4. Bread should be cut into thin slices and exposed to a heat of about 150° Cent. for twenty minutes at the utmost after it has been cut in slices. 5. All the vessels employed in the preparation of food should be warmed to a temperature of 150° or more. 6. Bed-clothes and body linen should be plunged into boiling water and then dried. 7. Water for washing should be brought to boiling point; and, after cooling, one five-hundredth part of thymic acid (a liter, 1¾ pint, of alcoholized water to two grammes of acid), should be added, or one-fiftieth (a liter of water to twenty grammes) of carbolic acid. 8. The face and hands should be washed several times daily with water which has been boiled, and to which carbolic acid dissolved in water has been added. 9. In cases only when it would be required to handle the bodies of cholera patients, or sheets or body-linen soiled with their injections, it would be necessary to cover the mouth and the nostrils with a little mask formed of two pieces of fine metallic cloth, containing between their surfaces wadding about the thickness of one centimeter or more. This mask should be warmed to 150°, and the temperature should be renewed on each fresh occasion of peculiar infection.—*Brit. Med. Journal*.

CASES OF PURPURA HÆMORRHAGICA, WITH REMARKS ON THEIR PATHO-GENESIS.*

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With Report on the Presence of Baccilli, By W. WATSON
CHEYNE, M. B., F.R.C.S.

CASE I.—William J., aged 17, tinner, was admitted into the General Hospital, Wolverhampton, under Dr. Hunt, on October 7, 1878.

History.—He first noticed spots on his legs a month before admission. About a fortnight before admission,

* The "Remarks" in this paper embody the observations made by Dr. Russell in the discussion on Purpura; in the Section of Medicine.

the gums began to bleed, and, ten days before admission, he fell while stooping; this latter occurred several times since. He had two attacks of epistaxis within the last fortnight, while his eyesight had become dim the day previous to admission. There was no history of muscular pains, of palpitation, or of dyspnoea. He was not confined at his work. There was no history of exposure or of rheumatism. His home was comfortable; his family history good. For months past, he seemed to have lived on bread, butter, and cheese, with tea, and occasionally some potatoes and cabbage.

State on Admission.—He was not emaciated; but the muscles were soft. The skin was very pale, and the mucous membranes blanched. The lips were dry and cracked, blood-clot occupying the fissures. The gums readily bled on pressure, and, at their junction with the teeth, presented a line of coagulated blood. There were numerous petechiæ and ecchymoses over the body, being abundant on the extremities, but more so over the anterior part of the iliac bones and their neighborhood; while the trunk, especially the thorax, showed few. The pulse was 108, bounding, dichrotic, and compressible. There was precordial pulsation, and a pulmonary systolic murmur. The lungs were normal. The hepatic dullness commenced at the fourth rib, and extended for five inches. The upper limit of splenic dullness was at the sixth rib, while its transverse dullness was much increased. The appetite was greatly impaired; he complained of thirst; and the bowels were constipated. He had no abnormal sensation, but occasionally saw red and black specks floating before his eyes. The fundus of each eye was pale, and contained hæmorrhages. The specific gravity of the urine was 1017; it was of neutral reaction, and contained no albumen. On October 10th and 11th, he vomited, the vomited matter containing a blood-clot on the latter date. On October 12th, prostration was much greater; at night he was semicomatose, and passed urine involuntarily; the pulse running up to 140. He rallied slightly the following morning, the pulse falling to about 120, but he died before night. The temperature during the five days the patient was in hospital ranged from 100° to 102° and 103°. The hæmacytometer showed the colored corpuscles to be 18 per cent. on admission, and to have fallen to 12 per cent. before death. The treatment consisted of iron, turpentine, and sulphuric acid; brandy, eggs, milk, etc.

A post mortem examination was forbidden.

CASE II.—John J., aged seven years and nine months, was admitted, under the care of Dr. Millington, on October 16, 1878. No satisfactory history of this case could be obtained. The boy had a fair complexion with red cheeks, and he was fairly well nourished.

There were purpuric spots on the trunk, upper and lower limbs, the neck, and a few on the face. There were also several ecchymoses. The conjunctivæ and gums were not very pale, but the latter bled on slight pressure; and there was coagulated blood on some of the teeth. The glands in the neck, axillæ, and each groin were enlarged, but not tender, and the individual glands were distinct from each other. The pulse was 135, regular and bounding. The cardiac dullness was increased, the first sound was very faint, and the pulmonary second sound accentuated. The hepatic dullness commenced at the fifth rib, and extended beyond the ribs, the edge of the organ being distinctly felt. The splenic dullness began at the sixth interspace, and extended 4½ inches, and the organ could be felt projecting beyond the ribs. The abdomen was distended and tympanitic; the bowels were confined. The spe-

cific gravity of the urine was 1020; it was acid, and contained no albumen. On testing it cold with nitric acid, there was an abundant precipitate above the acid, which cleared away on standing, and the nature of which was not made out. On October 22nd, the purpuric spots had faded considerably. The gums were bleeding more. He was paler than when admitted; and, for the last few days, there had been a large deposit of white urates in the renal secretion. The pulse was 136. On October 24th, he had slight epistaxis twice, and he vomited about five ounces of clotted blood. There was oozing from the posterior nares. The pulse had run up to 160. On the 26th, there were slight epistaxis and hæmatemesis. The pulse had fallen to 132, but was small and irregular. There was severe pains in the bowels, which was relieved by an enema. In the evening, the pulse was 152, and weaker. The following morning he was groaning and pulseless, and died early in the afternoon (the 27th). The temperature during the five days ranged from 99° to 100°; thereafter its range was higher, and only on one occasion fell below 100°, while it twice reached 101.6° and once 102.4°. The treatment consisted of turpentine, and sulphate of soda to regulate the bowels. He was nourished by milk, beef-tea, and port-wine. The local bleedings were treated with ice, etc. On October 18th, Gower's hæmacytometer showed the red corpuscles to be 77 per cent.; on the 20th, 58 per cent.; on the 22nd, 32 per cent.; and, before death, 22 per cent. The hæmacytometric observations in this and the preceding case were made by Dr. Hunt, to whom I am indebted for permission to use them.

Post mortem Examination.—The dura mater was firmly adherent to the calvarium. Beneath the dura mater was a thin layer of blood, covering the anterior two-thirds of the brain; the blood in parts being bright red, in the other parts darker, more abundant clotted. There were no hæmorrhages into the meninges or brain-substance. The brain weighed 55½ ounces; the convolutions were numerous, and the sulci shallow. There were numerous purpuric spots on the pericardium, on the outer surface of the heart, and on the endocardium. There were none on the pleuræ or bronchi. There was a blood-clot, of the size of a pigeon's egg, in the upper part of the remains of the thymus gland. The mediastinal glands were not enlarged, and the glands generally were much smaller than before death. The spleen weighed 2½ ounces, and measured 4 inches by 2½ inches; it was firm, but congested in patches, as if localized hæmorrhages had occurred into its substance. The liver weighed 29 ounces; its surface was indented by the ribs, and its section was pale, the interlobular vessels being unusually large. The stomach and upper part of the duodenum were thickly strewn with hæmorrhages, while the rest of the intestine contained none. There were a few hæmorrhages on the parietal peritoneum. The kidneys were normal.

CASE III.—T. B., aged 28, a boiler-maker, was admitted under Dr. Toherick on November 6, 1878. During the three months preceding admission, he was conscious of a gradual failure in strength, and had suffered from unwonted pain in the small of the back, and in the back of the head and neck, if he worked hard. About eight days before admission, his throat became painful and the cervical glands swollen, while the pain of deglutition restricted him to fluid food. He had noticed a thick state of his urine for three months. No further recent history was obtainable. His mode of life and his surroundings resembled those of his fel-

lows; he had abundance of vegetable and other food, was well housed, and of steady habits. There was no specific history. With the exception of the past eighteen months, he had been a good deal exposed at work. His mother died of "nervousness;" otherwise his family history was satisfactory.

State on Admission.—He was well built and well nourished, and gave the impression of being a man of considerable muscular power. The face appeared to be puffy, especially round the eyes. The breath was offensive. The pulse was quick, full, and bounding. The tonsils were enlarged, and presented some whitish spots on their surface. The urine contained a large deposit of urates, but no albumen. The cervical glands were enlarged. The assumption was, that the patient had follicular tonsillitis which would speedily run a favorable course. On the 7th and 8th, there had been a small amount of blood in the expectoration, which was not thought to be of any importance; but, on the 9th, it had so much increased, that its source was sought for, when it was found that the gums were soft, with blood freely oozing from them, and in places much retracted from the teeth. The right tonsil still presented whitish spots, and the posterior wall of the pharynx was covered with what appeared to be tenacious mucus. The cervical glands were still enlarged and hard; the boundaries of individual glands being nearly obliterated. The glands in the axillæ and groins were enlarged, but discrete. There was a sparse purpuric eruption all over the body, the spots being most abundant on the right arm. There was a subconjunctival ecchymosis in the lower lid of each eye. He breathed heavily, the respirations numbering 22. Hearing was markedly impaired. There was no retinal hæmorrhages, but the fundus was pale, and the veins large. The splenic dullness was increased, and began at the sixth interspace. He became more and more apathetic, and died the following morning. There was hæmaturia before death. The temperature remained steadily between 103° and 104°, except on the morning of the 7th, when it was 101.4°, and on the morning of the 8th, when it was 99.2°.

The necropsy was made thirty-eight hours after death. Rigor mortis and hypostasis were well marked, and the green discoloration of the abdomen and round the mouth showed that putrefaction had already made considerable progress. The cerebral surface of the dura mater was lined in places by a brownish-red layer of altered blood, which was readily separable, and, when removed, exposed numerous vascular points on the membrane. Between these more recent extravasations there was a pale membranous exudation, also easily separable from the dura mater, and presumably formed of older blood-clot. There were no hæmorrhages into the other membranes. There were hæmorrhagic petechiæ on the pericardium, exocardium and endocardium in the loose tissue about the aorta, on both visceral and parietal pleuræ, on the mucous membranes of the bladder, stomach, intestines, and especially the rectum, on the parietal and visceral peritoneum, and in the periosteum of the ribs. The spleen weighed fourteen ounces, and measured seven inches by four inches and a half; the greater part of it was normal in color and consistence, but the upper third contained extravasated blood, and towards the hilus its substance was pulpy. Both kidneys exuded blood on section, and the calyx of each contained blood-clot. The liver weighed seventy-seven ounces, was pale, not specially soft, and presented petechiæ on its free surface. The glands in the neck, axillæ, and groins were slightly enlarged, but they were smaller than during life, this being particu-

larly noticeable in the cervical glands. The mediastinal glands were not enlarged.

CASE IV.—Mary H., aged 19, was seen by me on October 14, 1881. She was in bed and of corpse-like pallor, with a yellow tint. She had never been strong, and had been under treatment for some time for menorrhagia and anæmia. There were purpuric spots on the neck, upper part of the chest, and body generally, and one ecchymosis on the forearm. Her mother said that, as long as she could remember, she used to have purpuric spots on her body. She was subject to epistaxis, perhaps every two or three months; and it was noticed that, if she cut her finger, the bleeding was stopped with great difficulty, and the slightest blow produced an ecchymosis which took long to disappear. She menstruated first at sixteen, and since then there had been no epistaxis. The menstrual flux was usually only absent for a week, and reappeared, lasting for two or three weeks. The present menstrual period had lasted for a month, and was still going on; at its onset she had to give up work, as she felt unfit for it, and suffered from headache. The pulse was 140, regular, soft and compressible. The temperature was 101.4°. There was a *bruit de diable*. The bowels were regular; the appetite fair. There was no pain. The body was plump. The pupils were normal. The gums were not bleeding, and there was no history of hæmoptysis. She was one of a family of nine, all of whom were grown up and in good health. On October 15th, Gowers' hæmacytometer showed the red blood-corpuscles to be down to 48.4 per cent. There was no increase of white corpuscles. She was treated by turpentine enemata, as the stomach would not tolerate the drug. Her progress was exceedingly satisfactory under a carefully regulated diet, and a preparation of dialysed iron. The morning temperature was invariably 99°, or a little more, while the evening temperature was a degree higher. By November 1st her color was much improved, and the hæmacytometer showed the corpuscles to have increased to 74.2 per cent.; the bleeding from the bayonet-prick had to be stopped with caustic. The temperature after this never reached 100°, and fell to normal before the end of the month. At the beginning of the month there were no petechiæ, but on the 30th there were some new ones on the neck and arms, and for the first time I noticed that the upper gums bled readily on pressure, but her mother said they had always done so. Although I warned her friends of the necessity of having her constantly under medical surveillance, I soon ceased to see or hear of her, until, on October 25th, 1882, I was called to see her, and found her moribund. The story was, that she had resumed work since I saw her, and was much stronger, and had only menstruated three times. A fortnight ago she stopped work, as she was vomiting and menstruating, but both these had been stopped for a week, and her mother thought she was recovering. She was very pale, but had no hæmorrhage from any other quarter. She was quite conscious and bright a little time before I was sent for, and was suddenly seized with what they called a "fit." I could not get permission to make an examination of the body, but was allowed to take some blood from a small vein at the wrist; the blood on a slide looked like water with grains of red sand in it, and the small incision continued to bleed most obstinately. The immediate cause of death might possibly have been intracranial hæmorrhage.

CASE V.—This was a girl, aged 12, under the care of Dr. Barnes in the Carlisle Infirmary, whom I saw during a casual visit, and to whose necropsy Dr. Barnes

kindly invited me. The case is, I believe, to be published; but I may say here, that the temperature coincided with that of the preceding cases.

Remarks.—There are few diseases, our knowledge of which seems to have advanced so little during the present century, as has been the case with hæmorrhagic purpura. Since its first description by Werlhof, little has been added to the elucidation of its clinical or anatomical features. Willan, in his work on Cutaneous Diseases (1808), left us a picture which is practically as perfect now as it was then; there we find the premonitory lassitude noted; that the eruption may be preceded by, among other symptoms, shiverings and acute pain; that the course of the disease is attended by extreme debility and depression, with a weak and frequent pulse, and, further, "febrile paroxysms, like those of a hectic or remittent fever, occur at intervals." Dr. G. Gairdner (1823) pointed out the febrile condition of a patient, both during the premonitory and the fully developed stages. Bauer (*Dissertatio Inauguralis Medica de Purpurâ Hæmorrhagica*, 1828) says that fever is sometimes present, and is sometimes hectic, and of remitting character. He also noticed swelling of the spleen, and that the liver was affected, and mentions that Bavinga had seen the disease with swelling of the submaxillary glands, and Neuhäuser, with parotid swelling. Dr. B. W. Richardson (*Medical Times and Gazette*, November 1874) divides the disease into three forms: 1, aqueous purpura, which seems to be hæmophilia; 2, saline purpura, which includes scurvy; 3, vascular purpura, where a disease of the minute capillaries is assumed. Immermann (Ziemssen's *Cyclopædia of the Practice of Medicine*, vol. xvii.) says there is a "primary disease either of the blood or of the walls of the vessels, or of both together," and that it is "impossible to answer the question as to its pathogenesis," and that "in the search after an explanation, we are driven either to assume the existence of imperceptible changes in the blood, e.g., the importation of a deleterious miasmatic principle, or to recognize as the basis of the hæmorrhagic diathesis a peculiar disease of the blood-vessels more or less independent of the condition of the blood. The febrile movements, he thinks, may be of a "resorptive nature," or the blood extravasated may act as an "inflammatory irritant," or it may be due to what he believes to have existence, namely, a special "anæmic fever." Dr. Hilton Fagge (*Guy's Hospital Reports*, third series, vol. xxv, 1880-1), in a paper on the relation between this disease and sarcomatous growths, says: "Different views may be taken with regard to their relations. One is, that a minute development of sarcomatous tissue, with vessels made up of embryonic cells, occurs at each spot which becomes the seat of an effusion of blood; or, perhaps, that sarcomatous cells, or nuclei, or even leucocytes in an abnormal condition, become lodged in the capillary vessels here and there, and produce softening of their walls after the manner of emboli" (p. 16). "But another view is to regard the purpura, the spongy state of the gums, and the epistaxis, as the joint results of a profound cachexia or alteration of the blood, analogous to that which is present in pernicious anæmia, in splenic leukæmia, and, indeed, in scorbutus itself. . . . In splenic leukæmia, a morbid state of the gingival tissues has been described by Mosler; it was present in a case of that disease which occurred in this hospital in 1878" p. (18). But while stating these two views, he appears to lean towards that of "sarcomatous infection." But, were this correct, we should expect each spot of hæmorrhage to become the center of a

sarcomatous growth, and this does not occur. Again, that the glandular swellings present in some cases should be regarded as sacromatous, is open to grave objections which shall appear hereafter.

The other hypothesis, that the affection is due to a structural disease of the minute capillaries, may be set aside, as no satisfactory change has been demonstrated in them, although much attention has been paid to the subject, and as it is difficult to imagine the nature of a vascular change, which would give rise to such a series of phenomena.

We thus seek to fix on the blood itself as the site of the evil. The clinical outline of the disease is, premonitory depression, or a condition below par, perhaps chilliness; the appearance of spots, and the presence of pyrexia; hæmorrhages and increasing pyrexia; and, what has not hitherto been noted, a diminution and destruction of blood-corpuscles out of all proportion to the amount of hæmorrhage; a rapid course; and a fatal termination. The pyrexia cannot be explained on any of Immermann's assumptions, for, in two of the preceding cases, the pyrexia was present when there was nothing but a few spots to require "resorption," or to act as an "inflammatory irritant," even if it were believed, at this time of day, that blood-clot, under the conditions which hold here, led to pyrexia; and the "anæmic fever theory is untenable, for there was pyrexia in one of the preceding cases, with the red corpuscles at 77 per cent., and, in another, with them at 48 per cent.; and we know that this fall in the corpuscular richness of the blood is not, under ordinary anæmic conditions, accompanied by pyrexia. And the pyrexia is not the cause of the anæmia, for the latter is out of all proportion to what exists in other morbid conditions where as high a temperature-curve is attained. That the blood is the seat of the disease is, I believe, further shown by the glandular enlargements which occur. That such enlargement may take place from a general blood-condition, I had the opportunity of observing some time ago in a woman who had recurring attacks of pyrexia, accompanied by a general enlargement of glands, the glands regaining their normal size during the pyrexial periods; and in the above cases, the extent to which the glands diminished after death was very striking. From a clinical consideration of this disease, it appears to my mind to present the characters of a specific fever due to a specific poison, or, what Dr. Creighton calls, an autonomous disease. On this assumption, I asked Mr. Watson Cheyne to examine what material I had preserved for micro-organisms; and I here wish to acknowledge his extreme kindness in devoting time and labor to this subject. The slides of blood which I had prepared, and on which I had proposed to depend, were so unsatisfactorily stained, that Mr. Watson Cheyne could not give a definite report on them. I had, however, retained a piece of heart covered with the hæmorrhages characteristic of this disease; this he examined, and I annex his report *verbatim*.

Mr. Watson Cheyne's Report.—Immediately beneath the exocardium are extensive hæmorrhages raising up the exocardium, and separating the muscular bundles. Many of the capillaries at the deeper part of these hæmorrhages are plugged with small bacilli, and, here and there, among the effused blood, small colonies of these bacilli are found. There are also a few single bacilli lying among the blood-corpuscles, but the typical mode of growth of these organisms is evidently in colonies. The capillaries are not merely blocked by the plugs, but their walls are distended, and, in some cases, ruptured, the bacilli thus escaping into the sur-

rounding tissue. There are no evidences of inflammation around the masses, the tissue in the vicinity being apparently quite healthy. The individual bacilli vary somewhat in length, but the average length is $\frac{1}{100}$ of an inch, and their breadth is about $\frac{1}{2000}$ of an inch. Some of them apparently contain spores; at least there are unstained, roundish bodies in the rods, as a rule two in each rod. They do not materially differ in relation to staining agents from the common forms of micro-organisms, such as bacillus anthracis, etc., but they are best demonstrated by an alkaline solution of methylene blue. From the size of the colonies, and the distention of the walls of the capillaries, the bacilli have evidently been growing in the blood for some time. Further, from the number of capillaries blocked by these colonies, and from the position of the plugs around the margin of the hæmorrhages, there can, I think, be no doubt that these plugs have been the cause of the hæmorrhage, acting in the same manner as any other embolus. Should the condition be found in other cases of purpura hæmorrhagica, it will establish the fact that the hæmorrhages, at least in this disease, are due to these bacilli, whether the relation between the organism and the affection as a whole be a causal one or not. I may caution future observers that the close arrangement of the organisms in the colonies, and the presence of spores, might lead one, at first sight, to the conclusion that the organisms in question were micrococci, but careful examination, with good lenses and correct illumination, will soon show that the bodies are bacilli.

Should Mr. Cheyne's observations be verified by others in other cases, it will be one step onward in our knowledge of this disease; although the more difficult problems will remain to be investigated as to suitability and preparation of nidus, the sources of infection, and the paths by which the infection reaches the circulation.—*British Med. Journal*.

MEDICAL NEWS AND NOTES.

Alleged Death from the Sting of a Wasp.—

An inquest was held a few days since on a lady residing near Harlow, who died shortly after being stung by a wasp. Mr. Day, M.R.C.S., stated his opinion that death resulted from syncope, induced by the pain resulting from the sting.

Dr. John S. Billings has declined the offer of the Professorship of Hygiene in the Johns Hopkins University (says the *American Medical News*), for the reason that it is impossible for him to hold this place while he is an officer of the army, and he prefers to retain the latter position and continue his library and indexing work, for the present at all events. It is probable, however, that during the coming winter he will give a course of lectures at the University on the subject of municipal hygiene.

It is stated that Dr. Abbâté Pasha, Chief Physician of the Khedive and Vice-President of the Egyptian Institute, is satisfied that the present epidemic in Egypt is not Asiatic cholera, but *choléroïde*, a local malady presenting similar symptoms.

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In the student's number of the *London Lancet*, Sept. 8, 1883, is embraced some timely editorial comments on topics which are presumed to be of especial interest to students, but which will entertain graduates as well.

They embody some wholesome advice to the matriculate, most of which the *GAZETTE* can heartily indorse and re-apply to our American students. We give below some abstracts from this extensive editorial lecture:

"THE MODERN MEDICAL STUDENT.

"Judging from the descriptions of medical students current during the last, and even far into the present century, the term must at one time have been anything but complimentary. There is, indeed, no reason to believe that the youth depicted by our novelists could ever be considered as average specimens of those whose training consisted chiefly in 'walking the hospitals'; Smollett's revolting sketch—whether personal or not—was merely that of a decidedly objectionable character, who chanced to have as a future a medical career, and the Bob Sawyer of the less remote past bears no closer a resemblance to the average student of to-day. There is still, however, an opinion current that the modern medical student indulges in repulsive pastimes, lives a truly Bohemian life, and assumes, as a supposed evidence of a scientific spirit, atheistic notions in religion, and heterodox views on things in general. These opinions are but the remains of those formerly accepted on all hands, fostered by the ignorant and fanciful sketches of needy or prejudiced writers, and the occasional indiscretions of a real or fictitious medical student. Though the Roderick Randoms are as extinct as the dodo, it is to be feared that first year's men, coming to hospital with the popular notions concerning their class, do sometimes place themselves in circumstances which, in common with their more advanced fellows, they soon come to look upon with shame; but it is certain that the hard work of the regular students and the *morale* of the school are sufficient quickly to eradicate tendencies so dishonoring. As in other classes of the community, there are found among students various grades; and as certain features are characteristic of these, it may

be worth while to inquire as to their origin, their continuance, and their subsequent history.

"THE PRIZEMAN.

"Perhaps the one most essential element of marked success during a college year is simple industry. The race is not always to the swift; and close observation on the part of teachers elicits the fact that the steady worker of moderate capacity carries off a large share of the honors. The prizeman, too, almost always comes to the front early in the curriculum, by undeviating attention to the subject in hand, from his first entry at the hospital. A first session success is a splendid incentive to future effort. It need not, however, be forgotten that the system of examination by written papers gives an opportunity for 'cram'; and thus in many cases the more thoughtful and intelligent student is left behind when detail and numerous facts must be mastered. It requires much thought and judgment on the part of the teacher to arrive at the best method of examination, and not unfrequently he fails to mark by the order of his certificates the merits of the men whom he wishes fairly to judge. As the curriculum advances, the principles as well as particulars must be understood, the mind trained to thought, and intellectually strong, takes a rightful place in the struggle, and finds little trouble in retaining it if moderately diligent. The man who, parrot-like, repeats the fact that 'the biceps arises by two heads'—though quite familiar with his Latin—and labors to impress his mind with the truth; may succeed so long as mere memory will serve him, but is out of the race whenever thinking is required. But it becomes yearly more necessary for those who aim at distinction to thoroughly utilize all the channels of knowledge capable of affording assistance in mastering their subjects, and he who depends upon his lectures and his text-books solely for acquaintance with many matters formerly alone taught in this way, will find himself lamentably deficient. Whenever a statement can be tested by experiment, or conditions shown by dissection; wherever facts can be more forcibly impressed, as they almost always can, by demonstration, the student should greedily accept every opportunity of gaining such practical knowledge. By touch, sight, hearing, taste, and even smell, an acquaintance may be made with a condition which a long discourse might fail to afford, and the ready and constant use of all the aids to the various senses becomes yearly more and more the habit with all good workers. A time may come when a too great dependence may be placed upon those means of diagnosis which formed no part of the armamentaria of the celebrated physicians of the past; but assuredly we are far from that stage now, and no better or fairer test can be applied to students than the practical use of the stethoscope, thermometer, microscope, laryngoscope, sphygmograph, ophthalmoscope, and other aids, which should be 'on the finger ends' of every modern physician. Men who take the necessary trouble to ascertain all that can be known through these channels are unlikely to be suspected of superficial examination, the damning habit which creeps upon so many; and even now familiarity with instruments of precision is expected of all who look for special recognition on the part of their fellows. This, then, is one of the leading characteristics of the distinguished student, that he has called no man master, and received nothing on authority which could be tested by means within his power; and it may be expected that in the future, with such liberal provision on all sides for such inquiries, few except men of this

stamp will emerge from class or other examinations as *prizemen*. It is needless to say that the honors man is usually distinguished for regularity in class- and work-room, far removed from the idlers or the drivelers who disgrace their class.

" THE AVERAGE STUDENT.

"During recent years the requirements of students, even for the lowest of the too many qualifications, have increased considerably; this has been met by such earnest effort in every medical college throughout the country, that even the preliminary training and examinations are now so much more satisfactory, that the average student of to-day takes deservedly a higher place than at any previous time. Work has become such a necessity, that to have a fair chance of success at examinations implies a generally exemplary line of conduct, and such industry as is at least respectable. The student who expects to 'get through' must now, or in the near future, be satisfactorily grounded in all that relates to medicine, surgery and midwifery; and medicine, with its collateral studies, now forms such a wide field, that he dreads had better avoid all effort in its cultivation. To a man of moderate ability there is no time for idling and trifling, as he is expected during four years to obtain an amount of knowledge which will fully test his powers, and no better help can be given to such than the time-honored but constantly forgotten advice to make the most of his opportunities from the first day of entering his class. The practical loss of the first session, examinations being then in the somewhat distant future, is the commonest calamity to students, and it will be generally found that these idle youths are the means of attracting the modicum of opprobrium which still attaches to their class. They seem proud of their unaccustomed life, and show the absence of a needed home-restraint by indulging in follies more childish than vicious. It was noticeable that in a recent outbreak of rowdiness at Edinburgh nine out of ten of the disgraced students were of the first year. The manner of life common to medical students, which allows the fullest liberty in a choice of residence, and is unrestrained by college authorities outside the class-room, has disadvantages of an obvious kind. During the young man's first years of city life there is a necessity for guidance, and often for admonition, while the promiscuous gathering of associates is a danger against which all who have an interest in the student should assist in guarding. It is an easy matter to drift into the darker currents, and with our present system no better guarantee against this can be suggested than the fullest use of personal introduction to teachers and friends, who should aim at 'attaching' these youths sufficiently to act as a real restraint. The cultivation of exercises outside the bounds of the curriculum is to be commended most fully, and a well-regulated curriculum might with advantage be formulated applicable to the hours necessary for relaxation. The various societies for discussion of non-professional as well as medical subjects, and for the cultivation of music, vocal or instrumental; the boating, cricket or football clubs, and the many accomplishments zealously pursued by a large number of young men—show how many-sided is the character of the modern student of medicine, and deserve every encouragement. A moderate indulgence in such pastimes does not injure the chances of success at college or hall, but recognition of the number of failures at the examining boards should teach the anxious student how necessary is steady application to his chief business. Perhaps the more noticeable feature in the

average student which requires condemnation is his evident desire merely to fit himself for examination. To this end he deems dresserships and clinical clerkships unnecessary and therefore undesirable; he looks upon compendiums and crams as legitimate possessions, and ignores further and complete text-books and special treatises; he imagines there is a royal road to success by means of spurts, and so inclines to desultory study; and the end of all this is the detection by the examiners of the weak links in the chain, frequent rejection and disgrace. We can scarcely expect a law to be passed against the publication of these traps to the unwary, in the shape of guides to examinations, and crams generally, but we can warn the intelligent student against reliance on such broken reeds, and tell him that the road to a degree or license is necessarily toilsome, and not to be taken by such short cuts. A hasty survey of the field may be enough to assist the man who is thoroughly grounded, but the examiner who cannot detect knowledge acquired in such a fashion is unworthy of his position. To the average student, then, good behavior, steady application, and intelligent study are absolutely necessary if the curriculum laid down by the governing bodies is to be carried out, and failure in examination avoided.

" THE RESIDUUM.

"We have already caught glimpses of men in training for the formation of this despised class, but it is unlikely that our words will reach them, and it is advisable to be brief over the unsavory subject. There is, indeed, one division of this class for whom sincere sympathy will be felt, and our remarks regarding preliminary requirements were directed toward a diminution of their number. Men are frequently met with in our schools who, having by some means got through the meshes of the net supposed to intercept the unsuitable, prove themselves incapable of reaching a standard of respectable knowledge, and gradually drop off to more congenial work. But it is the chronic nuisance which occasions such evil influences in a school; those helpless, hopeless youths not only rush to certain ruin themselves, but drag not unwilling victims towards their own haunts and damaging customs. The unhappy tap-room *habitué*, the billiard-room frequenter, the well-dressed nincompoop, the moneyed idler, are all dangers as well as disgraces to their fellow students, and a few such men may degrade a whole college. There is in the management of this hindrance to work a decided lack of firmness or perhaps of power, but in any case means should be found for the expulsion of this demoralizing agency from well-ordered universities and hospitals. It is puzzling to know what becomes of these men; they are constantly rejected at examinations, become year by year less familiar with the work of their classes, and better acquainted with their peculiar haunts; they ultimately disgust the friends whom they have deluded, and probably drop into obscurity or infamy. The influence of rejection is by no means an incentive to study in such cases as these, and when that is so the road assuredly leads downwards. The chronic nuisance rarely escapes from his acquired habits or rises higher than the unqualified drudge to some needy and shady practitioner.

THE PRACTICAL ELEMENT IN SCHOOL WORK.

Within recent years there has been no such marked or forward movement in teaching as that which has resulted in the present prominence to all that is practical in ordinary class work. It is to the development of the method of teaching by demonstration which has

spread over the schools we must now look for the preparation of a higher standard of student than was possible in the days of continual lecturing and dogmatic statement. The study of medicine must now exert a greater fascination than in the student days of most practitioners; the interest of the whole course, from microscopic botany to practical toxicology, is now sustained by actual demonstration instead of description, and little room is left for authority where all is supposed to be capable of such direct proof. The student should give himself up to the spirit now dominating the method of our schools, gain by dissection, macroscopic or microscopic, and by experiment a thorough mastery over the elementary subjects, and, pursuing the same habit of personal investigation, so accustom himself to the use of all the instruments of precision that long ere the curriculum is closed the habit of direct inquiry may become one of his possessions, as valuable as we have before seen is the thorough mastery of principles when compared with the storage of facts. The recent prominence given to practical teaching, and the still augmenting consequence attached to it, will before long compel a rearrangement of the curriculum by which systematic lectures will hold a less commanding place, or the necessity for a more lengthened course of study will soon be made generally apparent. It would be a most undesirable solution of the difficulty were students to shirk the opportunities for practical study now offered, and as every day the methods of examination are becoming more and more in accord with the teaching, it will soon be found impossible to escape in this manner. While looking with the most friendly eye upon the recent change, it must, we fear, be acknowledged that here and there endeavors are made to give the system undue weight, but the student has opportunity for discrimination so long as these classes are not compulsory. All earnest workers will see the advantage of practical physiology, pathology, and chemistry, as well as operative surgery, and tutorial teaching in the advanced subjects will be found most useful; but, except where unlimited time can be disposed of, the necessity for practical classes—all of course with extra fees—in botany, zoology, pharmacy, and midwifery is less obvious. While botany and zoology hold a place in a four years' curriculum it is positive cruelty and something like imposition to pitch examinations so high as to virtually compel students to take this extra course, and we are not charitable enough to suppose that in all cases the profits of the class are not a chief consideration. Practical pharmacy can probably best be picked up in a chemist's shop or dispensary—at least, students speak of this class as largely a waste of time,—and midwifery other than theoretic must be learnt in the lying-in room.

EXPERIENCE IN THE TREATMENT OF DISEASE.

In the midst of our modern methods, and with a scientific atmosphere which lends vigor to all inquiry, whether prompted by a desire for utilitarian results or the simple elucidation of the truth, it must not be forgotten that the ultimate aim of all medical knowledge is the alleviation, cure, or prevention of disease. We have already seen how valuable, even in this light, is the study of the earlier subjects; but the foundation being thus securely laid, the cope-stone can only be placed after every means have been taken to secure facility in dealing with disease. This can be gained in but one way: the book of Nature must be mastered at the bedside, and by regular and continued familiarity with the more trivial complaints met with in the

out-patient department and in dispensary and general practice. There is room for a much greater development of the tutorial system in the teaching of clinical medicine in our hospitals, and especially in our larger schools; the elementary work is too often neglected by the visiting physician, either through want of time or inclination, or from the vastness of the field open to him and the superior attractiveness of complex cases and problems; the average student crowding around the popular physician gains little of the intimate acquaintance with the patient's condition necessary to independent diagnosis, and the result is a smattering of high flown opinion about phenomenal cases, with total inability to deal with the diseases of everyday life. We need a large infusion of younger and less engaged men to take in hand the junior student, and teach him how to use his senses and the instruments of precision lying around him; he must be made familiar with urine testing, auscultation, percussion; he should know something of dyspepsia or diarrhoea before troubling himself with the "splendid cases" of a later experience; prescription writing and case-taking should constantly exercise him, so that with confidence he may go forward upon what will, with all his aids, be found a thorny and difficult path. It is only in small groups that students can be adequately trained to this routine work, and even then they must have the closest individual attention; so that physicians of the experience and position of those constituting the visiting staff cannot reasonably be expected to engage in such drudgery, and are entitled to be relieved of the work. Sent forward from such tutorial classes the student is enabled to profit by the bedside demonstrations of the physician or surgeon, and his wisdom will be shown by giving due importance to both methods. It should be the aim of all to obtain the advantage of a dressership, and, in due time, a clerkship in the surgical and medical wards. Such opportunities should be looked upon as essentials, and in a well-managed hospital a large proportion of students will be so employed. Though the cases allotted be few, the close observation necessary and the feeling of responsibility engendered are lessons of the most valuable kind, such, indeed, as can be obtained in no other way. It will be found that the men of our schools who afterwards become house-physicians or surgeons have been distinguished by their constant attendance and occupation in the wards, and they are thus fitted for the almost inestimable advantages they enjoy in securing the prize of residence. No other position open to a junior practitioner can offer the same facilities for obtaining the best kind of experience—thoughtful and well directed—as the position of resident in a well-conducted hospital, especially where teaching is carried on; and, at whatever pecuniary or other immediate sacrifice, such a post should be striven for by men who would know their work. It may be that residents give too much heed to the graver cases, and fail to observe the commoner ailments they will afterwards be expected to treat, yet they cannot avoid vast benefit from their fortunate position. But all men cannot be supplied with these advantages, and, whether in the pursuit of knowledge or for other reasons, a considerable proportion seek to gain the required experience as assistants to general practitioners. We would warn students against the dangers of endeavoring to assume full medical functions while yet unqualified, and with an unfinished curriculum. Such a course too often ends in the indefinite postponement of classes as well as examinations; the supposed advantages of experience do not accrue, and the only

result is a slipshod method of treatment difficult to be got rid of, wholly unscientific, and empirical. It is a mere meeting of symptoms, not unfrequently a serious injury to the patient, and generally a species of deception. The system now condemned, though extensively practiced, is capable of a limited good, and an unqualified youth may gain a knowledge of dispensing, bandaging, and other elementary matters, besides experience in the 'management' of patients, which will stand him in good stead afterwards. Such aims would be legitimate; but the employment of unqualified assistants as now carried out is hurtful to the zealous student, unfair to patients, and degrading to the profession. It is far otherwise when qualified men are employed; in their case a year or more of work under an experienced practitioner may be of the most signal service, and the majority of graduates or licentiates will find such training afford readiness in dealing with various classes, acquaintance with minor maladies, experience in midwifery, and that confidence and suavity in the treatment of patients which can hardly be obtained in any other way. When it is possible, choice should be made of a situation where facilities for special studies are available. The newly fledged practitioner should bear in mind that he is still but a student, and he will be fortunate indeed if his principal still regards himself in the same light. It is of course obvious that this period of advanced pupilage will have the highest value if spent under a master who avoids simple routine and devotes appropriate thought to individual cases. Daily discussion on these will serve the highest purposes. The haste to commence practice so soon as a diploma has been obtained is an error common to most men; the student, by the simple possession of the parchment, deems himself equal to all emergencies; but we venture to say that the first case of placenta prævia or puerperal convulsions is likely to cause a rude awakening.

SPECIAL STUDIES AND PRACTICE.

"The ever-widening area of medical knowledge, attended as it has been by an almost stereotyped curriculum, has now reached such an extent that an acquaintance with many diseases, absolutely essential to the well-trained practitioner, can only be attained by special effort. It has become necessary to exclude from the course of medicine all consideration of mental diseases, and it is but seldom the student is made acquainted in the regular course either of medicine or surgery with the important diseases affecting the skin; the lecturer on surgery feels he has enough to do in the one hundred lectures allotted to his subject to even hurriedly glance at the principles and practice of general surgery, or what is now known as such, the consequence being that the student too often loses the opportunity of learning anything about ophthalmic or aural diseases. It is a melancholy and even shameful affection that our system of teaching and examination allows the possibility of men being licensed as fully qualified practitioners who are incapable of intelligently dealing with diseases so common and so important; the only satisfactory thought in connection with the subject is that the outlook is more hopeful, that in the near future these so-called "special" courses will be embraced in the ordinary curriculum, which must be extended to receive them, and examining boards will look upon a knowledge of such subjects as essential. We repeat that the time of the medical student is now fully occupied, and another year is urgently needed that his education may be both complete and thorough. Herein lies the hope of crushing

the wretched and increasing quackery which branches off into all conceivable by-ways, and under the specious guise of special study and aptitude entices a credulous public to place confidence in men who, on their own showing, ignore the fact of the complexity of the organism and dependence of special diseases on general conditions. We have almost reverted to the manners of the ancient Egyptians, who had "doctors for each disease, and that disease only. Every place was full of doctors—some for the eyes, some for the head, some for the teeth, others for the belly, and others for secret diseases." Indeed, if this last is a category of specialists, we have already gone far beyond these early efforts, and the special hospitals in London alone expose an amount of charlatanism distinctly opposed to the more legitimate work here indicated. In large tailoring establishments we believe the custom exists of leaving buttonholes to one set of workers, and possibly threading of the needles to another; but though the method works well in such instances, the plan of the tailor can only be imitated by scientific physicians if willing to be considered as the needle-threaders in the profession. Unfortunately, quackery of this kind pays, and so long as that is so the profession must be dragged in the dust, legitimate hospitals starved, material for clinical teaching lost, and patients sacrificed through the ignorance of men whose therapeutic vision is of the most limited character. But we must not forget that the rank and file of the profession are responsible for much of the success of this unfortunate development, as they too often support men of the class referred to, ignoring the claims of the many accomplished physicians and surgeons attached now or formerly to general hospitals, but teaching some so-called special subject as a branch of legitimate study. It must also be remembered that there are branches of practical medicine or surgery, such as mental or eye disease or gynaecology, of such width, requiring such manipulative skill as can only be obtained by practice, or demanding so much personal attendance upon cases, that it is of advantage, alike to the profession and the public, that men should be found to devote their lives to their pursuit. But a sound ophthalmic surgeon must have as a groundwork a thorough all-round knowledge of medicine. The gynaecologist and asylum physician should have experience in general practice, whereas the peddling specialist usually has neither. Let our students, then, approach the study of the various subjects dealt with below with the feeling that an acquaintance with these is as necessary as a knowledge of pneumonia or fractures, and that they have only a right to any special place from the fact that they are crushed out of the courses now composing the curriculum. An extra year of study would suffice to obtain a good working knowledge of these organic derangements. The study should, in all the cases, be chiefly clinical, and we trust ere long to see a course of study, compulsory throughout the three kingdoms, which will be drawn with a view to the inclusion of these misnamed specialisms and the suppression of overgrowth in the crop of specialists."

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK COUNTY
MEDICAL SOCIETY, SEPT. 25, 1883.

The President, Dr. David Webster, presided. After the reading of the minutes of the preceding meeting, candidates were nominated by the Society for President, vice-President, Secretary, Assistant Secretary, Treasurer, and five Censors. They were as follows, viz :

For President—T. Gaillard Thomas, S. O. Vanderpoel.

For vice-President—A. H. Smith, C. A. Leale.

For Secretary—E. A. Judson.

For Assistant Secretary—P. B. Porter, C. A. Avery.

For Treasurer—H. D. Nichol, O. B. Douglass.

For Censors—Charles McBurney, Charles S. Wood, Richard H. Derby, Charles Hitchcock, Thomas H. Burchard, David Webster, Daniel Lewis, F. R. S. Drake, J. W. Howe, F. R. Sturgis.

Dr. Millet proposed for honorary membership Lieutenant-Colonel Bennett A. Clemens.

The scientific paper of the evening, entitled

“ADENOID VEGETATIONS OF THE PHARYNGEAL VAULT
AND THEIR RELATIONS TO MIDDLE EAR DISEASE.

was read by its author, Dr. R. E. Swinburne. The paper embraced a resume of the etiology and symptomatology of adenoid growths with a critical description of the various methods recommended for their removal. In conclusion, Dr. Swinburne exhibited and described the application of an instrument which he had devised for the removal of these growths, and which he had used successfully in fifteen cases. He was accustomed to give ether to patients operated upon as it insured the easier and less painful and more thorough performance of the operation and had no contraindications. In criticizing other methods of treating these growths, he regarded the use of the curette, caustics, and the actual cautery as ill-advised since they were not radical and were often followed by severe inflammatory reaction, and, in some cases, even by perforation of the drum head. Jarvis' snare was a better method to employ than the cautery loop. The forceps if properly curved and the patient was fully anæsthetized was, as a rule, efficient. But the best method was that which he had described, viz. : by the use of the instrument exhibited.

In discussing the paper, Dr. Garrish spoke of the necessity of general treatment in these cases and the use of iodide of potassium and other alteratives. Such growths often depended on scrofula and were made worse by meddlesome surgery. The pernicious habit of cigarette smoking he looked upon as a frequent cause of disease of the pharynx.

Dr. F. H. Bosworth said that the proper treatment for the cases described was not by sprays, douches, etc., but to search for the cause of the condition and remove that. In children there was a great tendency toward hypertrophy; in adults the structural change involved the mucous membrane proper. Caustics he regarded as a survival of the last century; their use led to atrocious results. He believed in the efficiency of the wire snares. As to giving ether and accomplishing the operation at one sitting, the operation was not necessarily very painful, and he seldom gave anæsthetics. If you could gain the child's confidence you could observe and operate without difficulty. The galvanic cautery he had used, and considered its use dangerous in the nose, but very serviceable in

the pharyngeal vault, but we could develop the same white heat by a spirit lamp.

Dr. Curtis spoke as follows :

“In the removal of adenoid growths I have assisted many times. I have educated the finger-nail for this purpose. But great depression sometimes follows the use of the nail and galvanic cautery almost equal to that of diphtheria. Repeated scarification with the use of the spray and pot. iodide, and perhaps mercury, were of inestimable value.”

Dr. Pomeroy said:

“The array of information appearing in the discussion is gratifying. The paper has been done with care. It is truly astonishing that so much has been said about adenoid growths. Little was said about them until ten years ago. Adenoid growths are simply hypertrophied glands, resulting from chronic pharyngitis. Closed cysts may form, but this is not a constant condition. I still think as much of the use of spray as ever. I do not remove these growths unless they are acting as foreign bodies. I feel a strong prejudice against the galvano cautery. The Jarvis' snare is a better means of removing these adenoid growths. As to removing the whole of the growths at a single sitting, I do not approve of it, for fear of the reaction, which may be violent. Another point, if these growths are located near the eustachian tube the tissues should not be much lacerated, as the cicatrix may close the eustachian tube. Local treatment will often tide over the time, till the growths shrivel, which they do as the patient grow older.”

Dr. Douglass said :

“If Dr. Swinburne's instrument is efficient in my hands I shall esteem it highly and shall use it. I wish to emphasize the importance of the reflex effects of these growths in the pharynx, as I have seen them very frequently. It is not desirable to remove the growths all at once.”

Dr. Bosworth rose to protest against Dr. Pomeroy's doctrine “to let alone such growths until they act as foreign bodies.” Why wait ten or twenty years for them to shrivel up, when their growth may lead to incurable mischief?

Dr. D—— asked as to the effect of constitutional treatment without operation.

Dr. Swinburne thought the growths would disappear in time, but he had never met with success by constitutional treatment alone.

Dr. D—— thought many of these growths could be remedied by local applications. The older he grew the less he operated, and the less he wanted to be operated upon.

Dr. O. B. Douglass exhibited a hypodermic syringe which shut up in an air tight case.

Dr. Pomeroy remarked that he had had an old hard rubber hypodermic syringe for years, which he kept in order by filling with water when not using it.

The Secretary read the resignation of Dr. J. C. Metcalf. Dr. Pomeroy moved its acceptance.

The Secretary read a communication from the Kings County Medical Society relative to the action of members of the New York Society in publishing a certain article in a Swedish paper. The matter was referred to the Committee on Ethics.

The Society then adjourned.

LECTURES.

ACUTE BRONCHITIS—DRY PLEURISY.

A CLINICAL LECTURE

BY

FRANCIS DELAFIELD, M.D.

Professor of Pathology and Practical Medicine, College of Physicians and Surgeons, New York

CASE I.—*Acute Bronchitis*.—This man, gentlemen, is an Italian aged 30. He was admitted into the hospital on the 14th of January. He is a laboring man by occupation, and two weeks before his admission he was exposed to the weather and contracted a cough which was at first not very severe; besides the cough he also had headache, dyspnoea, fever and pain in the back and limbs. But still he managed to work for a week and then became so sick that he had to go to bed.

Vital Signs.—There was suffusion of the face and eyes. His lips were dry and his tongue a little coated and moist. When he came into the hospital on the 14th of January his morning temperature was 100° . His chest was examined, and it was evident that there were a great many râles over the whole of both lungs in front and behind. These were coarse, and subcrepitant. The percussion resonance was normal. His pulse was somewhat rapid and feeble and he breathed with considerable difficulty. He has a good deal of cough and expectoration which is of a mucopurulent character. The expectoration is very abundant. He fills a cup in the course of a few hours. This expectoration has been entirely mucopurulent without blood. On the 15th of January his morning temperature was 100° , and afternoon temp. 102.5° . On the 16th it was 101.5° in the morning and 100° in the afternoon. On the 17th the morning temp. was 100.5° . There has been no other change in his condition and no other physical signs. At the present time the physical signs are just the same as they were when he came into the hospital. He has normal resonance on percussion, and forced and subcrepitant râles all over both lungs. About the 18th day of his disease you observe that the man is seriously ill. He has well-marked febrile movement, well-marked prostration, and the appearance is that of one seriously sick. He has a severe form of bronchitis involving most of the bronchial tubes. This is a condition which is not very common, and is worth seeing and thinking about. We are in the habit of thinking of acute bronchitis in an adult who had previously been in good health as not a very severe disease. The old division of bronchitis affects first the larger tubes and secondly the capillary bronchi, as if there were a disease in which the smaller bronchi alone took on an inflammatory process. This is not so. The character of the inflammation is a great deal more intense here than is an ordinary bronchitis, and in the second place, instead of only the larger bronchi being involved, all the bronchi both large, middle sized, and the small ones are involved. This difference in the intensity of the bronchitis is quite as important as the difference in the extent of the bronchitis. In an ordinary catarrhal inflammation of a mucous membrane, the tissue proper of the mucous membrane suffers very little. The mucous membrane is congested, and the mucous glands produce an increased amount of mucus. There is some swelling of the mucous membrane and that is all. In an acute example of catarrhal inflammation we get more than this. We get an infiltration of the stroma

of the mucous membrane with pus cells. This is what we get in the case of bronchitis here. There is an actual infiltration of the wall of the bronchi with pus cells. This is especially marked in the middle sized and smaller bronchi. This sort of bronchitis is very common in children compared with adults. In children we find regular evidences of intense catarrhal inflammation shown by infiltration of the walls of the bronchi with pus. This is not at all common in adults. It is only from time to time that we see one of these cases of intense general bronchitis. When this form of bronchitis does occur in adults it is a very dangerous disease, and not infrequently proves fatal. We had an example of this only a week ago in another Italian who was admitted into the hospital after he had been sick about a week. With this other man the symptoms commenced in the same way as with this man, namely, rigors febrile movement, dyspnoea, cough, and very profuse expectoration, together with a great deal of prostration. When this man came into the hospital he was evidently a much sicker man than the present patient. The dyspnoea was very urgent, and the interference with the venous circulation was very marked. The man was almost cyanotic, and the physical signs were the same as with this man. There were coarse and subcrepitant râles over the whole of the chest and normal resonance. The man had very severe coughs and abundant expectoration. He remained in the hospital about a week and died simply from the bronchitis. The dyspnoea and cyanosis continued; the pulse became more feeble, the cough and expectoration continued about the same and the man finally died apparently from the dyspnoea. In that case we examined the lungs and found the typical appearances of this form of bronchitis. There was no pneumonia at all. There was a little production of cells in the air vesicles immediately around the bronchi, but practically there was no pneumonia, but the bronchi throughout the whole of both lungs were kept full with muco-pus. They were congested, their walls were thickened, and the walls of the medium and smaller sized bronchi were infiltrated with pus.

This man, although sick, has a much better prognosis. I still hope that he will be able to recover from his disease, but I regard him as a man who is yet in a dangerous condition. He does not understand what I say, so I can speak about him.

Treatment.—The treatment of these cases can hardly be said to be satisfactory. We have to deal with an inflammatory process of such an intense kind and of such an extensive distribution that it is not at all readily controlled. The application of dry cups over the chest is of service in these cases. The use of quinine and sulphuric acid diminishes the excessive production of the mucus and pus from the bronchi. The use of alcohol and the carbonate of ammonia assists the feeble action of the heart. Further than this, I do not know that there is very much that we can do, except if the cyanosis is very marked, we can allow the patient to inhale oxygen in order to get rid of this particular symptom.

CASE II. *Dry Pleurisy*.—Male æt. 29. Admitted to hospital on the 11th of January. Was perfectly well until two weeks before admission. Then he was exposed to cold and wet. After this exposure he began to have a little cough and pain in the left side beneath the nipple and extending around to the back. The pain was quite sharp, and increased when he coughed and took a deep breath. With the cough he has had a thick tenacious expectoration and some dyspnoea. There have been no chills and no sweating

At the time of his admission his temperature was 100.5° . His general appearance was congested. His chest was examined and the conditions were the same as now. There was some shortness of breath and some pain in the chest. The next morning his temperature was 99° and in the afternoon 100° . On the following day the morning temperature was 99° and the afternoon $99\frac{1}{4}^{\circ}$. On the 14th of January it was $98\frac{1}{2}^{\circ}$ in the morning, and has remained normal ever since. The man has been improving steadily since he has been in the hospital.

Physical examination.—Observe that the man is in a thoroughly good condition and is not particularly emaciated. The resonance is natural on the left side. On the right side, immediately below the clavicle, it is a little higher pitch. The breathing is perfectly good on both sides. I imagine that the higher pitch of resonance on the right side is normal in this man, and as in a good many persons, is merely physiological. If you compare the resonance on the two sides, that on the left side is a little higher pitched than on the right side. It is not flat but a little dull. The breathing on the left side is good, not quite as loud as on the right side. There is no difference in the vocal fremitus on the two sides. This man is suffering from dry pleurisy. A great many cases of dry pleurisy have very little fever. This is not an ordinary case of dry pleurisy. This man had a very distinct loud friction sound or subcrepitant rale over the greater part of the left chest when he came into the hospital, and is now confined to the lower part of the left chest. There is a good deal of fibrin present, because there is more dullness than we had before. The peculiarity consists in the unusual extent and severity of the inflammatory processes. In this respect the case is analogous to that of bronchitis just spoken of. This man is suffering from a form of disease which usually runs a very mild course. Dry pleurisy usually involves only part of the costal pleura and not all the costal pleura, and is usually accompanied with a little fever which lasts for a short time. Here the inflammatory process has involved pretty much the whole pleura on the left side. He has had well-marked febrile movement lasting for a considerable length of time, and has well-marked dullness at the present time. This shows that the inflammatory process was unusual as regards its intensity and its extent. He is an example of a much more severe form of dry pleurisy than we ought to see. This man is a fair example of how well these cases of dry pleurisy will do if you leave them alone. This disease runs a regular course and terminates naturally in recovery. This man came into the hospital towards the close of his attack, and there were reasons why it was considered not advisable to blister him. Consequently he was let alone and simply kept quiet in the hospital and lying in bed while he had fever. He has been steadily improving and is now fairly convalescing without any special treatment whatever.

TRAUMATIC PARALYSIS OF THE FOREARM. —INFLAMMATION OF THE KNEE JOINT.— CICATRICAL CONTRACTION OF FINGERS FOLLOWING A BURN.—CANCER OF THE LIP.

A CLINICAL LECTURE.

BY

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CASE I.—Traumatic Paralysis of Forearm. This patient, gentleman, was kicked by a horse seven weeks

ago on the outside of the arm and at the same time received a dislocation of the shoulder. The dislocation was reduced. The man however did not recover the use of his limb but comes here with a very well marked paralysis affecting the muscles of the back of the forearm. He has wrist drop. This is a paralytic affection most commonly the result of lead poisoning but here it is manifestly the result of injury. It is a question whether this is owing to the pressure of the head of the bone upon the musculo-spiral nerve or whether it is due to a direct lesion of the nerve caused by the impact of the horse's shoe. For the nerve might very well have been injured in its course in the curve of the humerus. It would be desirable to ascertain what branches of the nerve are involved, to determine where the lesion is and unless the trouble yields to apply electricity, or, unless the patient after a time recovers, the question of surgical operation should be entertained. The commonest paralysis which results from dislocation of the shoulder is paralysis of the deltoid muscle. This is due to an injury of the circumflex nerve which is most likely injured in this dislocation. There are cases recorded in which paralysis of this muscle has been permanent and often depends upon actual rupture of the nerve. I am strongly inclined to think that in this case the lesion is the result of direct injury to the nerve, as it traverses the cavities in the humerus. If on examination paralysis were found here to be complete, I think if we could by examination of sensibility and movements of the parts supplied by the nerve get any fair idea where the lesion was, that this man ought to be advised to submit to an operation of discovering the nerve at the point of rupture and bringing the ends together by cat-gut suture. Many operations have been performed here and in Europe of suture of nerves and lately some have been successful in which divided nerves were reunited after the lapse of many months and even a year.

CASE II.—Inflammation of the Knee-Joint. Female. Had an injury last July. She fell upon the floor from a chair and injured her knee. For three days nothing happened. Then she was seized with severe pain in the knee which has disabled her ever since. This is one of those cases exceedingly common in which, in consequence of exercise after injury to the knee, inflammation is set up, which passes on to the usual result. If absolute rest were enforced immediately after the accident this inflammation would not have occurred. We know that we have to deal with a case of inflammation of the knee-joint. Very likely there was fluid in the joint. The patient has likely had some synovial inflammation. This has been treated by plasters. On inspection I find very few signs of disease. There is no fluid in the cavity. The patella is not pushed forward. It is in contact with the condyles of the tibia. On moving the limb I find that it is capable of flexion and extension to a considerable degree and on moving the patella over the condyles it moves smoothly without any signs of friction, and without evidences of erosion. Then we press in the neighborhood of ligaments of the joint and make motions to extend these lateral ligaments of the joint. I put the external lateral ligament on the stretch and it hurts. When I put the internal lateral ligament on the stretch it hurts still more. I could not say whether this was inflammation in the fibrous tissues of the ligament or whether it is one of those cases so common of internal derangement of the knee-joint in which the internal articular or semilunar cartilage is supposed to be displaced. But in any case the treatment must be the same. I should protect the limb by applying a posterior splint of felt or leather

and caution her not to sprain the limb again and keep it pretty quiet for some time. She will very likely not be well for five or six months.

CASE III.—Cicatricial Contraction of Fingers following a Burn. Boy, yet seven years. Four years ago he fell upon the stove and burned the palm of his hand. The forefinger and middle finger of the right hand are in a state of flexion at a right angle and almost immovably fixed in this position. Prof. Post of this city has had a large experience in the treatment of these deformities. The method of operation practiced by him is the best. The fingers here are held in position by the cicatricial bands and it is necessary to divide these bands to allow extension of the fingers. The principle in the operation is not to make one cut, but several cuts are made extending through the entire thickness of the cicatrices. Extension is in this way effected much better than if there were one single cut. There are three gaping wounds made instead of one gaping very widely. After subsequent contraction of these smaller wounds the healing is more speedy than in the case of a single wound. After the cicatricial bands have been divided extension of the fingers cannot always be made. This is due sometimes to contraction of the tendons, but usually to some dislocation of the bone. When this is the case, it becomes necessary to amputate the fingers and perhaps the best plan is to remove the distal end of the proximal phalanx. Remove the end of the first phalanx so as not to divide the extensor tendon. In opening joints a longitudinal incision should be made. We merely split the tendon and again cause it to inflame. By this means the joint is exposed, opened, and a small piece a quarter of an inch long is cut off. The wounds are treated antiseptically at the joint until they are nearly healed. Passive movements are made and a great correction of the deformity can be made and in a large number of cases motion can be restored.

CASE IV.—Cancer of the Lip. Here is a case, gentlemen, which is not promising and which perhaps some of you saw last winter. This old gentleman came here while I was on service and I removed a cancer of his lip. I did the operation in the clinic here and removed an epitheliomatous growth. The wound healed and has not reopened. After this there was a reproduction of the disease lower down and last summer Dr. Abbe performed a more extensive operation and removed a portion of the jaw and now he comes here with a reproduction of the disease. On examining this patient I find that the disease has extended to the bone. It has involved the skin of the chin to a very considerable extent. There is little doubt that the swelling is due to infiltration of epithelial elements in its substance. The skin seems to be adherent to the periosteum of the jaw. These are the bad features of his case. The good features are: There is no cachexia and there are no swellings of the lymphatic glands of the submaxillary region. Secondary deposits are most common in the submaxillary glands. The man is sixty-eight years old, and it is very hard to give this patient advice. If we leave him alone the progress of the disease will be from bad to worse. If we take the disease away we are not certain that it will not return. Still an operation should be done which will take away all the soft parts of the disease and also part of the jaw. This renders the patient more or less unable to perform the act of mastication and again the removal of so large a portion of skin as it will be necessary to remove, in this case would leave a gap which would be very slowly filled and not very conveniently with pieces of skin borrowed from neighboring parts. I recall a

case under the care of Dr. Parker and myself some years ago of a man who underwent six or seven operations for this disease. Great patchwork was done until finally the extension of the disease was so great as to forbid any further attempt.

CASE V.—Chronic Inflammation of the Breast. This is an interesting case which I show you in which the diagnosis was uncertain between chronic inflammation of the parts and carcinoma. I introduced a probe and withdrew a small quantity of pus. I directed one of my assistants to open the abscess. It was done at the woman's house together with the application of emollients. This has caused a discharge from the breast and improvement followed. The red swelling which you noticed at the last clinic has left. The progress so far is towards a cure so that we feel hopeful that this is a case of simple chronic inflammation of the breast. I would not be absolutely certain yet as regards the diagnosis. If this had been a case of cancer the opening of the abscess would likely have been followed by protrusion of a fungous mass. I am hopeful that we have to deal here with a case of chronic inflammation of the breast in which a firm deposit has formed and become so extensive as to simulate a cancer of the breast. It is a case of firm tumor with retraction of the nipple, the tumor consisting of infiltration of some hard material. If there were in addition to this swelling a swelling in the axilla I should advise immediate operation.

HOSPITAL RECORDS.

NEW YORK HOSPITAL—NEW YORK. CARIES OF HEAD OF TIBIA.

SERVICE OF

ROBERT F. WEIR, M. D.

J. W., native of N. S., yet 46, widower, clerk.—No syphilitic, rheumatic or strumous history.—Family history negative. 26 years ago the patient fell and struck the right knee against a box. Acute symptoms followed. The knee remained swollen after the pain had subsided. Patient was able to walk about. One year later he fell and struck the same knee again. Acute symptoms recurred, and for nine months he was treated in New York Hospitals with his leg on a splint. The joint was then entirely ankylosed, and patient returned to his work. Two years later he struck the right thigh, on the outer side, just above the knee. An abscess formed there and opened spontaneously. After discharging some time it closed. Until five years ago, patient was not troubled by any further attack, and only suffered from the ankylosed joint. Five years ago an abscess formed over the head of the tibia, anteriorly, without any assignable cause. It was followed by others, which opened and discharged at intervals. During the past six months several larger ones have formed, one in the popliteal space. Patient has lost flesh and strength, but appetite and digestion remained good.

Admission—Fairly well nourished.

Examination—Shows the right knee joint much enlarged. Greatest measurement taken at lower edge of patella shows circumference to be 16½ inches. There is firm ankylosis. Patella fixed. The ends of both tibia and femur are enlarged, and the periarticular tissues are thickened and indurated. Numerous fistulous openings are present on all sides of the joint, from

which thin, poor-looking pus escapes. Probe passed into one of these detects exposed bone in head of tibia.

Treatment—Ordered

R.

Hydrarg. biniod. gr. $\frac{1}{32}$
Potass iodid., gr. xv
Syr. sars. co., $\frac{3}{4}$ i
t. i. d.—

Sinuses syringed every second day with solution Hydrarg. bichlorid 1 to 32.

Feb. 10th—Much less suppuration. Inflammatory action decreasing.

Feb. 25th—Continues to improve under treatment.

March 8th—The knee is smaller. Discharge is small in amount and thinner than before. Local inflammation at a stand-still. Patient discharged improved.

ABSTRACTS AND SELECTIONS.

AN UNUSUAL HYSTERICAL SYMPTOM-GROUP.* BY DR. EDWIN WALKER, Prof. of Diseases of the Nervous System in Evansville Medical College.

There is no disease which presents itself in more varied forms than hysteria. There is scarcely a disease that it does not at some time simulate; the study of its manifestations, therefore is of the greatest importance from a diagnostic point of view, for its rarer manifestations are often mistaken for symptoms of some grave disease, and much harm is done by inappropriate treatment. One cannot peruse the cases related in Weir Mitchell's little work on diseases of the nervous system † without appreciating the great importance of studying unusual forms of hysterical disease. I wish to relate a case, which presented, in the first stage of labor, a group of symptoms closely resembling the premonitory symptoms of puerperal eclampsia.

When I was first called to see Mrs. L., she was eighteen years of age. It was in February, 1880. She had been married the September preceding. She had just had a convulsion, or, as her friends called it, a "spell." It consisted of irregular convulsive movements, not clonic in character, followed by a somnolent condition. She evidently did not lose consciousness, although she claimed she did.

She gave a history of "spells" from early childhood, but their exact character I could not learn. She began to menstruate at twelve years of age, and her paroxysms stopped until October, 1879, the month after her marriage, when they returned, and recurred at each menstrual period.

At the time of my visit she had not menstruated for two months. Pregnancy proved to be the cause of the suppression.

I saw her again the next day after the paroxysm, and found complete left hemi-anæsthesia. This fact, together with the emotional character of the patient,

the character of the paroxysms, and their connection with the menstrual period, together with her history, made the diagnosis of hysteria gravior quite plain.

It was evidently of quite severe type, from the early date it had appeared and the character of the symptoms. Let me here remind you, for it is often overlooked, that hysteria may exist in children at a very early age; Briquet says that one fifth of all cases begin before the twelfth year.

My patient continued in a pretty good condition until the sixth month of her pregnancy, when she lifted a tub of water and ruptured the membranes, and a small amount of amniotic fluid escaped. After rest in bed the fluid would cease to flow, but would commence again on any unusual exertion. So she continued until the eighth month, when a large discharge took place, and labor pains set in.

For three days she remained in bed, having occasional pains, but made no material progress. On the third day she began suddenly to complain of severe headache, and in a short time afterward said she was blind. This alarmed her friends, and I was summoned in haste. Her blindness certainly seemed real; I watched her very closely, and tried a number of ways to throw her off her guard, for I suspected shamming, but discovered nothing to warrant the suspicion. The pupils were neither dilated nor contracted and responded sluggishly to light. An ophthalmoscopic examination was made with negative result. She did not flinch from the light of the mirror.

Hysterical amblyopia is mentioned by Charcot, Jolly, and others. True blindness, doubtless, does occur, but it is usually in one eye, rarely in both. The results of ophthalmoscopic examinations have been for the most part negative, but Charcot's pupils found congestion of the optic papilla with œdema of its border in some cases. Whether Mrs. L. was one of these cases or was really shamming, is not a matter of special import to us in this connection. She said she was blind, and not being able to disprove it, we were compelled to consider the symptom in making our diagnosis. She had passed only a few ounces of urine in the preceding twenty-four hours. Here then was a patient in the first stage of labor, taken suddenly with pain in the head, and following it complete loss of vision, and with a scanty flow of urine. Certainly these are symptoms which would immediately suggest impending puerperal convulsions.

Had I been unacquainted with the patient it is more than probable I would have considered it such, without further investigation. It was only by a careful consideration of the symptoms that my doubts were removed, for an hysterical patient may have puerperal convulsions.

Her temperature was 37.° C. Pulse and respirations normal; the urine contained no albumen, nor was there any œdema; these, taken together with the history, were the points from which the diagnosis was made. She recovered her sight in twelve hours.

I am unable to find in the standard works, either of obstetrics or diseases of the nervous system, any mention of the liability of confounding hysteria with the premonitory symptoms of puerperal eclampsia; the liability of confounding the convulsions themselves is briefly alluded to by Cazeaux (p. 804).

All authors on midwifery I have consulted (Leishman, Lusk, Cazeaux, etc.) mention headache, disturbances of vision, and scanty flow of urine as the more prominent premonitory symptoms of puerperal eclampsia. These were all present in our case.

The points of difference are as follows:

* Read before the McDowell Medical Society, May, 1883.

† "Lectures on Diseases of the Nervous System, especially in Women." Philadelphia, 1881.

HYSTERIA.

History of hysterical attacks.

Mental state—emotional.

Urine may be scanty; no albumen or casts.

Temperature normal.

Pulse normal.

Pupils normal.

Headache general.

PUERPERAL ECLAMPSIA.

History of œdema of face, or extremities, and labia majora.

Mental state—irritable.

Urine scanty; albumen and casts.

Temperature sub-normal.

Pulse slow and hard.

Pupils contracted.

Headache confined to one side, or small area.

It may not be out of place to speak of the subsequent history and treatment of this case. She was safely delivered a few days after the attack referred to in this paper; she made a good recovery, and has never had an hysterical attack since that time. Now as to treatment. I explained the exact nature of the trouble to her husband, who is quite an intelligent man. I told him that when she complained, to pay but little attention to her; if she had any nervous manifestation, to treat it as a matter of no importance, and under no circumstances to call in the neighboring women. I then told her that her troubles were entirely nervous in character, and explained to her that she could often control herself if she would.

I think that the essential mental trouble in hysteria is deficiency of will-power, with an abnormal craving for sympathy. Hysterical patients are often quite intelligent and can be made to understand their mental bias, and some of them can be induced to cultivate will-power. Whenever my patient seemed to be depressed or more nervous than usual, I would give tonics or sedatives as the condition required, but would always give her distinctly to understand that medicines were only of secondary import, and to be used only when occasion required. I further instructed her to keep busy at something, so that her mind would be diverted from herself. As I have said, she has not had any hysterical attacks since the one detailed in this paper, and has given up many of her emotional habits, crying, complaining, etc.

Had this woman been drugged with nauseous medicines, and been taught to rely on sedatives, the hysterical habit would have doubtless been so engrafted on her, that she would never have shaken it off. I say "hysterical habit," because many of the troublesome manifestations of hysteria become confirmed by repetition. For example: A nervous woman becomes worried from some domestic trouble; she has an hysterical convulsion; it produces a consternation in the house; she is consoled and sympathized with. This is repeated with like result. Finally the woman loses the power to control herself, and every annoyance brings on an attack. An intelligent treatment at the start will often save much trouble.—*Archives of Medicine*.

BROMIDE OF ARSENIC IN DIABETES MELLITUS.

Soon after the announcement by Dr. Clemens of the benefit to be derived from bromide of arsenic in diabetes the remedy was employed in this disease by Professor Korányi, in Budapest. The medicine was administered to a man twenty-two years old, who when entering the hospital was so weak that he could with

difficulty ascend the steps to the clinic at the time of his admission, February 15, 1882. Through the administration of the bromide of arsenic this patient was so greatly benefited that on May 9th he was discharged from the hospital, and was at once enrolled for military duty. During the time of treatment his weight increased from 48.5 kilogrammes to 56.6 kilogrammes, and the loss of sugar in the urine, which in the first few days varied in amount from 170 to 411 grammes in twenty-four hours, was entirely suspended. This surprising result continued after the patient was given a mixed amylaceous diet, and the arsenic was withheld. Before the arsenic was prescribed at all, the patient was for some days confined to a strict diet, by which means the amount of sugar was sensibly diminished from 298 grammes by mixed diet to 113.52 grammes in twenty-four hours. The diet consisted of breakfast of bitter Russian tea, two to three soft-cooked eggs, or bacon; dinner, soup, cooked beef, roast meats, with green vegetables. During the whole day one water biscuit (wassersennel). The first cycle of treatment with bromide of arsenic and animal food lasted eleven days, in which the dose of the drug was increased from three to six drops. The result must be acknowledged a most brilliant one, for on the eleventh day (21st March) sugar could hardly be detected in the urine, and steadily diminished day by day.

During the treatment the average amount of sugar excreted was 55.35 grammes per twenty-four hours, that is, half the amount which was previously lost during the time in which the patient was treated by means of an animal diet, or one-fifth the original quantity lost daily by the patient. The diet of animal food was now resumed without the medicine, when traces of sugar could be detected in the urine at times, while at other times none could be detected. On the sixth day the patient was given rice in addition to his previous diet, when sugar appeared to the amount of one per cent. in the urine, and the treatment by the arsenical bromide was at once resumed. From this time the medicine was continued in the dose of five drops daily for twenty-seven days, with a modified diet containing, in addition to meat, 150 grammes rice, and two biscuits daily. During this period sugar was almost always absent from the urine, never being found in a greater amount than 0.1 to 0.3 per cent. After this for a period of some days, the diet was made to include a variety of amylaceous substances, and the medicine entirely withheld, and the only variation was that on two days sugar appeared to the extent of twenty-four and twenty-nine grammes, respectively, in the urine. During the remainder of the time the urine was absolutely free from sugar.*

[The translator has employed the same remedy as is here mentioned, a compound of bromine with arsenious acid, the nature of which is not yet satisfactorily determined, in the treatment of a case of diabetes mellitus of long standing, in which there has been a loss of thirty-three per cent. of the original weight, ravenous appetite, tormenting thirst, and an excretion of urine amounting to many quarts daily. The amount of sugar in the urine amounted to 35.71 grammes per fluid ounce, or seven and one seventh per cent. The result of treatment by means of this new remedy is awaited with much interest. —A. N. B.]—*Boston Med. and Surg. Journal*.

CHRONIC STARVATION AND "DELICATE" FEMALES.

Dr. Graily Hewitt, in the opening address before the Section of Obstetric Medicine, at the recent meeting of the British Medical Association, spoke of what had been in his experience a fruitful cause of that train of symptoms often called *delicacy* in young females, and usually associated with some displacement or other abnormality of the generative system. He says:—

"Physiology teaches the necessity for a continuous supply of a certain quantity of food. The popular impression is that some people do not require so much food as others; and, consequently, important quantitative diminution in the supply often escapes attention. I must confess that, not very many years ago, I shared in the popular impression. What induced me to form the opposite conclusion was that, in the first place, I was struck with the fact that in almost every case coming under my notice a state of what was termed 'weakness' by the patient had been notably present; and, secondly, that, on inquiry, this weakness was almost always found to be associated with a notably deficient dietary. For the last six or seven years I have tested the accuracy and applicability of these generalizations, by carefully inquiring into the past history of patients, most suffering from some uterine or ovarian disease, or some affection incidental to childbed, and these conclusions have stood the test of this long-extended inquiry. I have to state the important conclusion that a continuous insufficiency of food, or what may be termed a 'chronic starvation,' more or less intense in different cases, was found to have existed almost universally. Consequently, I have naturally been led to consider chronic starvation as a most important factor in disease, certainly in those classes cases which have come more particularly under my notice."

After giving a few illustrative cases he continues:—

"I have been much interested in observing, also, the effects of previous insufficiency of food in apparently predisposing patients to attacks of puerperal septicæmia. In the cases of this disease which I have seen in consultation, I hardly recollect having seen a case where the patient so affected had, during the pregnancy, lived fairly well; and the worst cases have been those in which the patients fed badly and insufficiently during the pregnancy, and had been fed on a gruel diet after the labor was over. In cases where severe sickness during the early part of the pregnancy prevents the proper nutrition of the patient, the system is liable to become much impoverished, and an insufficient dietary may be, and often is, the preliminary to a dangerous childbed."

"With very few exceptions, and those exceptions only tending to prove the rule, it is, I hold, impossible to find patients suffering from chronic uterine disease who have not undergone at some former period what may be termed a starvation process; and careful inquiry generally elicits the fact that the quantitative deficiency in the diet extended over a considerable period. In many cases the patients are found to be still under the influence of a deficiency in this direction, and to be 'eating,' as the expression is, 'next to nothing.'"

"The period of life during which quantitative deficiencies in the dietary are most common is the two or three years immediately following the arrival of puberty. The girl is at school probably, her appetite is bad, or the food is not palatable, or is deficient in important particulars, or, as I have found in some cases, she eats little in order to keep thin; the strength fails,

the appetite diminishes, and a habit of taking little is formed,—particularly little animal food is taken. Three or four years of the most critical stages of life are thus passed,—a time at which the body should be growing fast, and to maintain this growth in adequate vigor large supplies of nutritious material are required, instead of which the supply is far below the normal standard. The result is a general impairment of vigor and of vital action. On the generative organs the effect is, as I have observed in numbers of cases, most decidedly injurious; and the effect in most instances is of this kind, that the tissues of the uterus lose their normal firm, healthy consistence.

"It is generally admitted by authorities on the subject of diet that nitrogen is the most essential of all foods, and that a certain amount—about three hundred grains—should be taken daily. In cases of chronic insufficiency of food, it appears that the diminution in quantity of food most frequently affects the nitrogen. Meat is the article of diet which, as a rule, is the source of the greater part of the needed amount of nitrogen, for in England, at all events, meat is the popular article of food; and in cases of chronic starvation, we mostly find that the quantity of meat taken is exceedingly small. 'Never a meat eater,' 'do not like meat,' 'have got out of the habit of taking meat,'—such are common replies made to interrogations of patients under these circumstances.

"No doubt meat can be replaced dietetically by other foods containing nitrogen in sufficient quantity; but practically, owing to the habits of families, good substitutes for meat are not easy to find. The weakly one of the family is too often allowed to take her own course, and, if she does not take meat, often gets nothing sufficiently nitrogenous to answer the same purpose. Of all the nitrogenous foods meat is admitted by all authorities to be the most easily digested, most easily assimilable, and most rapid in its nutritive action. Milk is, of course, a most valuable alternative food; but in these cases of absence of sufficient meat we do not find it has ever been taken in any such quantity as to make up for the deficiency; and the quantity of bread consumed, even supposing it to be pure and of good quality, is in such cases entirely inadequate to supply the required quantity of nitrogen. I need not allude to the effect of deficiency in the other constituents of the diet. It is sufficient for my present purpose to show that the nitrogenous elements, while they are of all the most important, are those which are markedly absent in the cases now under consideration."

—*Bost. Med. & Surg. Jour.*

MEDICAL NEWS AND NOTES.

Extraordinary Feat.—An extraordinary incident, in which an athlete showed great presence of mind and unusual muscular strength, happened at Cranachan Farm, near Dundee, the other day, and is reported in the *Dundee Advertiser*. Mr. Archibald MacDonald, one of five brothers who occupy the farm, was going over his land accompanied by the shepherd, and, when they were passing through a field in which cattle were grazing, a bull gave them chase. The shepherd ran and left his master to his fate. Mr. MacDonald could not run, he having suffered much from rheumatism, and being now obliged to use crutches. The bull approached, and began to attack him, he doing his best to keep him at bay with the end of his crutches. As good luck would have it, Mr. John MacDonald, an elder

brother hearing cries, ran to the rescue. In his hurry, he forgot to bring any instrument with him with which to fell the brute; but it occurred to him if he caught the bull by the horns, he might keep him from doing more mischief till help arrived. Seizing the enraged animal by the horns, and using them as levers, with one supreme effort he gave a sudden twist to the head, dislocating the neck by his jerk, and, in a moment, the bull fell helpless at his feet. Mr. John Macdonald was, at one time, champion athlete of Scotland.

A somewhat remarkable testimony was given by a medical expert at a recent trial for rape before the high court of judicature of England. The witness, who had examined both the plaintiff and the accused, stated in his written report that: "On pushing back the foreskin of the penis of the accused there was an odor perceptible peculiar to woman." He argued that this was conclusive of coitus having occurred.—*Brit. Med. and Sur. Jour.*

Evening Classes at a Dispensary.—The trustees of the New York Dispensary have decided to increase the work done by that institution by opening evening classes on two evenings of each week at the dispensary building, No. 137 Centre street. The subject of opening these classes has been discussed by the trustees for some time, and it was thought that they would supply a long-felt want in the medical work among the poor people in the lower part of the city, where the work of the Dispensary lies. When the trustees finally decided to incur the additional expense of opening these classes, volunteer physicians were called for to take charge of them, and Drs. Gaunt and Vanderpoel were chosen from those who offered their services. The classes are begun to give an opportunity for medical help and advice to the men and women in the lower part of the city whose work throughout the day prevents them from going to the regular day classes. The trustees are confident that the new plan will prove to be a useful one, and that many thousands of working-people will be benefited by it who could not be reached by the regular work of the institution.

The Dispensary is the oldest one in the city, having been founded in 1790, and it does a large amount of good work every year. There are thirty-two physicians in its employ, who give medical treatment and advice to people who would not get it without the efforts of the Dispensary. The city territory of which the institution has charge is a large one, and is bounded by the North and East rivers, Spring street, Broadway, East Fourteenth street and Allen street. This territory is divided into four districts, in each of which there are a district physician and three trained nurses who minister to the sick poor people in their district. Each year about 30,000 people are treated by the Dispensary's workers. The income of the institution is derived from rents, from the excise fund, from the production and sale of vaccine matter, and from private subscriptions.

The Value of Ether in Collapse.—To the Editor of the *Lancet*. Sir,—Having read in your last issue the report of a case in which ether, subcutaneously injected, proved of the utmost value, I should like to record a case which occurred in the obstetric practice of this hospital. A few weeks ago I was sent for to a case of very severe post-partum hæmorrhage. The house was luckily situated almost opposite the hospital. I found the patient in a most critical condition; she was insensible and pulseless. The friends stated that

before unconsciousness supervened she had been violently convulsed. Her face was of a ghastly hue and covered with a clammy sweat; the extremities were cold; in fact, I believed at first that she was dead. But over the heart could be felt a feeble flutter. The condition of the patient made it evident that if any restorative could be of any service it must be given at once. I therefore injected subcutaneously a syringe-ful of ether (thirty minims), which I had fortunately ordered to be sent across when I left the hospital. It acted like a charm, for in two or three minutes the heart rallied sufficiently to receive benefit from an enema of brandy and strong beef-tea, which was then administered, together with hot bottles to the feet. In about fifteen minutes consciousness returned, and the patient was able to take some more brandy and beef-tea by the mouth. From that time she slowly gained strength. The amount of blood this woman lost was enormous, but could not be accurately determined because it had deluged the bed. The bleeding had fortunately ceased before my arrival. As she was *in extremis*, I think one may fairly state that ether saved this woman's life.

I am, Sir, yours faithfully,

F. FOORD CAIGER, M.R.C.S., L.R.C.P.
St. Thomas's Hospital, August 22nd, 1883.

AMERICAN ACADEMY OF MEDICINE.

Philadelphia, September 26, 1883.

DEAR SIR:—

The American Academy of Medicine will meet at the New York Academy of Medicine, on Tuesday, October 9th (three o'clock), and Wednesday, October 10th. The Address by Dr. H. O. Marey, of Boston, Mass., President, will be delivered on Tuesday evening, October 9th, at eight o'clock, on "The Recent Advances of Sanitary Science, the Relations of Micro-organisms to Disease" (illustrated by microphotographs projected upon the screen).

The following papers have been promised for the general meetings:—

Dr. L. S. Pilcher, of Brooklyn, N. Y., on "The Relations of Medical Journalism to higher Medical Education in America."

Dr. Traill Green, of Easton, Pa., on "The Imperfection of Technical Studies as a Means of Mental Culture."

Dr. Benjamin Lee, of Philadelphia, on "The Value of an Acquaintance with Botany as a Preliminary to the Study of Medicine."

Dr. Charles McIntire, of Easton, Pa., "Is it Fair? The Study of the Comparative Political Position of the Medical Profession in the United States."

Dr. A. D. Rockwell, of New York, on "The Exact Value of the Electrolytic Method."

Dr. J. Cheston Morris, of Philadelphia, "The Milk Supply in Large Cities."

Dr. Charles E. Cadwalader, of Philadelphia, "Considerations upon the Public Provisions for the care of the Indigent Insane."

Dr. A. D. Rockwell, of New York, "The late Dr. George M. Beard—a Sketch."

Report of the Committee on Laws of Medical Practice in the United States and Canada (Drs. Dunglison and Marcy).

Very respectfully,

RICHARD J. DUNGLISON, M.D.,

Secretary

THE MEDICAL GAZETTE.

PUBLISHED EVERY SATURDAY.

EDWARD J. BIRMINGHAM, A. M., M. D., EDITOR.

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"THE GENESIS OF THE BACILLUS TUBERCULOSIS."

Under the above title the *Lancet* takes occasion to offer some very sensible remarks whose general tenor is rather conservative than radical and hardly in accord with the opinions maintained by some of our eminent but over-enthusiastic defenders of the Germ Theory. The verdict is not proven and this will perhaps express in brief the opinion of the majority who have familiarized themselves with the claims put forward by experimental physiologists. The *Lancet* remarks:—

The necessity for a reconstruction of the clinical history of tuberculosis seemed to follow as a logical outcome of Koch's important discovery. And there can be no question that many medical men enthusiastically fell in with the view that phthisis was a parasitic and infectious disease. At the last meeting of the Académie de Médecine, Professor Bouchardat has done perhaps more than justice to these exaggerations, as he regards them, in a communication inspired by the praiseworthy endeavor of seeking to harmonize the known facts of clinical observation with the recent acquisitions of experimental pathology. There can be no doubt that up to the present the doctrine of the contagiousness of phthisis, as demonstrated by the actual record of alleged instances, stands in an overwhelmed minority. M. Bouchardat believes that pulmonary phthisis is originated chiefly under the influence of general conditions determining a state of ill health which has been called *physiological misery*. However, it is argued that the parasitic nature of the disease can no longer be denied. What then becomes the rôle of, and what relation have, the microparasites in those cases which are clearly not derived by contagium from without the organism?

The condition of *physiological misery* is essentially characterized by a deficient oxidation and consequent want of calorification, due to insufficient respiration. Certain portions of the lungs have been observed not to expand in proper degree in those who have just become or are about to become the subjects of phthisis. M. Bouchardat maintains that this local insufficiency is to be found in those in whom tubercles have not yet

formed. In such areas the capillary circulation is arrested. At these sites the lymphatic corpuscles placed under abnormal conditions acquire new functions, and amongst others, are metamorphosed into pathogenic bacilli! This, indeed, is a bold return to the doctrine of heterogenesis so strongly upheld by Bastian, and implies not only a spontaneous generation of the microparasites, but also of virulent diseases. Beale has believed that particles of protoplasm derived from the living organism may be the germs of disease. And perhaps the view here set forth may supply Dr. Creighton with the most solid basis on which to found his views of the acquisition of specificity by diseases which were originally non-specific. Suppose that we have in the natives of Central Africa to do with a non-contagious suppurating form of lichen, and we wished to know how such an affection became specific and contagious (small-pox). It would not be too much to invoke the presence of the necessary external conditions under whose presiding influence the products of the suppurative inflammation underwent such changes that the inflammatory corpuscles became colonies of bacteria, after the manner advocated by Bastian and now most recently by Bouchardat. The bacilli might then be regarded as veritable spermatic filaments capable of engendering the parent disease from which they were derived. If it be not for some such opinion as this we do not see, although they may exist, on what grounds Dr. Creighton's position becomes intelligible, unless as an ingenious exercise of the scientific imagination. It will thus be seen that the whole question of spontaneous generation would again be opened in some quarters, and that not with a little lease of vitality. Professor Tyndall, in writing recently on the breeding of cholera germs, has remarked very positively and emphatically on the impossibility of our owning any other than the view of contagiousness for the explanation of cases of cholera and typhoid fever. He has spoken of an opposite theory as a dead opinion, which, if it did any good, did much more harm to scientific medicine. Now, although appearances, so as to speak, are all against the doctrine of origination *de novo*, yet we hold that it is most scientific not to be so absolute as Professor Tyndall seems to be. He would not deny that spontaneous generation has occurred in long-past ages. And the mind which knows no changes of space and time cannot but conceive that what has once happened may do so again. We say, and say no more than this, that spontaneous generation is a conceivability, and whilst it remains such, it would be folly to shut our eyes and close our ears to attempts to show that the conceivability is something more than legitimate thought.

In thus having pushed to its utmost the heterodox doctrine, we do not desire to forget the actual teaching of experiment. We unhesitatingly admit that, notwithstanding the intellectual possibilities of the case, the satisfactory proofs of an origination *de novo* have not as yet been given. Nor, judging from the performances of the past, does there seem much hope that the evidences will be forthcoming. And why? The difficulties which surround such a demonstration are so numerous and so complicated; the search after the philosopher's stone is not more so. Conceivably, and more especially in the light of some of the teachings of modern chemistry—we refer to the notion that all the elements may be but remarkable modifications of one element,—all other metals may be converted into gold. But who would dare practically to entertain such an opinion with any regard for people's belief in the sanity of his mind! We have thus endeavored to express forcibly the insurmountable objections in the way

of establishing the truth of the fascinating doctrine. Possibly in our simile of difficulties we have over-estimated the perplexities which beset those who would prove what most individuals disbelieve.

DYSMENORRHOEA.

In a brief, critical analysis of a paper on this topic, *The Lancet* takes occasion to emphasize the superiority of the constitutional over the local or mechanical method of treatment:

"There are few subjects more worthy of sound study than dysmenorrhœa. It has received for the last fifty years more attention at the hands of gynæcologists than ever before. But still it cannot be said that authorities are agreed on its essential causes. For a long time it came to be regarded as eminently a case for treatment by specialists. The mechanical theory of its causation largely ruled practice, in some few cases with brilliant relief, and perhaps cure, in others without success, and often with the effect of adding to the mischiefs which it was intended to remove. The very nature of the complaint, and the fact that in its serious forms it affects chiefly unmarried women, render the complete investigation of it a matter of much difficulty. The existence of more or less dysmenorrhœa in the majority of women is a fact. Even those who are unwilling to recognize in this fact any argument against the capacity of women for competing in the labor market with men do not deny that in a large proportion, nearly fifty per cent., this dysmenorrhœa is considerable in amount.

We have before us a paper by Dr. John Williams, on the Natural History of Dysmenorrhœa, which was read last year before the Obstetrical Society of London. We can do little more than direct attention to Dr. Williams's principal conclusions from a large and painstaking observation of several hundred cases. He divides his cases into two sets—first, cases of primary dysmenorrhœa; secondly, cases of acquired. The acquired cases are so few (22) compared with the others (873) that we need not here allude to them. It is not easy to do justice to the details which constitute the interest of such a paper as the one under notice. But we can give his conclusions, and after doing so emphasize the chief of them. His conclusions are as follows:—

1. Dysmenorrhœa should be studied first under the least complex conditions—in single women. 2. Dysmenorrhœa in single women is rarely acquired; it is almost invariably primary—viz., it appears with the menstrual function. 3. Dysmenorrhœa in a few, but rare, cases ceases spontaneously a few years after puberty. 4. Marriage, if sterile, aggravates the disorder in many cases; it is only very seldom that it relieves the pain. 5. Childbearing cures a large number of cases, and it is not impossible that were all puerperal complications excluded it would cure every case. 6. The proportion of sterile to fertile women subjects of primary dysmenorrhœa is one to twelve. 7. Menstruation begins in women who become sufferers from primary dysmenorrhœa at about the estimated average age for the appearance of the function in London. 8. Menstruation is regular in about two-thirds of the cases, and irregular in about one-third. 9. The menstrual fluid is profuse in about two-fifths of the cases, scanty in about one-half. It contains clots or shreds in about three-fourths. 10. The changes which take place in the fluid in the course of dysmenorrhœa are various, and cannot at present be classified. 11. The uterus is imperfectly developed. It may be too short, or too

small in volume, or it may be defective in both respects. The cervix may be conical, and the os small and round, but stricture of the canal in any part of its course is infinitely rare. 12. The changes in the uterus due to dysmenorrhœa are slight hypertrophy, erosion and eversion of the mucous membrane of the cervix, and catarrh. The cavity increases but little in length, for after years of suffering it measures rarely more than two and a half inches in length. In the early stages the tissues of the uterus are in some cases soft; in the more advanced, hard. 13. The hypertrophy of the uterus is probably the result of periodically increased muscular action. 14. Ovaritis and perimetritis are possible consequences of dysmenorrhœa. 15. The menstrual pain is the result of spasm of the uterus, excited by the separation and expulsion of shreds of decidua and clots, in an organ whose sensitiveness in the performance of its function is enhanced by inappreciable conditions of tissue dependent on imperfect development, often associated with others, such as anæmia.

"The whole drift of Dr. Williams's views is to pursue a constitutional and rational treatment of such cases rather than a mechanical one. But we content ourselves with directing this much attention to a very original and painstaking contribution towards the elucidation of a very difficult subject."

BOOK NOTICES.

A Treatise on the Practice of Medicine for the Use of Students and Practitioners. By Roberts Bartholow, M.A., M.D., LL.D., Professor of Materia Medica and General Therapeutics in the Jefferson Medical College of Philadelphia, formerly Professor of the Theory and Practice of Medicine and of Clinical Medicine in the Medical College of Ohio, Fellow of the College of Physicians of Philadelphia, Member of the American Philosophical Society, and of the American Neurological Association, Honorary Member of the Medical and Chirurgical Society of Maryland, of the New York and Ohio State Medical Societies, of the Continental Academy of Medicine, Author of a Practical Treatise on Materia Medica and Therapeutics, of a Treatise on Medical Electricity, and of a Manual of Hypodermic Medication, etc. Fifth Edition. Revised and Enlarged. D. Appleton & Co., New York, 1883.

But few additions have been made to this latest edition of Dr. Bartholow's well known and deservedly popular work. About twenty pages of new matter in all have been added. Perhaps the most notable difference between this and former editions is the fuller consideration given to the bacillus tuberculosis and the relation of minute organisms to disease. The form is essentially the same.

The Medical Students' Manual of Chemistry. By R. A. Walthaus, A.M., M.D., Professor of Chemistry and Toxicology in the University of Buffalo, Professor of Physiological Chemistry in the University of the City of New York, Chemist to the City of Buffalo, Member of the Chemical Societies of Paris and Berlin, Member of the American Chemical Society, Fellow of the American Academy of Medicine, etc. Wm. Wood & Co., New York, 1883.

The question of the utility of lectures on chemistry

in a medical course is often discussed by students if not by their teachers, and perhaps the majority regard chemistry as the least important subject included in the college curriculum. This feeling has been fostered in some schools by the technical character of the lectures which have failed to give sufficient preponderance to the medical aspects of the subject and the direct bearing of a knowledge of chemical physiology, and the chemistry of hygiene therapeutics and toxicology, on the practice of medicine.

Some few text books and manuals of chemistry have aimed in a greater or less degree to supply to the medical student what we may term the medical essentials of chemistry. The present treatise is the latest effort in this direction.

One would wish to see the process of elimination and crystallization be continued that the practical character of the book might be further enhanced. Although a very thorough presentation of the subject from the point of view taken by the author, we see in it little claim to supplant the excellent treatise of Fowne, which is now perhaps the most generally accepted text-book for students.

LECTURES.

MITRAL INSUFFICIENCY—ICTERUS— CHRONIC ORCHITIS.

A CLINICAL LECTURE

DELIVERED AT THE UNIVERSITY MEDICAL COLLEGE,

BY

JOSEPH E. WINTERS, M. D.,

Lecturer on Diseases of Children, University Medical Department, N. Y.

CASE I.—*Mitral Insufficiency—Icterus.*—This little boy, gentlemen, is twenty months old. It has always before been well, and the first trouble noticed by the mother was when cutting teeth. These first appeared a week ago. The bowels are regular, although the child has had a slight diarrhoea within the past week. At present this child is markedly jaundiced, the conjunctivæ being extremely pigmented.

The question now arises as to the cause of this jaundice. There are now recognized two distinct classes of jaundice, to wit: First, those cases due to obstruction of one of the biliary ducts, and secondly, those that are non-obstructive. Of the latter class we have exemplifications in malaria and febrile diseases.

The explanation of the non-obstructive cases is that there is an interference with the oxidation of the bile or biliary acids, and hence their reabsorption into the blood. The jaundice due to obstruction is owing to the absorption of bile into the blood and elimination by the skin, kidneys and so on. The bile and its acids undergo oxidation in the urinary pigment. The jaundice that comes from the action of anæsthetics as chloroform and ether, is due to the want of oxidation of the bile and belongs to the non-obstructive variety. All cases of jaundice which do not come under this variety, are referable to obstruction either at the hepatic, duodenal or cystic ducts. Now what is the cause of jaundice in this child? In new born children jaundice is generally owing to interference with the portal circulation, *i. e.*, independent of the obstruction of bile. In a child of this age the most common cause of jaundice is gastro-intestinal catarrh, and this produces icterus by obstructing the duct. The catarrh

extends through the alimentary canal until we have an inflammation of the biliary duct. This finally involves all the ducts of the liver, including the ductus communis choledicus. This is a case of intense jaundice, as not only the skin but the conjunctivæ are yellow to an enormous degree. Frequently the child has coated tongue, which is large, loose and flabby. This is due to indigestion. There is here present an unusual prominence of the abdomen, and also an unusual projection of the sternum. Now this prominence of the sternum may possibly be due to heart disease, but as we examine carefully we find that the sides of the chest are not prominent, but depressed, and that the depression of the costal cartilages renders the sternum more than usually prominent. The abdomen is tympanitic in its anterior portion generally, but is flat at the sides. The spleen is decidedly enlarged, measuring lengthwise $3\frac{1}{2}$ inches, when it should not measure in a child of this age more than two and a-half inches. A distinct loud blowing murmur is detected with the first sound of the heart. Now this might signify either aortic obstruction or mitral dilatation. How will you decide here whether it is an aortic obstructive or a mitral murmur? It would be conveyed to the left if it were a mitral murmur, and also in all probability to the back. If it is owing to aortic obstruction, then we would hear the murmur carried along the vessels of the neck to the right. Now, as I listen in the back, I can detect a murmur almost as loud as at the apex. This then confirms the diagnosis of mitral insufficiency. It is very unusual to get an aortic obstruction in a child of this age.

The question now arises as to the connection, if any, between the cardiac and the abdominal troubles. It is undoubtedly true that the existence of a cardiac lesion influences the condition of the portal circulation. For with each systole of the left ventricle you have the blood forced back into the left auricle, and you have interference with the right heart and portal congestion. The consequence of this is that the liver becomes enlarged and intensely congested. The spleen would then also become enlarged as we find it here. The exciting cause of this jaundice is the catarrh of the gastro-intestinal tract. In a case of mitral disease as we find it here, the digestive power of the child would necessarily be weakened, for if you have hypostatic congestion of the liver, you have also passive congestion of the stomach, and as a consequence you get indigestion. Accompanying this indigestion you have a catarrh which extends along the bile ducts, producing obstruction, and consequently jaundice. Now the passive congestion of the liver produced as the result of mitral disease, would not be sufficient to set up a jaundice in a child of this age. There must be some other exciting cause. When you have an attack of indigestion and slight catarrh extending along the bile duct, that indigestion and catarrh would be aggravated by disease of the heart and result in a passive congestion of the parts. Hence such cases of catarrhal jaundice are tedious to treat, and perhaps incurable. If you diet the child properly, give a mild purgative, in a short time the catarrhal state passes away. In this child you cannot correct the condition of things on account of the heart disease. The first thing to administer here is the digitalis. You cannot control the digestive power until you have controlled the heart trouble. The child has congestion of the stomach from mitral disease, and you can control that congestion only by digitalis. It should receive two drops of the tincture of digitalis every two hours. The child should also be given pancreatin to digest the food. Or you

may give it digested or semi-digested milk. The milk should be digested for at least one hour at a temperature of 130° F. by pancreatin before its administration. In this way you can relieve the child. The child might be relieved by its growth. For as it grows the muscular power of the heart will become enlarged and the obstruction to the onflow of blood will be lessened.

CASE II.—Chronic Orchitis.—This little boy is seven years of age and gives a very curious history. He says that a year ago he was kicked by a playmate in the left testicle, which subsequently became enlarged, and three weeks ago he fell and received an injury of the right testicle. He now has enormously enlarged testicles. The enlargement on the right side is irregular and indurated, and there is no sense of fluctuation. There is also free movement of the scrotum over the testicle. The left testicle is also considerably enlarged, and is likewise indurated and more irregular than the right. There is also enlargement of the spermatic cord extending upwards along the external abdominal ring. On the left side there is no enlargement of the spermatic cord. The boy has a right inguinal hernia.

Now what is the trouble with this boy? He has what we designate a chronic orchitis, which means an inflammation of the testicle with induration. There are three varieties of chronic orchitis, namely: simple, syphilitic and scrofulous, also called tubercular chronic orchitis. We can exclude syphilitic orchitis, as the boy is perfectly healthy otherwise and has healthy parents. The mother has five children, all perfectly well and strong, and has never had any miscarriages. We can also exclude the tubercular variety, as there are no other manifestations of struma in this boy such as enlarged glands. The most common cause of simple orchitis is injury, and we have here a very clear history of such injury. This is not acute orchitis, for by that we mean generally an epididymitis which involves mainly the posterior portion of the testicle. Here the entire testicle is involved.

Now as to the treatment. The principle involved in the treatment of a case of chronic simple orchitis, is the absorption of inflammatory products. This might be done by the iodide of potassium. The best plan of treatment, however, is that by mercurial inunction.

HOSPITAL RECORDS.

NEW YORK HOSPITAL—NEW YORK.

ISCHIO-RECTAL ABSCESS.

SERVICE OF

ROBERT F. WEIR, M.D.

Pt., T. C., native of U. S., æt. 28, single. Commercial traveler. Admitted Dec. 18th.

Two weeks ago patient noticed a pain in the lower portion of rectum. This was very marked when evacuating the bowels or walking. On admission, patient could scarcely walk, and the most excruciating pain followed attempts at defecation. On examination, the finger introduced into the rectum discovers an abscess projecting from right lateral rectal wall into the rectal pouch, low down, $1\frac{1}{2}$ inches from anus. In the ischiatic region fluctuation is plainly detected. Examination caused intense suffering.

Patient was placed in the dorsal decubitus and ether administered. The anus stretched up and held there until the stage of primary anæsthesia was reached, the

incision was made, and about $\frac{3}{4}$ ii. of grumous pus evacuated. Almost complete relief from pain. Drainage tube inserted and a jute pad applied.

Dec. 28th. Discharge has ceased. Examination reveals a blind external fistula, the external opening of which is the orifice of the abscess. This extends along the rectal wall for about $2\frac{1}{2}$ inches, but does not communicate with the gut. Patient etherized, a director passing along the fistulous tract, and made to penetrate the rectal wall. The fistula then was laid open with a curved bistoury. Dressed with carbolized jute and suppository of opium introduced. Some tendency to hæmorrhage subsequent to operation, but this was controlled by pressure.

Jan. 29th.—Wound has healed by granulation, and patient is discharged cured.

ABSTRACTS AND SELECTIONS.

THE THERAPEUTICAL DRINKING OF HOT WATER; ITS ORIGIN AND USE. By EPHRAIM CUTTER, M.D., NEW YORK.

The therapeutical drinking of water at a temperature of blood heat to 150° F. having become popular enough to call for an allusion to it in the *Lancet*, as a valuable American contribution to medicine, and since it seems to be used at random from the directions of its distinguished introducer, I have thought that the origin and proper use of hot water should become history. The practice dates back to 1858, when Dr. James H. Salisbury of this city concluded a series of experiments on feeding animals to ascertain the relations of food as a cause and cure of disease. Besides swine, he experimented on men. These he took in companies of six healthy laborers, placed under military discipline, which he enforced himself. He also ate and drank as they did. The men were kept on single articles of food, coffee, and water. Among these articles were beans, beef, bread, chicken, crackers, fish, lobster, mutton, potatoes, rice, turkey, oatmeal. The blood, urine, and fæces of the animals were carefully examined microscopically and chemically, daily without any preconceived idea to develop, but simply to ascertain facts and develop ideas from those facts. In this manner he went through the whole range of food to show the permanent value when lived on exclusively and singly. Among other things, he found that the fermentations of food, and the products of these fermentations, were the chief primary factors in producing the diseases which arise from unhealthy alimentation. With the idea of removing these diseases by removing their causes, he employed hot water in order to wash out the saccharic, acetic, butyric, hydrosulphuric, and lactic acids, and sulphide-of-ammonium fermentation-vegetations (yeasts), from the stomach and intestines. At first he tried cold water on his men to remove these products of fermentation, but the cold water caused distress, pain, and colic, so he increased the temperature of the water. Lukewarm water made them sick at the stomach, and excited peristalsis upward. The temperature of the water was increased to hot— 110° to 150° . This was well borne, and afforded a feeling of agreeable relief, which thousands since testify to. The hot water excites normal downward peristalsis of the alimentary canal, washes down the slime, yeast, and bile through its normal channels, washes out the liver and kidneys, and the bile is eliminated through the bowels, and not through

the blood *via* the kidneys. It was some time before the proper times of administration, and proper number of ounces of hot water, and the proper number of ounces to be drunk at meals could be settled in order to obtain the best results. These directions may be found published in connection with the Salisbury plans for the treatment of consumption, Bright's disease, diabetes, fibroids, sclerosis, and colloid diseases. At the risk of repetition, and for the sake of a more thorough understanding of the subject, these details will be plainly and simply given.

1. *Directions for using Hot Water according to the Salisbury Plans.*—The water must be hot, not cold or lukewarm. By hot water is meant a temperature of 110°–150° F., such as is commonly liked in the use of tea and coffee. This is to excite downward peristalsis of the alimentary canal. Cold water depresses, as it requires animal heat to bring it up to the temperature of the economy, and there is also a loss of nerve force in this proceeding. Lukewarm water excites upward peristalsis or vomiting, as is well known. In cases of diarrhoea the hotter the better. In cases of hæmorrhages the temperature should be at a blood heat. Ice water is disallowed in all cases, sick or well.

2. *Quantity of Hot Water at a Draught.*—Dr. Salisbury first began with one half pint of hot water, but he found it was not enough to wash out, nor to bear another test founded on the physiological fact that the urine of a healthy babe sucking at the breasts of a healthy mother, the best standard of health, stands at a sp. gr. varying from 1015 to 1020. The urine of the patient should be made to conform to this standard, and the daily use of the urinometer tells whether the patient drinks enough or too much hot water. For example, if the sp. gr. of the urine stands at 1030, more hot water should be drunk, unless there is a loss by sweating. On the other hand, should the sp. gr. fall to 1010, less hot water should be drunk. The quantity of hot water varies usually from half to one pint, or one pint and a half at one drinking. The urine to be tested should be the urinis sanguinis, or that voided just after rising from bed in the morning, before any meals or drinks are taken. The quantity of urine voided in twenty-four hours should measure from forty-eight to sixty-four ounces. The amount will, of course, vary somewhat with the temperature of the atmosphere, exercise, sweating, etc., but the hot water must be given so as to keep the specific gravity to the infant's standard—to wit, 1015–1020. The urinometer will detect at once whether the proper amount of hot water has been drunk, no matter whether the patient is present or absent. Another test is that of odor. The urine should be devoid of the rank urinous smell so well known but indescribable. It should be like the babe's urine, free from odor, and deposit on cooling, and the color like that of champagne. The Salisbury plans aim for this in all cases, and when the patients are true and faithful the aim is realized.

3. *Times of taking Hot Water.*—One hour to two hours before each meal, and half an hour before retiring to bed. At first Dr. Salisbury tried the time of half an hour before meals, but this was apt to be followed by vomiting. One hour to two hours allows the hot water time enough to get out of the stomach before the food enters or sleep comes, and thus avoids vomiting. Four times a day gives an amount of hot water sufficient to bring the urine to the right specific gravity, quantity, color, odor, and freedom from deposit on cooling. If the patient leaves out one dose of hot water during an astronomical day, the omission will show in the increased specific gravity, as indicated

by the urinometer, in the color, etc. Should the patient be thirsty between meals, hot water can be taken any time between two hours after a meal and one hour before the next meal. This is to avoid diluting the food in the stomach with water.

4. *Mode of taking the Hot Water.*—In drinking the hot water it should be sipped, and not drunk so fast as to distend the stomach and make it feel uncomfortable. From fifteen to thirty minutes may be consumed during the drinking of the hot water.

5. *Length of Time to continue the use of Hot Water.*—A period of six months is generally required to wash out the liver and intestines thoroughly. As it promotes health, the procedure can be practiced by people in health throughout life, and the benefits of cleanliness inside be enjoyed. The drag and friction on human existence from the effects of fermentation, foulness, and indigestible food, when removed, give life a wonderful elasticity and buoyancy, like that of the babe above alluded to.

6. *Additions to Hot Water.*—In case it is desired to make it palatable, and medicate the hot water, aromatic spirits of ammonia, clover blossoms, ginger, lemon juice, sage, salt, or sulphate of magnesia, are sometimes added. When there are intense thirst and dryness, a pinch of chloride of calcium or nitrate of potash may be added to allay the thirst and leave a moistened film over the parched and dry mucous membrane surfaces. When there is diarrhoea, cinnamon, ginger, and pepper may be boiled in the hot water, and the quantity lessened. For constipation a teaspoonful of sulphate of magnesia, or half a teaspoonful of taraxacum, may be used in the hot water.

7. *Amount of Liquid to be drunk at a Meal.*—Not more than eight ounces. This is in order not to unduly dilute the gastric juice or wash it out prematurely, and thus interfere with the digestive processes.

8. *The Effects of Drinking Hot Water as indicated are:*—The improved feelings of the patient. The fæces become black with bile washed down its normal channel. This blackness of fæces lasts for more than six months, but the intolerable fetid odor of ordinary fæces is abated, and the smell approximates the odor of the fæces of healthy infants sucking at healthy breasts; and this shows that the ordinary nuisance of fetid fæces is due to a want of a proper washing out and cleansing of the alimentary canal from its fermenting contents. The urine is as clear as champagne, free from deposit on cooling or odor, 1015 to 1020 sp. gr., like an infant's urine. The sweat starts freely after drinking, giving a true bath from the center of the body to the periphery. The skin becomes healthy in feel and appearance. The digestion is correspondingly improved, and with this improvement comes a better working of the machine. All thirst and dry mucous membrane disappear in a few days, and a moist condition of the mucous membrane and skin takes place. Ice-water in hot weather is not craved; and those who have drunk ice-water freely are cured of the propensity. Inebriety has a deadly foe in this use of hot water.

9. *Summary of General Considerations on the Therapeutical Drinking of Hot Water.*—(a) Foundation for all treatment of chronic diseases. (b) Excites downwards peristalsis. (c) Relieves spasm or colic of the bowels by applying the relaxing influence of heat inside the alimentary canal, just as heat applied outside the abdomen relieves. (d) Dilutes the ropy secretions of the whole body, and renders them less adhesive, sticky, and tenacious. (e) Inside bath. (f) Dissolves the abnormal crystalline substances that may be

in the blood and urine. (*g*) Necessary to have the hot water out of the stomach before meals. (*h*) Its use is to wash down the bile, slime, yeast, and waste, and have the stomach fresh and clean for eating. (*i*) Promotes elimination everywhere. (*j*) If objection is made, it must be remembered that we are 75 per cent. water. (*k*) The gas that sometimes eructates after drinking hot water is not formed by the hot water, but was present before, and the contractions of peristalsis eject it, or sometimes it is the air that is swallowed in sipping, as horses suck air. The amount of gas contained in the alimentary canal is larger than most are aware of, and yet it is not excessive, as it takes some time to eruct a gallon of gas from the stomach. This time can be tested by submerging a gallon jug filled with air under water and observing how long it will be in filling with water. (*l*) Some physicians have advised against hot water on the ground that it would burn the covering off the stomach. If this is so, then a denudation of the lining of the stomach for twenty-five years is compatible with a state of otherwise perfect health with no sign of illness for that period of time, and is also compatible with the numerous cures that have occurred under the use of hot water as a foundation during the past twenty-five years. Again, the same physicians drink tea and coffee at the same temperatures, and this act belies their warning and shows their inconsistency and want of consideration before speaking. (*m*) These dicta about the therapeutical drinking of hot water were founded on physiological experiments at the outset, verified in pathology and based on the experience derived from the treatment of thousands of cases since 1858.

Personal Estimate of the Founder of this Practice.—"If I were confined to one means of medication I would take hot water." It may be added that he has drunk hot water for twenty-five years.

Corroboration of the Writer.—The writer testifies that his own personal experience and observation corroborate the truth of these statements of the Salisbury plans.—*The Lancet*.

DIPHTHERIA: ITS ETIOLOGY AND TREATMENT.*

BY ALFRED CARPENTER, M. D., LOND., &c.

The etiology of diphtheria is still a disputed point. There are many reasons why this is to be regretted, the most important being that treatment must be empirical until its causation is determined with certainty. Intimately associated with causation are the sequelæ which follow upon its incidence, and no explanation will be satisfactory which does not thoroughly elucidate their occurrence. The latter may be divided into two sections: those which are immediate, and those which probably follow in the relation of cause and effect, but which are at present seldom associated in the minds of the medical attendant with the preceding diphtheritic condition. I propose to show the intimate relationship between these classes of cases, and to point out that treatment to be effectual must be based upon rational lines, and be followed out on those lines to the termination of the case. Without asserting that diphtheria and potato disease are in any way allied to each other, except by analogy, I have been struck by the similarity of the effect pro-

duced in both diseases. The breathing passages are impeded. There is a similar train of results, though in the opposite direction. In the one case carbonic iacid cannot get into the plant to allow of the evolution of oxygen; and in the other oxygen fails to get admission to the blood-current, so as to allow of the oxidation of carbon in the various tissues of the body. There is in both cases suffocation and rapid death when the disease is immediately severe. If the course of the disease is not so rapid, and death does not arise from asphyxia, the nutritive fluid becomes altered by something intimately connected with the causation of the disease, and which leads to death either by paralysis or by failure of nerve power in the human body; whilst in vegetable life it arises from simple loss of power to assimilate the juices upon which the life of the plant depends. There is a blighted state produced by which the crop is destroyed sooner or later in the course of the season. If both these dangers are escaped, the fruit is permeated by a mycelium which produces seed of its own; the evil day is postponed; but when the store is opened in midwinter a large portion of the crop is found to be invaded by processes similar to necrosis, and which may be likened to the sequelæ of diphtheria. Even those potatoes which seem sound are permeated by mycelium, or have so-called resting spores in their buds only waiting for seasonable opportunities to develop into new growths, which will inevitably destroy the potato, and prevent any healthy production from that part of it which is so affected. The causation of one kind of potato rot is recognized as produced by a fungus called *botrytis*, or *peronospora infestans*, one of the genus *mucidines*, or *hyphomycetous* fungi. They form the commonest moulds upon decaying vegetable substances, and include some parasitic families which produce great destruction in vegetable matters. Their germs are always present almost everywhere, and only want a forcing bed in which they can develop, and then their effects are immediately manifest. There is great doubt in the minds of some men as to the capacity of parasitic life either to injure plants or animals which are in vigorous health. It is possible that this doubt has a sound basis, and that we may agree with my great teacher, John Simon, "that a contagium of a given disease, such as small-pox or measles [I here interpose diphtheria and potato rot] has no more power to influence the unpredisposed body than yeast has to ferment alcohol, or to turn pure water into beer." I am now inclined to think that this is so, and that in the absence of some impurity in the blood of the animal or the juice of the plant—that in the absence of some material which is the sequence of the act of living, and which material has not been properly excreted out of the system—the germs which set up parasitic diseases would fail to find a pabulum in which they could increase and multiply, and that they would be starved, so as to ultimately abort or dwindle away to nothing, and thus fail to establish a colony in their victim. I have taken up this view for a variety of reasons. It is true it is not indubitably established that infectious disease, such as diphtheria, is the result of filth in the home or in its surroundings, but the presence of the disease in the great majority of instances is intimately associated with decomposing excreta in some form or other. I have therefore come to the conclusion that when it fails to be proved to be so associated from the absence of any such visible cause outside the body, it is because the excreta have not passed away from the blood of the recipient, and that they are still within the curtilage of the human

* A paper read in the Health Section, British Medical Association, Liverpool, August 1st, 1883.

dwelling-house—that is, within the living precincts of its producers.

The connection of filth diseases with human excreta is a recognized fact. Diarrhœa, cholera, and enteric fever are certainly associated with human filth; a relaxed throat with diphtheritic exudation is also recognized as intimately connected with similar states, so that a person so affected cannot be cured whilst residing in a given dwelling-house in which the air is impregnated with the results of sewage decomposition. He must move into a purer atmosphere before the diseased state of his mucous membrane can be remedied. And why? He is like a man well able, under ordinary circumstances, to swim if naked; but his head is just under water because of heavy boots or other weight loading him beyond his swimming powers. The impure air acting like the boots, prevents that healthy assimilation of food by the aid of which he would recover power to resist the influence of the fungoid germs which irritate his mucous membrane; just as some men are from so-called peculiar idiosyncrasies unable to resist the influence of the pollen of some kind of grasses and become subject to hay fever, whilst others do not feel them in the least, and are not so affected.

I do not assume that the excreta of a human being retained within his own body are necessarily hurtful simply from retention. That is disproved every day of one's life, but I contend that it is impossible for an excretory organ to be defective for some time and to fail in its complete and regular duty without some minute particles of organic impurity being retained in the fluids of the body in a condition which is foreign to their ordinary state. The blood is placed in that form which is analogous to what obtains in the sufferer from hay fever, when a person so situated is exposed to the germs upon which diphtheria depends for its production, he becomes the victim of that disease. If he was not in that particular condition, he would not be affected by diphtheria any more than the majority of us in this room would be affected by hay fever if we joined a hay-making party. This view of the case will explain why we occasionally find diphtheria in exceptionally clean and healthy neighborhoods. It will explain its hereditary tendencies and the so-called idiosyncrasies of those who appear to be especially prone to its ravages. I have reason to believe that temperature has much to do with its sudden development. That whilst it is certain that ranges of hills in open country are liable to its incidence as much probably as less elevated spots, that it arises at clusters of cottages entirely away from sewers or a general water supply, and seems to arise *suo sponte*; yet it does at times follow lines of sewers in a way that shows that intimate connection with drainage which is suggestive of cause and effect; it is also propagated by milk-sellers, as is shown by evidence which cannot be disputed. It is not more prevalent in hot seasons, but, on the contrary, it seems more general in the colder months, producing greater mortality during or soon after sudden violent reductions of temperature than at other times. I have always found that its development has been associated either with washing-day, when hot water has been allowed to flow into the cess-pool or drain, or that there has been a communication between the sewer and some steam-engine or other source of hot water, which has elevated the temperature of the sewage to blood heat. It is to this point that I wish to direct the attention of those who are inquiring into outbreaks of diphtheria. The connection of tub-night with croup is not unknown; I believe it

was in Edinburgh that, some forty years ago, at a conference of medical men, it was discovered that Saturday night was the night upon which the majority of the attacks of so-called croup took place among the poor, and that it was shown to be intimately connected with the Saturday night tubbing with which the Scotch were then accustomed to treat their children, the steamy condition of the rooms in which they slept bringing into sudden activity the germs upon which I believe the disease to depend for its development. That a particular form of micrococcus or germ is always present in diphtheritic exudation, and that this germ is capable of setting up the disease, have been established upon a sound basis. The germ has been cultivated in the vitreous humor of the eyeball, it has passed through several generations, and the operator has ultimately been able to reproduce the same disease in another animal in a way which shows its complete identity. These micrococci are excessively minute, probably less than 1-30,000th of an inch in diameter. They have a life history of their own, and though not identical with botrytis or peronospora, they must have reproductive organs, they follow the life history of the algæ, as well as being endowed with some of the properties of the fungal tribes, and have probably resting spores as well as ordinary spores, both kinds developing together. From analogy we may assume that the resting spores are much less destructible than the ordinary spores, and are capable of preservation under conditions which enable them to reproduce their kind whenever the conditions arise which are required for the purpose.

What are these conditions? (1) The presence of certain forms of excreta; (2) of an elevated temperature, not much below blood-heat, but below that requisite for the coagulation of albumen; (3) of an atmosphere saturated with moisture, and probably also with (4) an excess of carbonic or some other acid in the air, by which the growth of the germ is determined; and (5) some other meteorological or electric manifestation at present entirely unknown. If these states coincide, the resting spore becomes active, it finds material which it can assimilate, and the disease is set up, commencing in the mucous membrane of the throat, that being the very place in which we find moisture, warmth, and CO₂. The way in which such actions do take place is manifest from the fact that the spores of a mushroom cannot be cultivated unless they have been in contact with the mucous membrane of some of the equine tribe. So diphtheritic germs (like the pollen of plants which fall upon the stigma of an appropriate carpel), as soon as they touch such a mucous surface, at once put forth all their vigor; an invisible mycelium is put out, a change takes place in the character of the fluids of the part, the disease arises and runs its course, and passes through the changes which indicate its presence. A felt-like mass forms in the throat, the patient dies asphyxiated, or the blood is so altered by the action of the micrococcus that the blood-corpuscles no longer perform their duty, and oxygen gradually ceases to be assimilated. This leads to failure of action in certain nerve centers, and paralysis may result. The micrococci have a life history of their own, a definite course to run; they are expelled by some of the excretory organs, and those which escape expulsion die in the course of time, leaving behind them spores similar to resting spores, which may set up sequelæ in an unexpected manner and at unexpected times. Returning to the conditions, let me say, that as regards the character of the excreta this must be peculiar; that as scarlatina probably has its origin when ap-

parently arising *suo sponte* in the blood of animals which are not in a healthy state, and which is undergoing decomposition, so the diphtheritic germ has its apparent origin *de novo* from morbid matter produced in the tissues of animals. It is probable that the excreta of vegetable feeders do not furnish germs which could develop into diphtheritic micrococci. That if a right condition be present the cells are hatched, and they then are capable of extension by so-called contagion, but that even then it is requisite that the recipient shall be in a state fitted to receive it, and like to the carpel of a fruit ready for the pollen which is peculiar to it, otherwise the cell fails to find fitting pabulum for its extension and the development of its reproductive organs. An elevated temperature is necessary, together with an atmosphere saturated with moisture. I conclude that this is so, because I have always found the coincidence in first outbreaks, and the consensus of opinion points to the necessity for moisture or dampness whenever the disease is epidemic. I go also to analogy for support in this view. The potato disease spreads more rapidly in the damp atmosphere which is found among the rank vegetation of overgrown haulms on those days on which the sun is obscured by clouds and the air itself close, full of moisture, and the temperature high. Sunlight and dryness soon remove the incidence of potato blight. The latter, however, does not require the elevated temperature which is requisite for the hatching of diphtheritic spores, but the warmth of a day in which thunderstorms abound is sufficient for the purposes of promoting potato disease. That carbonic or some other gaseous acid must be present is probably the case, because it has been shown that minute fungi grow much more rapidly and much more luxuriantly in such an atmosphere. It is probable that water which is free from carbonic or some other acid in solution will not be able to propagate even typhoid germs for want of the necessary pabulum, which accounts for the fact of certain waters, apparently free from suspicion of the presence of any infective principle, suddenly developing such a tendency from having lost their power of neutralizing the CO_2 for want of lime sufficient for the purpose, or of discharging it into the atmosphere. In this case typhoid germs rapidly multiply in the water, and disease is spread by its means, and so it is that diphtheria suddenly springs into great activity. There is a rapid fall of temperature, lasting for a day or two; the managers in a given school, or other places similarly situated, are not prepared for the change; fires are not lighted, but the cold and usually damp air is shut out, and the atmosphere of the school becomes highly charged with CO_2 ; and if it should happen that a child with an infectious throat is present, the disease spreads as rapidly as potato rot spreads on a favorable day. If there are the excreta of such people in the sewer, the admission of large quantities of hot water forces out a steaming air into the closed-up premises from the defective drain. But how will this explain the sequelæ which so frequently follow upon diphtheritic mischief? I mentioned the fact that potato rot is known to be propagated by the agency of resting spores. These are spores or germs which are shut up in a very resistant envelope which enables them to retain their vitality in adverse circumstances, so that heat, if it be not much above 212° , and cold even at zero, will fail to destroy them. These spores may by analogy be fairly assumed to exist. The ordinary spores are evacuated from the system as the patient recovers, but the resting spores remain in contact with the lining

membrane of the bloodvessels, or they are carried by the blood-current into some of those parts of the body which usually act as filters and retain matters which are foreign to the blood-current. Perhaps they attach themselves to lining membranes such as is on the valves of the heart; they may there as they develop set up actions such as ulcerative endocarditis, then being detached from the valves as they increase in size they irritate the membrane, and being carried on by the blood-current they produce emboli at the spot to which they are carried. There they multiply sooner or later, and the sequences of the disease appear as if they were separate and independent diseases, and as such are often registered among the causes of death, totally independent of the preceding diphtheritic condition.

I have the history of a considerable number of cases in which inflammations of different organs have come on a few weeks after the patient has suffered from a moderately slight throat affection which has not been recognized as diphtheria, but which has been coincident in point of time and place with true diphtheritic attacks, that I have been inclined to look upon the so-called inflammations as having been caused by diphtheritic emboli, and have treated them accordingly. That I now advise that course in the majority of cases in which the inflammatory attack appears to be idiopathic—that is, if it has not been preceded by some known chronic diseased state of the suffering part.

The treatment has been the use of ammonia as the proper stimulant, so as to reduce the acidity of the blood, for I have generally found these cases in constitutions which are either rheumatic with the lactic acid diathesis, or gouty with an excess of lithic acid in the constitution. I have generally given alkalies, as lithia or potass in combination with it, and when there has been an elevated temperature, which has indicated excessive chemical action in the invaded part, I have given the sulpho-carbolate of soda with the greatest possible benefit. This salt reduces temperature most likely by its antiparasitic power, for as soon as a few doses have been given the fever subsides, and the patient is much relieved; but if the medicine be left off too soon there is certain to be a relapse. This is very disappointing, and if the practitioner is disheartened and tries another remedy the patient will probably die; but if he continues the sulpho-carbolate he will ultimately destroy all the developing resting spores in the tissues of his patient, and lead him on to a perfect recovery. It is curious how in these cases organ after organ becomes involved in the disease; it is also curious, but highly satisfactory, that the congestions or embolisms follow one another in point of time, otherwise there would be very little chance for the patient to recover. I would urge the practitioner to continue the sulpho-carbolate in small doses, first with the ammonia, and after a time, with quinine, avoiding altogether the mineral acids, as such appear to allow of a more rapid development of resting spores and a further relapse. As regards the local treatment of diphtheria, I have been accustomed to treat it on scientific principles, and attack the disease just as my gardener attacks the oidium upon the grapes and parasitic diseases upon vegetables generally. I apply the powder of washed sulphur to the throat very frequently, blowing it into the fauces, and applying it by means of a brush with a little glycerine or honey, alternating the application with a little sulphurous acid in solution. It is not a painful application, it destroys the mycelium and the ordinary spores which produce the disease; if this is done quickly, so that the growths

do not penetrate to the deeper tissues, no resting spores will find admission to the body, and there will be no following sequelæ. I have also been accustomed to advise that creasote be kept in the room, so that the air may be placed in that condition which diminishes, if it does not destroy, the growth and development of hypomycetous fungi.—*The Lancet*.

TWO CASES OF HYSTERIA.—1. Hysterical Hemianæsthesia in a Man, Following Injury; 2. Hysterical Anæsthesia of Special Sense, Accompanying Cutaneous Hyperæsthesia,* By G. L. WALTON, M. D., Boston.

The cases here reported, both under treatment in the department for diseases of the nervous system, at the Massachusetts General Hospital, were kindly referred to me for investigation by Dr. Putnam.

The first case, interesting chiefly on account of its etiology, was that of a fireman, with no history of nervous trouble previous to an accident which took place a few months ago, since which time, among other nervous symptoms, has appeared a typical hysterical hemianæsthesia.

The patient, C. W., aged fifty-five years, who has always been a robust healthy man, was riding on his engine last November, when it was overturned, throwing him violently to the ground. He was taken up unconscious, and found to be severely bruised over the right side, including the shoulder and hip. He soon recovered consciousness and was taken home. He says that for some time afterwards he had little use of the right arm and leg, and was confined to his bed over six weeks. Since that time he has suffered from a variety of nervous symptoms, including great pain in the back, loss of sexual desire, impairment of emotional control and power of concentration.

Examination, five months after the accident, revealed a condition corresponding to his statement, with the addition of a dejected look, and a tendency for the eyes to fill with tears while describing his symptoms. The patient, a large man with fine muscular development, walked, at this time, with a decided limp, and found the use of the right leg attended with severe pain in the hip, which did not, however, occur spontaneously, or only to a slight degree. There was a stiffness of the arms, and an impairment of motion, both voluntary and passive, at the right scapulo-humeral joint; and pain on forced movements, also to some extent occurring spontaneously, especially at night (periartthritis).

Careful examination failed to reveal paralysis or atrophy of muscles, although the general strength on the right was impaired.

All forms of sensation were lessened over the whole body, much more markedly on the right side to the median line. A pin could be thrust through a fold of skin in most parts of the right arm and leg without causing pain. The punctures made in this way bled scarcely at all.

Sight.—There existed a concentric contraction of the field of vision on both sides, much greater on the right. The color-sense was unimpaired on the left, but with the right eye the patient had difficulty in distinguishing yellow and green. Examination of the

fundus (made by Dr. Wadsworth) revealed nothing abnormal. Patient had hypermetropia of one dioptric. The visual acuity, normal on the left, was quite defective on the right, amounting only to about one tenth.

Hearing.—The watch (heard normally at 60–80 centimeters) was heard on the left at 30 centimeters, on the right only on contact. The tuning-fork placed on the bone before the ear was heard plainly on the left, both with the ear open and closed, better with it closed. On the right it was heard faintly with the ear open, and scarcely at all with it closed. Placed on the teeth the tuning-fork was heard only on the left whether the ears were open or closed. The different tones of the scale were heard equally well, and all tones as high as C⁴ (4,428 v. s.); no examination was made at this time for very high tones.

Examination of the ears (after the removal of an accumulation of cerumen on the right) showed both membranes opaque, thickened, and indrawn (otitis media chronica). Both Eustachian tubes were permeable, though the Politzer air-douche produced no sensation on the right. The hearing in the right ear was practically unaffected by the removal of the cerumen.

Taste and smell were wanting on the right, not materially affected on the left.

The poles of a large electro-magnet were applied to the right forearm, so as almost to touch the skin. Before the application, only forcible pressure was perceived over this region; after thirty minutes, the lightest touch was readily felt with the eyes closed. There was no transfer of the anæsthesia to the corresponding part on the other side, nor to any other part of the body.

The same magnet was applied to the right ear for twenty minutes, at the end of which time the lightest touch was perceived at any part of the concha or meatus, regions in which the anæsthesia before the application was especially noted. The patient was surprised to find that he could feel the touch of his own left hand to his right ear, which he had been unable to do before. At this time the tuning-fork applied to the teeth was plainly heard on both sides, whether the ears were open or closed. The watch, heard on the right before the application only on contact, was heard after it at a distance of 10 ctm. There was no transfer of the deafness to the other ear. The anæsthesia, general and special, returned in a few hours.

A few days later the same magnet was again applied to the right ear under the same conditions, excepting that the current was not passing, a fact of which the patient was ignorant. At the end of thirty minutes no change had occurred. The current was then allowed to pass, and in twenty minutes the anæsthesia, general and special, disappeared as before.

The patient's condition has gradually improved under galvanization and cold douches to the spine. The adhesions at the shoulder were broken up under ether, since which operation massage, galvanization, and passive movement have been applied with benefit. Seven weeks after the commencement of treatment the general sensibility was normal on the left, much improved on the right; the retraction of the field of vision had disappeared from both sides; the patient could hear the watch at twelve centimeters, right; and the tuning-fork placed on the teeth was heard on the right as well as on the left, though not so plainly. That the hearing for high tones had been lost is shown by the fact that at this time the Konigs rod of 20,000 vibrations was unheard in the right, while that of 35,000 was plainly heard in the left

*A paper presented at the meeting of the American Neurological Association, June 22, 1882.

ear.* Motion was fairly good, excepting as restricted mechanically at the shoulder and hips. The general condition of the patient was also greatly improved, and the emotional and despondent element had for the most part disappeared.

The leading symptoms of this case have already been reported in connection with another case of hemianæsthesia following injury, and attention has been called by Dr. Putnam, who reported them, to the fact that all the objective hysterical symptoms should be carefully sought for in cases of railway and similar injuries, inasmuch as wherever found they furnish tangible evidence of the utmost value.

The peculiar feature in the second case is the occurrence of anæsthesia of the special senses, combined with hyperæsthesia of the integument over the corresponding regions.

The patient, E. S., is a Portuguese girl, aged sixteen, a hair-worker, unmarried. No history of nervous trouble in the family is to be elicited. The patient states that she herself was always well until she came to this country, about one year ago. Before that time menstruation was free and painless; since that time it has been scanty and painful, though regular. Four months ago the left breast began to be painful and tender. The sensitiveness increased, and spread gradually to the back, head, and left arm. About three months ago she had an attack of unconsciousness following fright, and lasting two hours. No other distinct history of hysterical attack of any sort can be made out, although she is said to have had convulsive movements of the left arm. Patient is highly emotional, and is said to cry often.

The patient is well nourished and well developed. Examination reveals extreme hyperæsthesia on the left, extending over the trunk, head, and arm. The hyperæsthetic tract is bounded sharply by the median line on the chest, back, face, and head, and extends downward to a line commencing behind at about the level of the tenth rib and passing directly around the body to the median line in front. The whole surface of the left arm is involved to a line about eight centimetres above the wrist, leaving the sensibility of the hand and wrist normal. The lightest touch over this entire region causes a grimace, and moderate pressure elicits a cry of pain. The breast is especially sensitive, but presents nothing abnormal in form or consistence; both breasts are large and pendulous. The patient complains of spontaneous pain in the left side, which comes on in paroxysms.

Sight.—There is concentric retraction of the field of vision on the left to about 15°. On this side blue is the only color distinguished, red being called black, and green and yellow, white. Hypermetropia of one dioptric exists on both sides. The vision, left, is $\frac{1}{2}$; right, $\frac{5}{8}$. Examination of the fundus (made by Dr. Wadsworth) reveals nothing abnormal on either side.

Hearing.—The patient hears the watch on the right at 40 cm.; on the left neither watch, voice, nor tuning-fork by the air, and neither watch nor tuning-fork by the bone. The tuning-fork placed on the teeth or forehead is heard only on the right, even when the left ear is closed, a procedure which, as is well known, intensifies the sound conveyed by the bone when the nervous auditory apparatus is unaffected.

Examination of the membranes shows nothing abnormal.

The senses of *taste* and *smell*, normal on the right, are wanting on the left.

The electro-magnet was applied to the breast several times for periods of thirty minutes, with negative result. Where it was applied to the arm a slight decrease of sensitiveness appeared in twenty minutes.

A few days after the first examination the left hand became hyperæsthetic; also the front of the left knee just inside the patella. After twenty minutes' application of the magnet to each of these points the hyperæsthesia disappeared without transfer, leaving the sensibility of the knee normal as well as that of the hand and wrist to the previous line on the forearm. This relief of hyperæsthesia was permanent; at least the sensitiveness had not returned after a lapse of several weeks.

A few days after the appearance and disappearance of the hyperæsthesia on the left hand and knee, it appeared on the right trunk, covering exactly the corresponding region to that originally involved on the left side, excepting that the face, neck and scalp were unaffected. The special senses on the right remained unaltered. This hyperæsthesia has persisted as well as that on the left, and the condition of the patient is otherwise the same now, after a period of four weeks, as when at first examined.

This case presents a marked exception to the rule that anæsthesia of the special senses accompanies that of the integument covering the organs of special sense. The rule, here deviated from is so constant that Ferri has offered the suggestion, that there exist somewhere in the brain tracts which preside over both special sensibility and the sensibility of the integument covering the respective organs of special sense.

The writer has had opportunity to examine nineteen cases of hysterical anæsthesia of special sense; and has, until this case, met with no exception to the rule. Even in those cases in which deafness, e. g., coexisted with normal sensibility of the concha, careful examination has shown anæsthesia of the deeper portion of the external auditory meatus. In this case the opposite condition obtained, the integument over all the organs of special sense on the affected side being hyperæsthetic, as well as the tongue and cornea.

Although the deviation from the rule is so marked in this particular, the fact is still noticeable that the special senses remained unaffected on the right, even after the hyperæsthesia had extended to that side, so long as the general sensibility of the face and ear remained normal.

With regard to the diagnosis in these cases, if further proof than the physical examination were required to confirm it, the experiments with the magnet would have sufficed, whether the magnetism or the imagination is credited with affecting the change in sensibility. The fact that the anæsthesia in the first case yielded to the magnet when the current was passing, and persisted when it was shut off, represents the series of experiments upon which the supposition is founded by Charcot and others, that magnetism as such is an æsthesiogenous agent. It is true that diversion of anæsthesia has been in some cases brought about by a false magnet, as for example in a case witnessed by the writer in Westphal's clinic. Such cases do not, however, as pointed out by Charcot, prove that magnetism is inert, but merely that in very susceptible cases the imagination may also act as an æsthesiogenous agent. A case like ours, in which the false magnet fails when circumstances are most favorable for the imagination (the

* Since sending this paper for publication, the hearing for high tones has improved so far that the rod of 30,000 vibrations is heard in the right ear, establishing the diagnosis of functional anæsthesia of the auditory nervous apparatus, and at the same time illustrating the value of the high-tone test in questions of diagnosis, a point elsewhere alluded to by the writer.

patient having previously experienced the effect of the true magnet), is certainly a powerful positive argument for the effect of magnetism.

The disturbances of vision peculiar to hysteria, and illustrated in a typical manner in these two cases, have long been made the subject of careful study, but the investigation of the auditory function in this disease is of so recent date that it may not be out of place to recapitulate the results of the writer's study on this subject,* undertaken at the suggestion of Professor Charcot.

Deafness generally accompanies anæsthesia of the integument of the ear, or at least that of the deep parts of the external auditory meatus and the membrana tympani: the latter being shown not only by the failure to perceive the touch of the probe, but also by the inability to feel the entrance of air on insufflation through the Eustachian tube. The deafness corresponds, as a rule, with the degree of general anæsthesia.

When the latter is *complete*, i. e., with loss of all varieties of sensation, the deafness is also complete, no sound being heard either through the air or by the bone. This degree of deafness is illustrated by the second case here reported, although cutaneous anæsthesia is replaced by hyperæsthesia.

When the general anæsthesia is *incomplete*,—for example, with analgesia and partial loss of the sensations of pressure, temperature, etc., the deafness is also incomplete, following, however, definite rules. The hearing through the bone disappears first in such cases, and in some is entirely wanting, while the hearing by the air is perfect, as in the case of one girl who heard the watch on the affected side at a distance of over a meter, while the loudest tuning-fork, vibrating in contact with the skull, was only perceived on the other side. The high tones disappear before the middle and low, as in the case of a patient who could hear no tuning-fork above E''' (1315.8 vibrations).

The deafness in hysteria is quite analogous to that in old age, in which the hearing by the bone, and that for high tones, disappears. It has been said that the conductivity of the bone for sonorous vibrations lessens in old age; this is, however, improbable, the more reasonable supposition being that, when the cerebral centers become dulled, either by age or by hysteria, those sounds disappear first which normally make the least impression on the auditory nerve, among which sounds must be numbered not only high tones, but also sounds conveyed by the bone.

In diagnosing hysterical deafness, lesions of the ear itself rarely offer difficulties, inasmuch as they are commonly situated in the middle or external ear (catarrh, cerumen) and are thus generally of such a nature as to intensify, rather than diminish, the sounds conveyed by the bone. The usual case of diagnosis is illustrated in the first case here reported, in which, notwithstanding the accumulation of cerumen and the chronic catarrh of the middle ear, the vibrations of the tuning-fork, conveyed by the bone, were not heard at all on the anæsthetic side, a fact which made it at once extremely probable that nervous deafness was added to that of mechanical origin.

That the loss of hearing through the bone was due to hysteria, rather than through the advanced age of the patient, was already evident from the fact that it was unilateral, and confirmed by the fact that it disappeared temporarily under the use of the magnet, and

permanently on the convalescence of the patient.—*Archives of Medicine*

MEDICAL NEWS AND NOTES.

Electric Lighting and Ventilation.—Although the moderation of the heat of the atmosphere of our public buildings and theatres is much to be desired, yet the use of the electric light does not do away with the necessity for systematic ventilation. Professor Pettenkofer has made some investigations at the chief theatre in Munich on the composition of the air during gas and electric lighting respectively, and, as might have been expected, has found a great difference in temperature, especially in the upper parts of the house. But analysis of the air showed that the proportion of carbonic acid was not very different with the two methods of artificial lighting. It is more than probable, therefore, that the large amount of carbonic acid (and we may add other even more noxious agents) present in theatres during the performance is due to insufficient ventilation. Gas properly used helps to purify the air by creating currents which introduce fresh supplies through every available opening.

Meat.—The value of meat as a food is due in a degree to its heat producing properties, though in this respect it is surpassed by fatty and amyloid substances. It is as a tissue-building material, and as an excitant of assimilative changes in the tissues, both with regard to itself and to non-nitrogenous foods, that it is most useful. It is stimulant as well as nutritive, and it therefore holds a deservedly high place in the daily dietary. Experiment has shown that three-quarters of a pound of lean meat fairly represents the quantity per diem which, taken with other less nitrogenous matter, suffices to maintain a person of average size and weight in a normal state of health. Some there are who largely exceed this standard, eating freely of meat at every meal, and living all the time quiet, sedentary lives. Such carnivorous feeders sooner or later pay a penalty by suffering attacks of gout or other disorders of indulgence. But it is equally important to note that many others, especially women, healthy in all points but for their innutrition, are apt to err as far on the other side. Thus one meets with people who consume about a pound of butcher's meat in a week, or not even that. This fact has been fully brought out by Dr. Graily Hewitt, in his address to the Obstetrical Section at the recent meeting of the British Medical Association. He has likewise with much probability assigned this defect of diet as the chief cause of that general "weakness" which is so common among the antecedents of uterine displacement. The experience of many practitioners will confirm his observation. Different causes are at work to produce this kind of underfeeding—too rigid domestic economy, theoretical prejudices, the fastidious disinclination for food which comes of a languid in-door life without sufficient bodily exercise, tight lacing perhaps, and many more. These difficulties are all more or less removable, unless, indeed, where absolute poverty forms the impediment. No effort should be spared to remove them. The advantages derived from a diet containing a fair amount of solid animal food could not be obtained from a purely vegetable or milk regimen without either unnecessarily burdening the digestive system with much surplus material, or, on the other hand, requiring such revolutionary changes as

* "Deafness in Hysterical Hemianæsthesia," *Brain*, No. 20, 1882. See also "Verhandlung der Physiologischen Gesellschaft zu Berlin," Feb. 9, 1883.

to quantity and quality of food and times of eating as would probably altogether prevent its general adoption, even were that desirable, into household management. In our opinion, such changes are not desirable, as being inadequate to secure their purpose.

Successful Cæsarean Operation.—On June 16th according to *Il Sperimentale*, Dr. del Chiappa performed the Cæsarean operation on G. B—, a primipara, aged thirty-three, suffering from rickets. When summoned to the patient in labor, Dr. del Chiappa, finding delivery impossible, in consequence of great narrowing of the antero-posterior pelvic axis, resolved on performing Cæsarean section. Through an incision in the linea alba a living female child was extracted from the uterus, which was left to itself and not sutured. The wound in the abdominal wall was closed by superficial and deep sutures and dressed with adhesive plaster and charpie. The temperature varied little from the normal standard throughout, only reaching 102° one day. On the fifteenth day (July 1st) the wound was completely healed and the patient got up. The child continued to thrive.

Window Ventilation.—No time could be better than the present for beginning the practice of house ventilation by the window, which is still, in the majority of houses, the readiest and the safest means of obtaining a regular and constant supply of fresh air. This practice, begun in warm weather, may be carried on with proper care through autumn and winter. The constantly accumulating impurities derived from breath, from perspiration, from excreta of other kinds collected in sleeping-rooms, from the use of gas or lamp light, and too often, even now, from suction of sewage-gas from waste-pipes by the heat of house-fires, etc., render it as necessary for health as for comfort that there should have free egress, and that they should be substituted by the pure outer air. Fresh air from without may very easily be had without draught, and without risk of cold even to delicate persons, if a few simple rules be observed. The cold air of winter of course enters with greater force, and in greater proportional volume than the more equable summer air, into a warm room. The aperture of ingress must be correspondingly diminished. Air from a window is preferable to that from an opened inner door, no matter how roomy the house, from its more reliable purity. If the window be the inlet, the fire, fireplace, or it may be the door of a room in summer acting as an outlet, it may be opened from the top, the extent being regulated according to the outer temperature. There is then a direct inward current at the upper part, which follows the roof of the room, thus mingling with any heated waste products which require to be removed, and an interrupted current at the middle, the previous line of junction of the upper and lower sashes; both are broken and diffused by the blinds or curtains. Ventilators for this purpose should be turned upwards. A window should never be made to ventilate by opening it near the bottom, unless the open lower space be filled up in some way, and ventilation be carried on at the middle, where the sashes join; otherwise draughts are unavoidable. The ventilating pane is a hardly less simple and equally efficient and safe method with all the others. Window ventilation is especially useful in bedrooms, and its efficiency or otherwise cannot fail to affect the vital powers of the occupant, who in his slumbers must trust to other energies than his own for the removal of those impurities and morbidic germs which his every breath multiplies around him.

Alleged Increase of Insanity in the United States.—The London *Lancet* thus holds forth on this subject: "We must confess our inability to understand how it comes to pass that the professors of statistical science, in reference particularly to what are known as 'vital statistics,' do not yet perceive the fallacy of 'increments' of integral classes of the population, calculated on the bases of successive censuses. Even if there be a given number for the whole population at one period of census-taking, and another number—say ten per cent. greater—when the next census is taken, it does not necessarily follow that the population has increased ten per cent. in the interval, as compared with the increase in any previous interval of like duration. It may very well happen that some devastating war or epidemic may have prevented the survival of a certain percentage of those who were alive at the commencement of the earlier interval until the close of it, so that the difference between the numbers polled at the beginning and at the end of the earlier interval may not have been so great as it would otherwise have been, and not so great comparatively as the difference between the census taken at the commencement and the census taken at the conclusion of the latter interval. It seems to be forgotten that mere difference between returns at successive periods throws no statistical light whatever on what has happened in the interval. Comparisons of birth-rate and death-rate are needed to interpret the import of successive census returns, and without such comparisons these returns are not simply worthless, but may be actually misleading. Now, when we come to compare the returns made to the Commissioners in England at the commencement of each year, we are comparing successive censuses, and no sort of conclusion can be drawn without taking steps to ascertain how any increase which may have occurred is to be explained. Has the number of admissions been greater during this year than formerly? If so, to what extent has this been due to the fact that more accommodation having been provided, it has been occupied? Again, has there been any proportional decrease in the death-rate? Because, if so, obviously a number of individuals who, according to precedent, would have disappeared from the roll during the year have not disappeared, and now help to swell the total? Further, have any changes in policy or administration, such as a broader interpretation of the meaning of 'insanity,' naturally leading to the extension of the class thus designated, or greater vigilance on the part of those charged with the duty of searching out and classifying the 'insane,' occurred? Clearly, these and other factors of the result must be examined and estimated before any trust can be placed in the returns made. Meanwhile these returns are mischief-making; they keep up a vicious circle of activity, producing an increase of asylum accommodation which we believe to be perfectly unnecessary, and which must inevitably lead to an apparent increase in the number of 'insane.' When, therefore, we hear of a 'startling increase' of insanity in the United States, we simply decline to believe in it. General indications of the state of mental health in America do not bear out the inference to which statistics point; and, as 'vital statistics' are at present computed in this country and in America, we are convinced that general indications are more trustworthy than figures which may not be facts."

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COMPENSATION FOR THOSE ISOLATED ON ACCOUNT OF CONTAGIOUS DISEASE.

Has it ever occurred to our health authorities that an efficient mode of controlling contagious disease would be by allowing to those isolated on this account some monetary recompense.

Would such action on the part of our Health Board be practicable, and would its effect be to control the spread of contagious disease.

The question has been suggested to us by a resolution recently adopted by a Trades Union Congress in England.

"That having regard to the failure of the Public Health Act, 1875, to stop the origin and spread of disease, this Congress is of opinion that it is desirable to so amend the Act as to render it incumbent on local authorities to isolate persons in whose houses infectious diseases exist; that compensation should be granted for any loss arising thereby; and that the Parliamentary Committee be instructed to use its influence in securing the passing of such a Compensation Act."

The Congress virtually asserts that the right of others to be protected is greater than the right of one to infect on all sides.

It is most important to a city to adopt every possible means tending toward the suppression of contagious disease. No doubt many cases of such disease among the working classes which attempt to avoid the Health Inspectors would gladly seek their protection and willingly agree to isolation could they by so doing be assured of compensation while ill.

The subject is certainly one worthy the attention of our health officials in view of the known inadequacy of inspection and the difficulties of effecting isolation.

THE UNRESTRICTED SALE OF DRUGS.

Apropos of a recent address delivered by Professor Attfield to the members of the British Pharmaceutical Conference, the *Lancet* emphasizes the importance of State protection to pharmacists and the advantages of such protection to doctors and the public at large.

If laws for the suppression of this evil sufficiently

stringent were enacted and executed in our own country we should hear less often of deaths from the effects of some patented pharmaceutical preparation obtained from unlicensed dealers, and the increasing resort to patent medicines would be checked and legitimate prescribing encouraged.

Many of the remarks of the *Lancet* which we quote below would apply to the condition of the relations between State and pharmacist in our own country.

"The question of the relations of the State to pharmacy and of the supply of drugs to the public is of vital importance not only to the pharmacist, but to the physician. That matters in the pharmaceutical world are fast approaching a crisis is only too obvious; so little protection is now afforded to chemists and druggists that their very existence is endangered. The custom which long existed in country districts of allowing the general shopkeeper to sell a few of the commoner drugs has gradually extended and developed, until now medicinal compounds of all kinds are openly retailed by grocers, hairdressers, chandlers, confectioners, drapers, and a host of other unqualified individuals. Indeed, in many cases completely furnished shops, undistinguishable in appearance from those of registered chemists and druggists, are opened by mere distributors of drugs who have no knowledge of the nature of the dangerous articles they sell, and who have no sense of the responsibility of their position. These sham chemists and druggists keep everything the properly qualified chemist and druggist is allowed to sell, excepting only a few of the more virulent poisons scheduled in the Pharmacy Act. The result is that the public are supplied with untrustworthy medicines, and medical men have no guarantee that their prescriptions are accurately dispensed, or that pure drugs are employed for the purpose. It must be remembered that whereas purchasers of food are more or less protected from the purchase of bad food by their personal power of judging of its quality, purchasers of drugs cannot be protected from the purchase of bad drugs by any personal power of judging of their quality. Even the aid which purchasers of food can invoke from officials under the Acts relating to adulteration cannot be obtained in the case of medicines, for Nature yields drugs which vary much in quality, and analysts are not as a rule sufficiently familiar with the varying standards of the many medicinal articles comprehended under the term 'materia medica' to act in the interests of the public.

"The remedy for this unsatisfactory state of affairs may, according to Professor Attfield, be summed up in one word—'protection.' Where the health of the public is at stake, and where the public cannot protect themselves, an exception to the rule of free trade is not only justifiable, but is imperatively demanded. The law already refuses to permit the unrestricted sale of certain drugs. The only question is where the limit of exception should be fixed. It is contended that the lines should encircle all poisons, and that they should one and all be excluded from the area of free trade. At present only about a score of substances are deemed poisonous; but if the list were considerably extended it would afford protection to the public, and would restore to the pharmacist those functions and duties which he is best fitted to perform."

SOCIETY PROCEEDINGS.

MEETING OF THE NEW YORK ACADEMY OF
MEDICINE, OCT. 4, 1883.

The Academy met for the first time since its adjournment last April. Many distinguished members of the profession were present, the hall being taxed to its full limit to contain those who had assembled to take part in the proceedings relative to the code question in its relations to the Academy of Medicine. The President, Dr. Fordyce Barker, presided. The usual custom of reading and discussing some scientific paper was omitted for this evening, and after the transaction of routine business, the discussion of the code question was at once entered into.

Dr. Austin Flint rose to a question of personal privilege, and, after referring to the aspersions cast upon him, stated that he had made the motion eighteen months ago to postpone indefinitely the ethical question in good faith because he believed it had no place in the deliberations of the Academy. He stood ready now to lead or follow in any movement having for its purpose the banishment from the Academy of all questions of professional ethics.

Dr. Barker expressed the pleasure he felt at the statement made by Dr. Flint. He then introduced the amendments proposed by himself, stating that his purpose in drafting them had been to find a compromise ground on which all the Fellows of the Academy could stand.

Among the changes in Dr. Barker's plan it is proposed to abolish the Committee on Medical Ethics; to reserve to the Academy the right of discipline "by admonition, suspension, or expulsion, by which all rights and privileges as a Fellow are forfeited, for violation of its by-laws or regulations, for unprofessional, ungentlemanly or dishonorable conduct, and for public immorality and great crimes;" to strike out the present section touching the qualifications of candidates for fellowship and substitute the following

The Committee on Admissions, upon receiving from the recording secretary the names of the candidates proposed for fellowship, with their professional credentials, shall make due inquiry concerning them, as regards their personal character, their standing in the profession, and their eligibility as persons of honor, who do not assume peculiar designations, implying special modes of treatment.

Other changes proposed refer to the quorum of the Council and the methods of procedure in fellowship elections. Touching these amendments, Dr. Barker said in his circular letter:

I think that it will be apparent that the whole intent of the proposed amendments is to make the Academy of Medicine a purely scientific society, independent of all other organizations: to place its standard of ethics on a higher plane than before, and to prevent the possibility of any future troubles by the introduction of matters foreign to its advanced objects.

THE DISCUSSION.

Dr. Barker gave the floor to Dr. Keyes, who moved the adoption of the amendments as a whole. The continuance of the unhappy struggle of last spring, he said, could not fail to lessen the usefulness of the Academy, whereas the adoption of the amendments would relegate to the arena where they belong, all discussions not of a scientific nature.

Dr. Loomis seconded the motion of Dr. Keyes. He

did it gladly, he said, for the reason that he was fully convinced that by their adoption the great danger which had threatened the Academy would be removed. It must be plain to all that if the Academy was to maintain its present position, all ethical questions and all medical politics must be removed from its councils. He urged the adoption of the amendments on the ground of expediency, because the ethical question would lead to estrangements and bitterness between the noblest and truest men in the profession.

Dr. Austin Flint, jr., said: There is no desire to obstruct the discussion of these amendments, but they cannot be acted on to-night. They must take the usual course and lie over till the next stated meeting, and I so move.

Dr. Henry began to speak, but, making some personal allusions to Dr. Loomis, was called to order by President Barker. Continuing, he said he wanted to remind the Academy that a year and a half ago a question of pure politics had been brought into the Academy by the president. The secular press had been invited to come and hear the president in what he was pleased to call "thunder tones" invite the Academy to go to Chickering Hall and Cooper Union and discuss the matter of street cleaning, all in the interests of the County Democracy. The remark brought out some laughter and a storm of hisses.

Dr. Barker said the gentleman must speak to the question or sit down.

Dr. Lee, in order to permit a discussion, moved that the Academy resolve itself into a Committee of the Whole. This action was taken, although Dr. Flint, jr., objected, as a question of privilege, that his suggestion that the amendments lie over had precedence. Dr. Henry attempted to speak, but was stopped by cries of "Question! Question!" On a division over one hundred voted in the affirmative and fifteen in the negative. Dr. Ellsworth Eliot took the chair, and on the suggestion of Dr. Roosa, Dr. Barker stated the reasons and the motives that had actuated him in drafting the amendments. He said he had prepared them with great care and after a long study of the European medical societies which were free from the ethical complication.

Dr. Flint, jr., replied to Dr. Barker. He said: "I do not rise to discuss the amendments, but simply to say this: Every gentleman here knows what they embody and what they mean. The Academy, in one of its by-laws, adopted the Code of Ethics of the American Medical Association. The object of the amendment is to strike out that by-law and leave the Academy without a code. This necessitates changes to keep the by-laws in accord, and they are made. It makes no difference what is done to-night. Every one who wants the old code retained when it comes to a vote will vote against the amendments; every one who wants to make the Academy a no-code organization will vote for the amendment. It will take a three-fourths vote to adopt, and the passage of the amendment is hopeless. The amendments therefore are merely a fire-brand. I came here to-night with the intention of making the motion that I have made—that the amendments take the usual course. I shall not discuss it, and I know others here who shall not discuss it."

Dr. Barker offered the following:

Resolved, That in the opinion of this committee of the whole, it is advisable to adopt the amendments to the constitution and by-laws which have been proposed; and that the chairman be instructed to report at the next stated meeting.

The resolution was adopted by a *viva voce* vote, and a division being called for, a count showed 103 votes in favor and 24 against the resolution. The committee then rose, reported progress, and asked leave to sit again at the next stated meeting. Dr. Flint, jr., moved that the amendments take the usual course. This motion was carried. The Academy then adjourned.

ANNUAL MEETING OF THE AMERICAN ACADEMY OF MEDICINE—THE NEEDS OF NEW YORK.

The American Academy of Medicine held its eighth annual meeting Oct. 1, at the rooms of the New York Academy in Thirty-first street. The entire afternoon was given up to the reading of papers, the main theme of which was the necessity of a higher and broader education. The only exception was a sketch of the late Dr. G. M. Beard by Dr. A. D., Rockwell. The paper illustrated Dr. Beard's studious habits, his sense of humor, his vigorous self-assertion, his literary industry, and his tolerance of others, even the humblest and most illiterate. Dr. Trail Green, of Easton, Pa., whose subject was "The Imperfection of Technical Studies as a Means of Mental Culture," insisted upon the need to the medical student of preliminary training in classical and modern literature, in mathematics and natural science.

Dr. Benjamin Lee, of Philadelphia, Penna., read a paper deprecating the neglect into which the study of botany had fallen among physicians and medical students. The result had been caused by a narrow utilitarianism, which made exhibitors and prescribers of drugs rather than enlightened physicians. The paper gave a historical review of the progress of botanical study in this country during the closing years of the eighteenth century and down to the present day. Dr. Charles McIntire, Jr., of Easton, Pa., followed with an argument against the public and professional indifference that allowed the field of medicine to be overrun by ignorant and incompetent persons. Dr. Gihon, Medical Director of the United States Navy, who was admitted as a fellow of the academy yesterday, insisted upon the necessity of a more searching investigation of the merits of applicants for the degree of Doctor of Medicine. He would close the door against mere "physickers" and fee-seekers, and suppress the illiteracy that was capable of addressing a letter to the "Navel Medicle Bord."

In the evening the President, H. O. Marcy, of Boston, read an address on sanitary science.

LECTURES.

VARICOCELE.—FISSURE OF ANUS.—EPULIS.

A CLINICAL LECTURE.

BY

ROBERT F. WEIR, M. D.

Being one of the Harsen Prize Clinics. Reported by

CHARLES H. MAY, M. D.

To whom was awarded the First Harsen Prize of \$150.—1883.

GENTLEMEN:—There will be three operations to-day—a case of varicocele, one of fissure of anus and one of epulis. The first two will interest you most, as they belong to that class of simple operations, which are most likely to fall to your lot of any; at least during the first years of your practice.

CASE I.—*Varicocele*.—Varicocele is an enlargement

of the spermatic veins. It presents itself as a pyramidal tumor, extending from the internal abdominal ring to the pampiniform plexus, where its base is situated.

The left spermatic veins are by far the ones most affected. This is explained in two ways: first, by the explanation that on the right side the veins open directly into the inferior vena cava, while on the left side they empty into the left renal vein; and some think that this indirect course of the blood on the left side is the cause of it; but we do not believe that this is the prime cause; for both on the right and on the left side, the veins are provided with valves at their opening into the inferior vena cava and left renal veins respectively. The chief cause of the more frequent occurrence on the left side we are now in the habit of attributing to the pressure produced by the presence of feces in the sigmoid flexus of the colon.

The symptoms produced are chiefly local; the tumor is of a pyramidal shape and of a knotty feel; it cannot be mistaken for any thing else after it has once been felt. This tumor increases in size when the patient stands up. This tumor causes a sense of weight and very often pain, which may be intense and which may radiate to the region of the bladder, to the scrotum and even groins, and which is increased when the patient takes any severe exercise. Very often there are seminal emissions, and atrophy of the testicle may result; and as a consequence of these two conditions, the patient very often suffers great mental depression and becomes melancholic, imagining he is losing his generative powers.

The treatment may either be palliative or radical. The palliative treatment answers every indication in most cases. It consists in keeping the bowels open, and in supporting the testicles by a well-fitting suspensory bandage—Rawson's Army Bandages, which come in three sizes, are the best. In addition to this, you must dispel any mental depression which the patient may have.

But in some cases palliative treatment will not answer; you will not succeed in improving the condition of the patient's mind, and if he is engaged in severe labor you will have to adopt radical treatment.

Many years ago, it was customary to cut off a piece of the lower part of the scrotum, thus shortening it and forming a sort of natural suspensory bandage; this treatment has been revived somewhat, lately; but with slight success. I remember it was the only operation in vogue when I was house surgeon in the hospital; but commonly, the condition returned in a variable length of time.

The operation which I am in the habit of employing consists in applying the ligatures of cat gut to the spermatic veins. The catgut I use is that prepared with sulphurous acid, and is of a very strong variety. I have a needle threaded and to this thread is attached the catgut; the vas deferens is separated from the veins—this is very easily done—and the needle passed through the integument of the scrotum, between the veins and the vas deferens, and brought out on the opposite side; it is then returned through the same opening and passed between the veins and integument of the scrotum, and then passed out of the first opening; the ligature is now tightened and this very securely. I am in the habit of using two such ligatures, one above the other; and the lower one I do not pass too near the testicle, for fear of exciting inflammation in this organ.

No anæsthetic is given, because I wish the patient to stand, so as to make the tumor more prominent.

It is somewhat painful, especially when the catgut is tightened around the veins; but it lasts such a short length of time that the pain need not be taken into account.

The patient was soon brought in. He was a man of about 50 years of age. The scrotum was first washed with a 1:40 solution of carbolic acid and the operation performed as already detailed; care being taken afterwards to remove all entangled hairs, as these often give pain when caught in the suture and are apt to excite inflammation.

CASE II.—Fissure of Anus.—The next operation, gentlemen, is also one which you will frequently be called upon to perform.

Fissure of anus consists, as you know, of a linear ulceration at the anus, and very frequently complicated by other small rounded ulcers near by. The causes of this condition are various. Very frequently it results from injuries to the bowel, inflicted during parturition; very often it results from the passage of hard fecal masses.

The history of the case to be operated upon to-day is briefly as follows:

It is a young man, 25 years old.

He complains of pain about fifteen or twenty minutes after defecation, not immediately afterward.

On examination, a fissure of anus consisting of a linear ulceration is seen; there is also the remains of an old hæmorrhoid at the anus.

This is the history which you will commonly get; in this case, the patient does not know any cause to which the condition can be attributed. You will frequently find hæmorrhoids complicating the disease, as in this case.

The diagnosis is very easy after your finger has become trained in rectal examinations; if you have not yet acquired this tactile education, you must expose the anus and separate its walls and usually you will at once appreciate the trouble.

About fifty years ago, the operation consisted in completely dividing the sphincter ani muscle; this was, no doubt, efficacious, but such severe measures are not indicated nor necessary.

Nowadays, we either stretch the sphincter ani muscle, or divide the superficial fibres to the extent of about $\frac{1}{12}$ inch; this stretching is done with the thumbs of both hands; these are inserted with their dorsal surfaces in contact and then separated; one of the rules sometimes given, is to separate them until the tuberosities of the ischia are felt; but I think this is too much stretching and is dangerous, because you might rupture the rectum; a more moderate stretching is just as efficacious, since you only want to paralyze the sphincter for a few days, so that the ulcer can heal, which it could not while the sphincter was intact, on account of this muscle always pulling the edges apart when it acted. I am in the habit of combining these two operations—stretching and subsequent division of the superficial fibres of the sphincter—and until recently, I thought that the credit of combining these two operative procedures belonged to me; but I have heard that Syme also used this method.

After the operation, you should keep the patient's bowels quiet by the use of opium and in two or three days move them by some mild saline cathartic, such as Hunyadi water, or give an enema of warmed olive oil; and since you know just where the fissure is, you can put in the nozzle of the syringe so as not to pain the patient.

On all operations upon the bowel, you must see that these are empty at the time of operation, simply as a matter of cleanliness and convenience for yourself.

It is not enough to give cathartics, for these sometimes merely liquify the intestinal contents; you should give a good cathartic the day before, and on the morning of the operation a good large enema.

In all operations upon the anus, anæsthetics should be given, for this is a very sensitive part of the body. Dr. Markoe has just whispered to me that this is the origin of the word "anus-thetics."

The patient was now brought in, anæsthetized, placed in the dorsal position with knees drawn up, and the operation performed in the manner given above. After its performance, the wound was covered with iodoformized cotton and this kept in place by a T-shaped bandage, made of folded towels.

OPERATION III.—Epulis.—The next case, gentlemen, will be one of epulis. This word signifies merely "upon the gums," and this is about as good a definition as can be given. There are many kinds of these growths. Most important it is to distinguish between the malignant and benign. The malignant epulis grows very rapidly and is soft and the neighboring glands are apt to be involved; while in the benign form the glands are not involved, and the tumor is firmer and slower in its growth. The tumors may occur either upon the lower or upper jaw. They are very apt to occur at the back part of the jaw, in the situation of the molar teeth. They are apt to involve besides the gums, the periosteum of the jaws and even the bone itself. They are usually associated with or caused by carious teeth and often from the fangs of these teeth.

The case was now brought—man of about thirty years—; the patient was only partially anæsthetized, and Dr. Weir explained that this was desirable in operations about the mouth, so as to allow the patient to avail himself of the sensibility of the larynx, and cough out any blood which may flow down into the respiratory tract; it is also desirable to have the patient in a semi-erect posture for the same reason. A stitch was put into the tongue, and this then drawn forward and to one side, and the mouth opened and the tumor exposed. It was situated on the right side of the lower jaw and was about an inch and a quarter in length, extending from about the second molar forward. Dr. Weir stated that it was very important to see that the teeth which had been extracted or loosened had really been taken out of the mouth. He gave as an illustration of the importance of this a case which he had in St. Luke's Hospital some years ago. In this case, an operation was to be performed about the mouth, and some of the teeth were extracted; and, whilst extracting one, the patient coughed, and the surgeon lost his hold on the tooth. It was thought that the patient had coughed it out, but subsequently pulmonary troubles led to the examination of the patient's chest, and a celebrated diagnostician of diseases of the chest gave as his opinion that the tooth which they had supposed to have been coughed out had lodged in one of the bronchi. The patient became worse and tracheotomy was proposed, but the patient positively refused to have this done and soon died; and at the autopsy the missing tooth was found in the left bronchi, and was the direct cause of the patient's death. Another case, Dr. Weir said, occurred lately in London; it was similar to the one just related and caused the patient's death, and at the coroner's jury the surgeon was severely censured, and subsequently he was mulcted to a considerable sum for his carelessness.

Dr. Weir now sawed on each side of the growth and then with a bone forceps removed all the bone until he came down to healthy bone. It was very important

he said, to remove all the diseased bone, or else the epulis is very likely to return.

In the present case, the tumor seemed to be malignant, and for these reasons: It had grown rapidly, was soft in consistence, and the neighboring glands were swollen.

Dr. Weir spoke of the frequency with which glands in the neighborhood of malignant growths were at present extirpated, at the same time that these malignant growths were removed. Thus in most cases of cancer of the breast, when the mamma was removed, the axilla was freely laid open, and the glands stretched; and in this way the recurrence of the disease kept off much longer than if the axilla had not been opened. It was customary, Dr. Weir said, to do this, even though these glands were not increased in size, for examination has shown that even in these cases the interior of the glands are apt to be diseased.

In the present case, the glands in the neighborhood of the lower jaw had become enlarged; this, Dr. Weir said, might be due to a simple congestion or to their implication by the malignant disease, and the question comes up, whether or not they should be removed.

In consultation with Drs. Markoe and Peters, it was decided to postpone the removal of this gland for the present, and see how it behaved hereafter, and then, if necessary, a second operation could be performed.

ABSTRACTS AND SELECTIONS.

A CASE OF EPILEPSY. OBLIVIOUSNESS OF DANGEROUS ACTS; MEDICO-LEGAL BEARINGS; VALUE OF PERCUSSION OF THE SKULL. BY A. ROBERTSON, M. D., F.F.P.S.G., Physician to the Towns Hospital and City Parochial Asylum, Glasgow.

THE following observations are largely based on a case which lately occurred in this hospital, of which a careful record was made by my late assistant, Dr. Williams, now of the Denbigh Infirmary. His report is as follows:—

W. R.—, aged forty-five, a soldier, was admitted on Jan. 25, 1882. Five years before admission he had a sunstroke in India. Epileptic seizures set in shortly afterwards and recurred at intervals of from a month to six weeks till the time of his admission into the hospital. Under a combination of the bromide and iodide of potassium, half a drachm of the former and ten grains of the latter, thrice daily, the intervals were somewhat prolonged. On Feb. 23rd of this year he had a convulsive fit, which left him irritable and quarrelsome, but apparently quite conscious of all his actions. On the 24th, while in this mood, he suddenly attacked and knocked down an old man who was passing him in the ward, though there had not been the slightest quarrel between them. Next day he denied having struck him, and at the same time said that he had no recollection of anything that happened on the previous day. His whole bearing in saying so impressed me with the truthfulness of his statement. There was no further violence nor recurrence of the fits, but he was unsociable and somewhat obtuse. He complained of pain in the head, especially on the left side and anteriorly. The pupils were slightly dilated. On April 14th slight shivering occurred, and the axillary temperature was found to be 103° F. Headache was severe, and still most pronounced on the left side. I percussed the

skull most carefully. The patient stated that the taps of the finger did not cause pain on the right side or back of the head, but that they were very painful on the left side, in front of the ear, forward to the middle of the brow. Leeches were applied over the painful region, and mercurial inunction prescribed. The symptoms, however, became more serious, and he died comatose on May 16th.

Necropsy.—There was about an ounce and a half of serous fluid under the arachnoid and in the ventricles; within the dura mater, on the left side, over the entire frontal lobe, and extending downwards to the base, there was a thin organized false membrane, which seemed to have no adhesions either to the dura mater or arachnoid. The brain was firm; the specific gravity of the white substance in the frontal region was 1047.

Remarks.—Much attention has been given by Dr. Hughlings-Jackson and others to the mental automatism which not unfrequently occurs in epilepsy, particularly after attacks of petit mal. In these cases purposive acts are performed, sometimes nearly correct in themselves, but at improper times and places, and without the consciousness of the actors. But there is a condition following such seizure in which the mental defect is even less than that just stated, where consciousness is only very slightly impaired, where there seems only a little confusion of mind, scarcely noticeable to superficial observation. The remarkable feature of this state is that the patients may maintain a conversation, apparently correct or nearly so, and perform acts, of which they have not the slightest recollection a few hours afterwards. This is illustrated by W. R.—'s case. He knocked down his fellow-patient without the least provocation, though seemingly aware of what he was saying and doing, both then and afterwards in the course of the day; yet next day he declared, and I believe truthfully, that he had no recollection not only of that act of violence, but also of all the other events of the next few hours. The question suggests itself, Had he killed the old man at the time he struck him, ought he to have been held responsible for his death? I think not; at least, not fully so. A few months ago I was engaged as medical witness (case of George Miller) in a trial for murder by an epileptic, in which the accused, like W. R.—, declared that he had no remembrance of the fatal act, nor of what happened, for at least half an hour afterwards. The main facts of the case are as follows:—G. Miller, a soldier, who had been in the Egyptian campaign, was discharged on Dec. 30, 1882, on the breaking up of his regiment in a small town about ten miles from Glasgow. He drank freely in the course of the afternoon, at night reached the city by train, when, being unable to take care of himself in the streets, he was conveyed to the district police-office. There he was able to tell his name, etc., and walked upstairs to a cell with assistance. He was laid on a fixed wooden bed beside another drunken prisoner, who was asleep at the time, and locked up with him about 8.15 P. M. The latter was stated by those who knew him best to be very inoffensive, and not quarrelsome either in drink or out of it. They were seen by the warder five different times at short intervals, the last time being at 10.45 P. M., and always found asleep. Twenty minutes later, when again visited, the accused was sitting at the side of the cell, with his arms crossed, and his comrade in the middle of the floor, lying with his face down, dead. The head of the deceased was fearfully bruised, and some of his ribs were broken. The conclusion arrived at was that the soldier had jumped on him or kicked him to death with his heavy boots. The gaoler stated that the

accused said, on being questioned respecting his comrade's death, he knew nothing about it, and while saying so appeared cool and collected, and so correct in every way that, had nothing happened, the officer in charge would have allowed him to go free. He was taken to the bar and formally charged with the crime of murder; the lieutenant on duty testified that he was apparently quite conscious of what was said to him. Thereafter he was removed to a cell, where he spoke for a short time freely about his Egyptian experiences to the officer appointed to watch him, and then fell asleep. He slept soundly for nearly five hours. When he awoke he was told about his crime, but he appeared quite incredulous, and declared that he had not the least recollection of it or of any of the after circumstances. It was ascertained that he had been subject to the attacks of petit mal, and that on occasion he had a convulsive seizure. He had also been convicted of inflicting a severe blow on a woman, an entire stranger to him, who was passing him quietly in the street; he denied all knowledge of this assault also. He had likewise about two years previously made a determined attempt at suicide.

This history points to the fatal attack as having been of an epileptic character. No doubt the prisoner had previously been indulging in alcoholic liquors, but this does not satisfactorily account for his condition when first seen after the homicide. The seeming cool composure and indifference which he then displayed, the failure to realize his position, and the forgetfulness of the act, as well as of the events of the next half hour, all indicated a really imperfect consciousness, even though to ordinary observers he was apparently fully aware both of what he was saying and doing. At the same time the epileptic seizure, which I believe occurred on his awakening from the drunken sleep, was itself probably due to the action of the alcohol on his weak and susceptible brain. It only further remains to be said that the jury found the accused to have been of unsound mind at the time he killed his comrade in the cell, and he was sentenced to be confined in the Criminal Lunatic Asylum during Her Majesty's pleasure.

It is not improbable that the objection may occur to some minds that, after all, the chief actors in both of these cases may not have been so oblivious as they alleged and appeared to be, it being so very much their interest, and especially G. Miller's, to deny all recollection of their criminal acts. Such objectors will, I think, admit that the following case, very similar to the others so far as the mental condition is concerned, is free from that doubt. A gentleman, aged fifty, whom I see occasionally, has been subject to the minor, and much less frequently the major, attacks of epilepsy for several years, the intervals between the seizures varying from a week or two to some months. Though mentally not now quite equal to his former self, he is still active and intelligent, and, what is specially to be observed, possessed of fairly good memory. On several occasions he has had attacks of petit mal when attending to his occupation, and has afterwards found his way down stairs and through busy streets, returning quite correctly to his place of business, but entirely unconscious of all that had happened in the intervals, lasting for from five to twenty minutes. It is not known how far he may have seemed intelligent and correct to others while walking in that condition. What I have next to mention is, however, more to the point under consideration, and was told to me by his wife, a highly intelligent lady. One afternoon, about four months ago, while he was seated on the sofa at

home, she observed by the movement of his lips and of one of his hands, that he had taken one of his "turns." The ordinary medical attendant of the family was sent for, and arrived within a quarter of an hour. By this time the patient was apparently quite conscious, and conversed correctly with his medical friend for about five minutes. About half an hour after the latter had left the house, some reference was made by the patient's wife to the doctor's visit and his instructions, when she found that he had no recollection of his having seen him, and indeed positively insisted that the doctor had not called that day.

In W. R.—'s case the exact correspondence between the painful area on percussion of the head and the extent of the false membrane within the dura mater, so far as it could be ascertained, was very striking. Would it not have been warrantable, as my friend Dr. Macewen, of this city, suggests to me, to have trepanned the skull and removed the false membrane? In the light of the necropsy this might have been done, and with probable advantage, as the irritation due to its presence was, I think, the immediate cause of death. In any future case of a similar kind, in which percussion clearly defines a painful region, I should be disposed to try trephining, in the event of no improvement resulting from ordinary treatment.

As the method of diagnosis by percussion of the skull is still comparatively new, I may mention that there is at present in the hospital a patient in whom it revealed a painful area over the motor region of one side of the brain. He had been long subject to convulsive seizures, mainly unilateral, and has greatly improved since the application of a series of blisters over this region.—*The Lancet*.

ON THE USE OF CARBOLIZED SAWDUST AS A DRESSING IN ANTISEPTIC SURGERY. By H. P. SYMONDS, SURGEON TO THE RADCLIFFE INFIRMARY, OXFORD.

One of the drawbacks of the usual antiseptic dressing is the rapidity with which the discharges come through on the first day or two after the operation, often necessitating the redressing of the case within a few hours. To prevent this, and yet not to interfere with the aseptic condition of the wound, is a distinct advantage both to the patient and the surgeon. The material I have used recently in a considerable number of cases is coarse sawdust, soaked in (1 in 10) solution of absolute phenol and spirit of wine, then allowed to dry slightly so that the spirit may evaporate, leaving the sawdust charged with carbolic acid. When used it is inclosed in a bag made of several layers of gauze, and applied outside the deep dressing, the usual external dressing being put over it. The sawdust thus takes the place of the padding of loose gauze which is generally used. Its absorbent power is very great, and it has the additional advantage of keeping up an equable pressure on the divided tissues. I find that fourteen ounces of sawdust will readily absorb about one pint of fluid.

The following cases in which this dressing has been used form a successive series, taken without any selection.

CASE 1.—Amputation through the middle of the arm for disorganization of the elbow-joint and necrosis of the humerus. The operation was done on July 24th. The stump was dressed at the end of twenty-four hours in order to remove the drainage-tube. On

July 30th the dressings were changed and sutures removed. The wound was quite healed, with good union throughout. The patient was discharged from the infirmary seven days after operation.

CASE 2.—A woman, aged sixty-one, with extensive scirrhus of the breast. On August 10th the whole breast was removed, and the axilla cleared of glands. Two drainage-tubes were put in the wound. Dressing changed on the 12th to remove the tubes, and again on the 17th, when some of the sutures were taken out. On the 19th the wound was thoroughly healed, and the patient left the infirmary.

CASE 3.—A man, aged forty eight. Amputation of forearm for large sarcoma in the back of the hand. Operation done on August 3d. Drainage-tube removed in twenty-four hours. Wound dressed again seven days after the operation, when complete union had taken place.

CASE 4.—A middle aged woman, with compound dislocation of the elbow, admitted August 11th. She had a small wound on the inner side of the right elbow. Both bases were dislocated backwards, and the inner condyle chipped off. The joint was dressed antiseptically, a counter opening made, and a small drainage-tube passed through. This was removed in twenty-four hours, and the dressing not changed again for four days. No soaking through took place, and the wound remained aseptic. The highest temperature 99.4°.

CASE 5.—Removal of an adenoma from the breast of a girl aged eighteen. This case occurred in private practice. Drainage-tube removed in twenty-four hours. Dressed again on the seventh day. The incision was quite healed.

In all these cases complete primary union took place without any formation of pus. In only one did the temperature reach 100°, and that on the day after operation, after which it became normal. I have not quoted these cases as being at all remarkable but merely as common instances in antiseptic surgical practice in which the sawdust dressing was used. Surgeon-Major Porter, in "The Surgeon's Pocket-book," states that he has used sawdust as a dressing in suppurating offensive wounds; but I am not aware that it has been tried, when prepared in the way I have described, in antiseptic dressing. The three points in its favor are its powerful antiseptic qualities when saturated with carbolic acid, its great absorbent power, and its adaptability to any surface. I may add that the sawdust should be coarse, as I find that if it is very fine it passes through the gauze and irritates the skin.—*The Lancet*.

ACUTE RHEUMATISM AND PHTHISIS.

BY J. GORDON BLACK, M.D. LOND.

In *The Lancet* of July 7th Dr. Austin calls attention to acute rheumatism as a premonitory symptom of phthisis, and gives the histories of four cases in illustration. The following particulars of a case attended by me last year may perhaps be of interest in connection with this subject.

On March 6, 1882, I first saw a pale, delicate-looking young woman, aged twenty. Both father and mother were dead, the former of phthisis, and a sister was then suffering from that disease. My patient had been doing rough hard work beyond her strength in a cold damp atmosphere, for some months. At the previous Christmas she caught cold and a cough ensued.

She had, however, been away from work only two days. The symptoms were on examination:—Short dry cough with pain under left axilla, sickness and vomiting of food, sleepless nights, and free perspiration. Pulse 100, weak, and pupils dilated. Tongue red in middle, furred at the sides. Temperature only slightly above, and respiration, normal. Menses regular, but discharge too pale. Some rough breathing below left clavicle; no dullness or crepitation. No increase of cardiac dullness, but sounds unduly accentuated. At this visit I was undecided as to the exact nature of the attack, fearing some lung mischief or impending febrile disorder. A diaphoretic and expectorant mixture was prescribed and the affected side ordered to be poulticed. Next day I found that the cough and sickness had entirely left her. The pain was still bad in the side, and perspiration continued. Temperature 102°, pulse 100. A soft murmur was now heard with the first heart sound, loudest over the pulmonary cartilage, slightly conducted towards the apex, but not heard over the second right cartilage. The right knee and ankle were swollen and tender. Thus the affection had developed into rheumatic fever, and the signs of lung implication suddenly disappeared. Salicine treatment happily soon gave relief to the distressing symptoms, and by the second day of its use the patient was comparatively well. The cardiac murmur became much less audible, but never went entirely away. At the end of March the patient, being rosy and plump, in complete contrast to her previous condition, was allowed to go to a farmhouse in the country.

On April 17th, a few days after her return, I saw her again, and was shocked at the serious change which had occurred. She was now in bed, complaining of excessive muscular weakness. The cough, fever, and vomiting of food had returned worse than ever. Some dullness was now noted in both infra-clavicular spaces, and at the top of the sternum. Pectoriloquy and mucous râles were heard on the left side below the clavicle, whilst on the right there was double respiration. Expectoration was copious and nummular. Pulse 120; temperature 101°. By April 27th, the above symptoms had become greatly aggravated. The expectoration was tinged with blood, and there were signs of a vomica at the top of the left lung. For the next few weeks the disease progressed with the fearful rapidity of so-called "galloping consumption"; but afterwards, curiously enough, became quite chronic. The appetite had never failed, and from first to last colliquative diarrhoea was absent. Thus were the powers of nature sustained until the patient had become a veritable skeleton. Death occurred on the 24th of November.

The succession of symptoms above detailed arrested my attention as being unfamiliar, and I was therefore much interested to observe that Dr. Austin had recently attended four somewhat similar cases. Judging by my own experience, I should say that acute rheumatism is a rare complication of phthisis. The text-books are almost silent on the subject, nearly every other ailment, however, being mentioned in that category. Under the head of Acute Rheumatism we find no allusion to the existence of a tubercular variety, though others, such as scarlatinal and gonorrhœal, are enumerated. At one time the phthisical and rheumatic diatheses were even thought opposed to each other. The following exceptional reference is made towards the end of the late Dr. Hughes Bennett's article on Phthisis, in Reynolds's "System of Medicine":—"Pericarditis and other inflammatory diseases may occur, occasionally gout or

rheumatism." And from the construction of what immediately follows, one gathers that Dr. Bennett did not consider such complications to bear "an essential or constant relation to phthisis."

Now, such a view seems to me more in accordance with symptoms than Dr. Austin's theory that tubercular deposit in the affected parts is the cause of the rheumatic manifestations. It is noticeable that when tubercle occurs in different organs and membranes during the course of phthisis pulmonalis, it does so as part of a general constitutional affection, with which the local developments do not tend to interfere and which the latter do not mask. It is perfectly different, however, when rheumatic fever intervenes. This seems completely to replace the signs of pulmonary affection by others peculiar to itself, which then have their ordinary course and termination. Further, the well-known tendency of tuberculosis to produce chronic inflammation and ulceration does not accord with the equally familiar temporary and changeful character of acute rheumatism, in which disease ulceration is exceptional. If Dr. Austin's theory were correct, one would look for ulcerative endocarditis or serious disorganization of joints in cases of phthisis complicated by rheumatism. We know that such results are not uncommon where other specific agents of inflammatory action are present, such as gonorrhœa or scarlatina. Another argument may be adduced from a consideration of the results of treatment upon the phases of disease under notice. The well-known power of salicine to control acute rheumatism, a good illustration of which is furnished by the case related above, contrasts strongly with its utter uselessness in checking tuberculosis. If both sets of symptoms in my case had been due to one general cause—viz., tubercle—then one fails to understand the marked difference observable in the effects of salicine. Considered in connection with pulmonary consumption, I am therefore inclined to regard acute rheumatism as a somewhat rare accidental complication of the former, to which malady it bears no necessary relation. Although it cannot consequently be properly regarded as "premonitory," yet it is well to remember the possibility of its advent as an early complication. Unless this be kept in view during attendance upon a delicate patient suffering from rheumatic fever, especially where there is a family history of phthisis, a too favorable prognosis may be ventured, to the disappointment of the friends and possible discredit of the medical attendant.—*The Lancet*.

ON A CASE OF COMBINED SCROTAL AND ABDOMINAL HÆMATOCELE. BY SURGEON-MAJOR W. GRAY, I.M.D., Senior Surgeon, Jamsetjee Jejeebhoy Hospital, Bombay.

Essub E—, aged thirty-six, a cart driver, was admitted to the Jamsetjee Jejeebhoy Hospital on March 6th last, suffering from great enlargement of the right side of the scrotum, and also from what appeared at first sight a distended bladder. The latter belief was strengthened by the fact that there had previously been some difficulty in micturition, and by the additional circumstance that the house-surgeon, on attempting to withdraw the urine, found it impossible to pass even the smallest catheter beyond the bulb. The history, so far as it could be ascertained, was that about a year ago the scrotum began to swell, and gradually attained its present size. A month before admission he first noticed the hypogastric tumor, and it was in consequence of the rapid enlargement of this during

the last few days, and the increasing pain and discomfort which it caused, that he came to hospital for relief. The patient was unable to furnish any data that could throw light on the origin of the disease. All he could tell us was that up to a year ago he was in perfect health, and had nothing whatever the matter with either the scrotum or cord. Urine had always been passed freely until lately. He was emaciated and anæmic, passed urine with difficulty, and in a narrow twisted stream, and complained of considerable pain and tension in both swellings. There was no history of injury. The scrotal tumor was cylindrical in shape, about six inches in diameter, and when the patient stood up it descended nearly to the knee. The hypogastric tumor looked and felt, as the patient lay on his back, almost exactly like a case of retention of urine; it reached a little above the umbilicus.

On making a careful and detailed examination the day after admission, when I first saw him, it was noted that both tumors contained fluid, and that they communicated freely with each other. Placing one hand at the bottom of the scrotal tumor, and percussing the hypogastric swelling with the fingers of the other, a distinct wave of fluid was felt to pass. According to the position, too, either tumor could be considerably increased in size at the expense of the other. When he stood up the scrotum filled out, and the abdomen became less prominent; the reverse happened if the scrotum was elevated while he lay on his back. Coughing also made the scrotum swell up. Except this impulse, no evidence of hernia could be detected, either by local examination or from the history. The precise nature of the case was now the question to decide. Standing in front of the patient it was noticed that the hypogastric tumor was in the very slightest degree larger on the right side of the middle line. In fact, the difference was so small as not to be perceptible unless carefully looked for. This fact alone seemed sufficient to cast doubt on the distended bladder theory. Closer examination of the urethra and perineum showed that the obstruction to the passage of urine was due to the pressure of the upper part of the scrotal tumor on the urethra, and on further cross-questioning the patient it appeared that he had been passing, though with difficulty, the normal quantity of urine daily.

It now became sufficiently clear that the case was one of hydrocele or hæmatocele, presumably the latter, which had extended upwards along the cord and under the crural arch, and finally formed a second sac for itself within the abdominal cavity. A small exploring trocar soon showed that the tumor was filled with fluid blood, and a larger trocar and canula having been inserted, nearly five pints of this were drawn off, and both tumors completely emptied. A large syringeful of 5 per cent. carbolic acid lotion was then injected, the trocar wound carefully closed, and an ice-bag placed over the cord. There was now no difficulty in passing a catheter and removing from the bladder a small quantity of bloody urine. A noticeable circumstance was that the fluid drawn from the tumors possessed a distinctly urinous odor. This fact induces me to think that at one period or other of the case there may have been a communication between some portion of the bladder and the upper sac. Unfortunately, through some misapprehension, the fluid was not examined for evidence of the presence of urine. The blood in the urine withdrawn by the catheter was probably due to the attempts made to relieve the supposed retention: there was no blood noticed afterwards.

By the third or fourth day after the operation it was evident that the tumors were rapidly refilling. Early on the morning of the 12th the patient was found in a state of semi-collapse, with both tumors larger and tenser than ever. Percussion revealed the fact that they were tympanitic, and the hasty conclusion was formed that a hernia had descended, and had become strangulated. More careful examination, however, showed a drop of fetid matter oozing from the trocar wound, when it became at once apparent that the tympanitic note was due, not to intestinal flatus, but to the gases of putrefaction. The patient was immediately placed on the operating table, chloroform administered with extra precautions, and the scrotal tumor then laid open from one end to the other. A quantity of decomposed blood-clot and fetid matter was turned out, the interior of both cavities thoroughly cleansed with carbolic lotion, and a large drainage-tube was placed in the abdominal sac, with its end hanging out through the scrotal incision. The patient was then removed to bed, and appropriate general and local treatment administered. For some days he remained in a very precarious condition, but eventually rallied, and was able some time later to undergo a second and final operation. The walls of the scrotal sac were fully a quarter of an inch in thickness, and were composed of tough fibrous tissue. Its inner surface was rough, and in general appearance was not unlike the mucous membrane of the stomach in a case of arsenic-poisoning; in color it was dark purple. The opening of communication under the crural arch, between the two portions of the sac, was wide enough to admit four fingers or a small hand, and the interior surface of the abdominal sac was felt to be similar to that of the scrotal sac. The source of the hæmorrhage was sought for in vain. The patient having regained strength, and the parts looking sufficiently healthy, he was, on March 28th, again placed under chloroform, and the redundant portion of the scrotal integument, together with the whole of the sac wall below Poupart's ligament, were excised. As the testicle had atrophied to a mere nodule, it also was removed. The wound was then closed with silver sutures, the drainage-tube of the abdominal sac being brought out at its upper angle. From this time the patient made an uninterrupted recovery; the scrotal wound healed readily, while the upper cavity, which for a time discharged freely, gradually contracted, and by degrees pushed out the drainage-tube. He was discharged well on May 12th, returning to his former avocation of cart driver. I have since had an opportunity of seeing him. The scrotum is of natural size, while the abdominal sac is apparently obliterated, and the sinus quite closed.

I think this case is worthy of publication, both from its rarity and on account of the success of the treatment adopted. I have never seen or heard of a similar case in this country, where hydrocele and hæmatocele are so common. Professor G. M. Humphry mentions a case of "abdominal" hydrocele in his article in the "System of Surgery." Nothing further has been added to this by Mr. Jacobson in the third edition. J. Rochard records an instance of "abdominal" hæmatocele complicated with hernia. Beyond these cases I can find no reference to the subject. The liability, after a cursory examination only, to mistake the present case for one of retention of urine was natural enough, and forms an interesting feature of it. As regards the origin of the abdominal sac, the very unsatisfactory history of the double tumor leaves us more or less in the dark. In the absence of any

better explanation I am content to accept that offered by Professor Humphry—namely, the persistence, unclosed except at its upper part, of the funicular portion of the peritoneal pouch which accompanied the testicle in its descent. The gradual distension of the scrotal sac caused the canal to yield where it passed through the abdominal wall, and finally to dilate into a large pouch behind. The patient, however, adhered to his original statement, that up to a year before his admission to hospital he had no swelling of either the scrotum or cord, nor had he sustained any injury of the parts. Still, long experience has taught us that the histories of their diseases given by our hospital patients are, as a rule, more or less incomplete or untrustworthy.

THE TREATMENT OF ATONIC DYSPEPSIA.

In an article on Atonic Dyspepsia* Dr. J. Milner Fothergill thus discourses on the question, What is it which needs improving, the assimilation of hydro-carbons or the assimilation of albuminoids, or both?

"This is a matter too little insisted upon. Too commonly action is taken rather blindly, and malt extract (diastase), or pepsin, or pancreatic preparations prescribed without that discrimination which is so desirable. My own rule, so far as it is formulated, and it needs some corroboration (possibly some correction), is taking the following direction: When the patient is spare and too thin, then starch and sugar are indicated, and diastase should be added to farinaceous matters. Surplus sugar is laid down in the body as fat, that is, within the storing capacity of the organism. Then when there is any tendency to glandular degeneration, and that growth of lowly connective tissue spoken of commonly as tubercle, the indication is some fat which can be assimilated, of which cream, butter, and cod-liver oil are the most digestible forms. When it is desirable to increase the power of assimilating fat, there are several measures which may be adopted, singly or together. There are agents which stimulate the flow of bile, which emulsionizes fat so that the pancreatic secretion may further act upon it, and the most useful of these is ipecacuanha. Ether has been found to stimulate the flow from the pancreas, and so aid materially in the assimilation of fat. It might be given with liquor pancreaticus and cod-liver oil. Sometimes when cod-liver oil is not assimilated, it is well to resort to the following plan: The oil is observed unchanged in the stools, *en masse*, never having been divided into an emulsion. Here it is well to remember that a fatty acid helps in the emulsionizing of fat. So give some castile soap, say two grains, with two grains of dried ox-gall, in a pill, about two hours after a meal, when the contents of the stomach are passing into the duodenum. The fatty acid and the bile assist the natural efforts, and then the assimilation of fat is often materially aided."

Regarding indications to be gained from the appearance of the tongue, the author remarks:—

"In very acute conditions it may become necessary to give milk and milk gruel already largely digested by the addition of liquor pancreaticus, or these may be given at times with ordinary milk and seltzer water or lime-water at other times in the day. Such are conditions where there is much gastric irritability with vomiting, and a tongue denuded of epithelium or seen to be covered by a growth of young epithelium. This

* Medical Record, September 1st.

condition is not uncommon in the course of phthisis, and when it shows itself it requires its own peculiar treatment, and others being abandoned for the time at least. Here the line to be taken is that all alkalies and bismuth with or without some hydrocyanic acid. Whenever the tongue is raw or bare then alkalies are to be given, and acids carefully eschewed. If the reader has doubts about the last, let him just try the experiment with his eyes open, and watch it. It will not be long before the results will be apparent to him. Bismuth with soda in calumba is the old and well-known combination for such state, and with it the milk dietary just described may be combined. More commonly, however, a less grave and acute condition is found where the state of the tongue is just the opposite, namely, covered with a layer of dead epithelium. Here acids are not only unobjectionable, but are very useful. Indeed, soda sulphate with some acid is the combination which gives the most satisfactory results. Under this the tongue soon cleans, the appetite returns, and the stools are of a normal color. When the primæ viæ are once more acting normally and in a healthy state, then, and not till then, may some chalybeate be given. But as long as the liver is in any way disturbed chalybeates are useless, and usually disagree. When the appropriate time comes then iron is useful, but however impatiently the time is awaited it is well to be patient. To retort to iron prematurely is a very common mistake. Sometimes when the tongue is placed in a side light a yellow shade can be detected, and so long as that remains so long must chalybeates be withheld."

Among hepatic stimulants he places more dependence on ipecac than on mercury, arsenic, euonymin, baptisin, iridin, leptandrin, or any other of the so-called cholagogues. Of this he says:—

"A century of experience tells of the utility of ipecacuan in indigestion. It was a constituent of the dinner pill of the last century. Not only does it stimulate the liver, and so be useful in cases of indigestion where there is either bile acids formed in excess or lithates present (that is, the peptones which find their way into the portal vein from the intestinal canal, and which, converted into proteids, are elaborated into the albumen of the liquor sanguinis by the liver normally, are transformed instead into bile acids or urates; the patient loses flesh, and on a flesh dietary only makes more bile or more lithates without gaining weight), but ipecacuan is a "pepsin persuader" from its action on the gastric lining membrane with its multitudinous glands and follicles. Ipecacuan combines properties, indeed, as does no other agent, in my opinion. Then there is often atony, either general or in the bowel, and for this strychnia is an admirable remedy. Perhaps, too, flatulence, for which a carminative is indicated. Then there is the vehicle, which may or may not be a laxative, according to the case. The pill would stand then somewhat as follows:—

R. Strychniæ	gr. 1-20
Pulv. ipecacuan	gr. 2-3
Pulv. piper. nig.	gr. iss.
Ext. gentian	gr. i.

Boston Med. and Surg. Journal.

CASE OF BASILYSIS.

In the Section of Obstetric Medicine, at the Annual Meeting of the British Medical Association, 1883, Dr. J. Halliday Croom, described a case where this operation was found necessary:—

Among the recent improvements in operative midwifery, the operation of Basilysis, as a means of comminuting the foetal basis cranii, deserves to occupy a prominent place. Devised by Dr. A. R. Simpson, some years ago, and carried out by him in practice, it has, in my opinion, quite fulfilled the expectations he formed of it. I gladly take an opportunity of a recent case, which occurred under my care in the Maternity Hospital, to bring this operation under the notice of the Section. The case was as follows.

S. W., a primipara, aged 26, was sent to the Maternity Hospital on the forenoon of Sunday.

At the time of her admission, she was well advanced in the second stage of labor; the membrane had ruptured early in the morning, and a loop of the cord had prolapsed in advance of the head. I saw her shortly after admission, and found the conditions as described; and further found, on abdominal palpation, a very prominent uterine tumor; the head at the brim, but unengaged, and back to the left. There were no foetal heart-sounds to be heard.

On vaginal examination, the head was presenting, the membranes ruptured, and a loop of cord prolapsed and pulseless. The occiput was to the left, and the sagittal suture transverse. The conjugata vera diameter, gauged by the diagonalis, measured slightly less than two and a quarter inches. The pelvis was a distinct rickety one. The indications, therefore, for reducing the head were obvious. This I did with the basilyst in the following way. With the assistance of Dr. Barbour, the head was steadied thoroughly at the brim, and the basilyst introduced at the most centrally presenting part of the right parietal bone. The cranial vault was easily pierced, and the instrument pressed down through the cerebral substance to the base of the skull. While Dr. Barbour kept the head perfectly steady, I screwed the basilyst home into the base, and, closing the handle, easily effected separation of it. The head immediately collapsed, and was pushed by Dr. Barbour through the brim, with slight aid on my part with the crochet. Indeed, the use of the crochet was almost unnecessary, as after the collapsed head was well pushed into the brim, its extraction was mainly accomplished by the hands *per vaginam*, aided by suprapubic pressure.

On examination of the head after birth, it was found that the basilyst had entered the right parietal bone, and then passed down to the basi-occipital, just behind the foramen magnum, and the base was found to be splintered both laterally and anteroposteriorly. The disintegration of the base of the skull was remarkably complete, as the recent preparation which I now exhibit shows; and the great diminution in the bulk of the head is obvious from the fact that suprapubic pressure was of itself sufficient, with but little aid from the crochet, to push the head through the brim.

REMARKS.—The introduction and working of the instrument are simple enough, but there is one point which, in a former case, offered some difficulty; namely, the doubt, after the basilyst has pierced the vault, as to whether it goes directly to the base. This is more apparent than real, for, if the head be well steadied, and its position distinctly made out, there can be but little risk in pushing the instrument straight on in the proper axis. Of course, in cases of extreme flexion, it will be easier to strike the centre of the base than in a case of flat pelvis, where marked Naegele obliquity is combined with extension.

This is illustrated in the case I have just recorded, where the basi-occipital bone was struck instead of the sphenoid; but, as the case shows, the result was none

the less satisfactory. In any case, the risk of missing the base is very slight. It has been urged against this method of communication and delivery, that some instrument for extraction in addition to the basilyst is required. First of all, let me point out that in the case in point, with a head perforated at the occiput, and with a two inches and a quarter brim, suprapubic pressure was almost enough to effect delivery, and secondly, it must be kept in view that a second perforation of the base can always be performed when necessary, reducing the whole head to a veritable pulp, and allowing it to pass through the pelvis with the aid of the hands and suprapubic pressure alone. It has, therefore, the advantage over cephalotripsy and other forms of embryulcia, that delivery is accomplished without the application of any instrument external to the head.—*British Medical Journal*.

MEDICAL NEWS AND NOTES.

Fat in the Stools in Pancreatic Disease.—

In the *Deutsche Medizinische Wochenschrift* (September 12th) Dr. Ziehl records a case of cancer of the pancreas occurring in Professor Erb's clinic at Heidelberg, and discusses the question of fatty stools in pancreatic disease. The case itself presented no unusual features, but the predominance of gastric symptoms suggested the stomach as the seat of the disease, which was marked by the appearance of a painful tumor in the left side of the epigastrium, and by jaundice. The motions were of a peculiar silvery gray color, and found microscopically to consist in great part of masses of acicular crystals soluble in ether; chemical analysis showing the stools to be composed of fat to the extent of half the solids. On dissection there was found a large scirrhus cancer of the pancreas, which had invaded the walls of the stomach and duodenum, and occluded the common bile-duct. The pancreatic duct was dilated and distended except at its termination, which was lost in the cancerous mass. The writer, after saying that the case illustrates the well known fact of pancreatic disease being marked by the occurrence of fat in the stools, shows that the form in which the fat occurred in this case was exceptional, almost requiring the microscope for its detection, whereas it usually occurs in amorphous masses recognizable at once, and not in crystalline form. He further shows, by reference to cases recorded by Friedrich, Nothnagel, and Gerhardt, that when fatty crystals in excess are present there is not only pancreatic disease, but also occlusion of the bile-duct, the last-named author finding crystals resembling tyrosin and leucin in a case of catarrhal icterus. Some doubt may be expressed whether the crystals in question were tyrosin rather than fatty crystals; but Gerhardt's suggestion, that in such a case there was also temporary plugging of the pancreatic duct is probably true. Indeed, if the accepted view of catarrhal jaundice be a fact, there must surely be as much hindrance to the escape of the pancreatic juice as of the bile. If it were more frequently the custom to submit the alvine evacuations to as minute a scrutiny as is brought to bear on the urinary excretion, the occurrence of fatty matter in excess in the stools would doubtless be found in many more cases than those of primary disease of the pancreas.

Bromide of Potassium in Diabetes Mellitus.

—The influence of the sceptre which the so-called "diabetic centre" has so long swayed over the domain

of diabetic pathology is, perhaps, destined ere long to be felt less acutely, or even not at all. It is certain, at all events, that the majority of pathologists are by no means satisfied with the opinion that diabetes is essentially due to a lesion of the parts of the central nervous system about the medulla oblongata. In 1866 Begbie, probably influenced by the prevailing views of the nervous origin of diabetes, suggested the employment of bromide of potassium in that disease. He obtained satisfactory results in four cases. Since that time many physicians have employed the drug with varying success. Last year M. Felizet presented, in August, to the Académie de Médecine a work entitled "The Cure of Diabetes Mellitus and Glycosuria by Bromide of Potassium;" and now we have before us the report of the commission appointed to inquire into that paper. From a therapeutical point of view, the numerous theories of diabetes may be divided into three classes, according to the report. The alimentary, hepatic, and nervous theories are the names adopted. Each of these hypotheses has had its own therapeutics. M. Felizet believes that he can cure diabetes with bromide of potassium. His belief is based on the results of clinical and experimental researches. Glycosuria induced by puncturing the floor of the fourth ventricle of rabbits ceased sooner under the administration of bromide than when left alone.

Effect of Metallic Poisons on the Spinal Cord.

—The affections of the nervous system produced by contamination with certain metals, as lead and mercury, have been studied more extensively clinically than pathologically, and even yet it may be held to be undetermined whether the action of the poison is upon the peripheral or the central apparatus. Dr. Popow has recently put on record the results of an anatomical investigation upon animals (chiefly dogs) poisoned by arsenic, lead, and mercury respectively (*Virchow's Archiv*, 93, Heft 2), and in most cases he was careful to administer the poisons in varying quantities, so as to contrast the effects of acute and chronic poisoning. The general result of his inquiry goes to show that marked changes of an inflammatory character occur in the spinal cord, both in the gray and white matter, under all these conditions. In acute arsenical poisoning the spinal cord was softened, the gray matter especially being reddened and swollen; there was proliferation of the nuclei of the blood-vessels, and an exudation of a peculiar hyaloid substance. The nerve-cells were swollen, their processes dwindled, and their protoplasm granular or vacuolated, whilst in the white columns the axis cylinders showed irregular thickenings. In chronic poisoning it was difficult to discriminate between the two portions of the cord, the divided surface having a yellowish-red color throughout the walls of the vessels were thickened, and hyaline masses abounded; the nerve-cells vacuolated, or shrunken and pigmented; whilst free pigment masses, representing traces of hæmorrhage, occurred throughout the sections. In other words, there is, in poisoning by arsenic, a central myelitis at first, and later a diffuse myelitis. Very similar changes were found in the spinal cord after poisoning by lead—namely, exudation from bloodvessels; a general affection of the nerve-cells, beginning as cloudy swelling, and passing into atrophy and pigmentation; and inflammatory swelling of the axis cylinders. In mercurial poisoning, the early changes consist of hyperæmia of membranes and of the cord, followed by hæmorrhages, inflammatory exudation, and changes in the nerve-substance hardly differing from those seen in the other two cases. In

each instance the peripheral nerves and the nerve-roots showed no alteration; so that the conclusion is that the paralysis, spasms, &c., characteristics of the toxic effects of these metals, depend upon a central rather than a peripheral disturbance, all the degenerative changes described as occurring in nerves and muscles being strictly deuteropathic.

"Tea v. Beer"—Mr. Edward Payson Weston has announced his intention of undertaking a pedestrian tour through England and Wales, with a view to demonstrate the superiority of tea over beer and alcoholic drinks in general during periods of prolonged muscular exertion. He proposes to walk fifty miles a day for 100 days, and at the close of each day's walk to deliver in the town to which his day's journey may have brought him an address on Temperance, having for its title "*Tea versus Beer*." He is anxious for medical men of the towns through which he may pass and in which he spends the night to visit him, for the purpose of recording the state of his temperature, respiration, pulse, &c. It is proposed to commence the tour on Nov. 5th, and should this date be finally adopted the task, if successfully accomplished, will be completed on February 28th. As Sunday will be taken as a day of rest, the actual distance traversed each week will be 300 miles.

A prize, established in accordance with the wishes of the late Signor Bufalini, Minister of Public Instruction in Italy, of the value of 5000 francs and to be known as the Bufalini Prize, has been announced for international competition. The subject for 1883-4 is "*The Application of the Experimental Methods to Science*." The essays must be received by the Secretary of the Medical Faculty of Florence before October, 1884.

According to the French political papers France is to possess another School of Medicine. This will be in the Orient at Beyrouth. The necessary structures have just been completed. The courses will begin in October next. The professors will be chosen from the doctors of the Faculty of Medicine, and will receive their appointments under the auspices of the French Government.

At the meeting of the French Association for the Advancement of Science held at Rouen, M. Mallez presented an instrument of precision called a surgical pantograph, for measuring the dimensions of the enlarged prostate and for demonstrating by the aid of graphic tracings the influence of treatment on the diseased organ.

The French wholesale druggist who was accused of fraudulently substituting sulphate of cinchonidine for sulphate of quinine, which he supplied to the hospitals of Paris last autumn, has been sentenced to a year's imprisonment, to pay a fine of fifty francs, and to defray the expense of an advertisement of the judgment in a dozen French journals.

Trepanned Skulls in France.—Dr. Broca describes the trepanned skulls which have been discovered in some of the caves of France, belonging to the earlier periods of the new stone age. He asserts, in regard to this remarkable disclosure, that a great number of these skulls were trepanned during lifetime, probably in infancy and early youth, and that they healed up again, the subject of the operation surviving

it for many years. The theory is that the practice was a sacred rite of some sort, it being found that the skull of those very persons who had undergone the operation in their lifetime were after death subjected again to the same operation; a number of small disks were cut from them in such a way that each disk contained a portion of the cicatrized edge made by the original trepanning these disks being used as amulets by living persons, the skull thus treated being in its turn also provided with one of these talismanic disks in place of those surrendered.

Common Lodging-Houses in London and Paris.—In London the poor live in what are known as registered common lodging-houses, and in spite of the poverty and irregular habits of this class, the mortality among them is a little less than the average mortality of the entire metropolis. This result must be attributed to the constant inspection of these lodging-houses by the sanitary police, and the excellent regulations with regard to drainage, ventilation, etc. In Paris the reverse is noted. Disease is always most prevalent in buildings that correspond to our common lodging-houses, for there is no sanitary police to keep them in order. In London, strict rules are laid down, and very generally carried out, to prevent overcrowding but in Paris overcrowding is daily on the increase. Thus, our sanitary commissioner, when reporting on the causes of the recent typhoid epidemic in Paris (*see The Lancet* of January 6th, 1883, p. 31), noticed that the number of poor lodging-houses was 9050 in 1876, with 142,671 tenants, and that these figures had risen in 1882 to 11,535 and 243,564 respectively. This showed that the number of lodgers augmented far more rapidly than the number of lodging-houses, the overcrowding being thus aggravated. We also gave statistics of the quarters where the rate of mortality from typhoid was the highest, and this corresponded with the district where the greatest number of lodging-houses, and the most overcrowding, had been recorded. Apparently nothing has been done to check this evil. A plentiful supply of statistics have been prepared by the authorities on this subject, and the police keep the keenest watch on each individual lodger; but nothing is done towards supplying traps to the drain-pipes, ventilating the rooms, or for the removal of the closets from the vicinity of the bedrooms and other unsuitable positions. Fever is constantly present in such houses, but effective disinfection and isolation are never practiced. The size of the houses, many of them having as many as six storeys and 200 inhabitants, aggravates all these sanitary defects. Fortunately the French poor spend the greater portion of their time out of doors, and are also more tidy and clean in their rooms and in their dress than the same classes in London. It is rare to see in Paris the filthy bedding on which our lower classes are content to sleep. The greater sobriety and thrift of the French poor help to counteract the unwholesome condition of their dwellings; but it is high time the French Legislature should protect them from infection by some enactment which would carry out, on a larger scale, provisions similar to those of our Common Lodging-houses Act of 1851.

"Dr. William L. Janney has been unanimously elected Professor of Practical Anatomy and Clinical Surgery in the Medico-Chirurgical College, of Philadelphia. Dr. Janney is the present Coroner of the city of Philadelphia, and is well known to the profession as an anatomist and surgeon of extended experience."

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ORIGINAL ARTICLES.

I. RHEUMATISM OF THE HIP.—II. RHEUMATIC ARTHRITIS IN ADULT [MALUM COXÆ SENILE.]

BY

V. P. GIBNEY, M. D.

Surgeon to the Hospital for the Ruptured and Crippled,
New York, etc.

I.

One of the most common errors with which the general practitioner is charged is that of calling hip-disease (chronic ostitis of the hip) "rheumatism." Scarcely a week passes but that a patient suffering from the disease well advanced is brought to the dispensary, the parents asserting, "my doctor said it was 'rheumatism.'" It is seldom that a case of disease at the hip is reported in extenso, without this testimony of the friends is inserted. I have always taken the evidence with much allowance, and in many instances I have felt no disposition to censure the gentleman who has made such a diagnosis. The invasion of this dreaded disease is often very like that of acute monarticular rheumatism, and for several days and weeks even the symptoms run along almost parallel one with the other. I have very little doubt but that the surgeon who prides himself on his diagnostic skill occasionally commits just as great an error (considered as an error) in calling cases of rheumatism "hip-disease." I have now the history of a case spread out upon my books, in a male child two years of age, whose symptoms began with sharp pain in the left thigh one night at eleven o'clock, causing loud cries, and next day there was decided redness with a little swelling on the upper third of the leg, same side. This child was treated, so I am credibly informed, with weight and pulley for "hip-disease." When I saw the patient one month after the invasion of the disease there was effusion in, with extra heat and tenderness about both ankles and the left knee. The symptoms were subacute in character. The mother was herself typically rheumatic. Under soda salicylate, vigorously employed, the symptoms soon subsided, and in a week he was walking

quite easily. A few days later I succeeded, for the first time, in making a thorough examination of the hip, finding absolutely no impairment of function and no tenderness whatever. Even after all these changes for the better, the physician first in charge, the father reported, called in, examined again, and was willing to make affidavit that the case was one of "hip-disease."

We have been educated up to a positive fear of making a diagnosis of rheumatism, especially muscular rheumatism. One dreads criticism, as do some malariaphobists. In some localities it requires much nerve to call a disease malaria. Those wiseacres who love to talk learnedly about subacute gastritis, perisplenitis, etc., lie in wait for the malarial man. Now I am pretty firmly convinced that many cases are correctly diagnosticated rheumatism outside of the large cities, and that good results follow. It has been my privilege as a specialist to come in contact with many rheumatic cases, and I have recorded a few that I shall refer to in this article.

The term rheumatism, as applied to the muscles, is deprecated by some authorities. They prefer to speak of myalgia. Myalgia simply means pain in a muscle, and nothing more. Rheumatism carries with it not only pain, but pain on movement, tenderness, and a rise of temperature, frequently associated with other constitutional disturbances. It does not necessarily mean a palpable myositis, as some clinicians would seem to intimate.

Dr. Garrod, in Reynolds's System of Medicine, defines muscular rheumatism as "an affection of the voluntary muscles, of an inflammatory nature (?) but unaccompanied with swelling, heat, redness, or febrile disturbance."

On October 11, 1878, a medical friend asked me to see his little daughter, two years of age, in whom the mother had observed, on the 2nd, a manifest indisposition. The rectal temperature was 103°. The day previous the child had eaten grapes and had swallowed the pits. A cathartic was administered immediately thereafter, and the pits were passed per rectum, the next evening (the 2nd). All day the little patient complained of pain about the shoulder and in the arm, was restless the next night, her temperature that day ranged from 102° to 103°. On the 4th the symptoms had subsided, and she was well on the 5th. There was no lameness of any kind.

On the morning of the 6th, while the mother was dressing the child, it complained of pain in the left thigh and in the left foot, crying if handled much, and was noticed walking a little lame—just a mere halt it was. This lameness continued without change one way or the other during the 7th, the 8th, and the 9th, and during the night any turning in the crib would be accompanied by moaning and crying aloud. There was no pain at this time in the arm or shoulder. Whenever any one grasps the hip in lifting her, an outcry is made. The father I knew to be a sufferer from occasional attacks of muscular rheumatism, and he regarded himself as a typical rheumatic. On my examination I found the child walking with a decided limp, more correctly described as a halt. She stood on the limb without any evident tenderness, and there was nothing abnormal in the position. The nates were unchanged, and there was no muscular spasm or resistance of any kind when I executed with the thigh the various movements of the hip. The joint was not tender by any test employed; there was no atrophy, no swelling or induration at any point; and no spinal sign or symptoms could be discovered.

Four days later, in the evening, I made an examina-

tion with the same care, and the lameness, as on the first examination, was absolutely the only sign I could discover. It occurred to me at this date that this lameness partook more of the nature of that due to paresis of the anterior tibials, yet I could not appreciate any atrophy. I learn that in the morning when the child is set upon the chamber-pot, it complains of pain in the left hip, and raises this side of the nates from the vessel. I had scarcely ventured on a diagnosis up to this time, but was gradually eliminating bone or joint disease. A day or so later I employed the faradic current diagnostically and the result was negative. The lameness and morning tenderness continued, gradually growing less, however, until the 28th, when all disappeared, and the case was discharged cured. There has been no recurrence of symptoms, however light, up to the present date.

It will be seen that the occurrence of pain in a fleshy part preceding lameness, tenderness, or pressure over the muscles, constitutional disturbance more or less marked, and a family history in which rheumatism is present, constitute the chief symptoms by which one is to be guided. Then the perfect freedom of joint movements, together with a limp which is suggestive of loss of power rather than the stiffish limp of chronic ostitis, known to all orthopedists as the "hip-limp," these two signs are quite significant. A curious case, which puzzled not only myself but several other gentlemen to whose diagnostic skill I always pay humble tribute, came under my observation in 1875, and I was unable to venture a diagnosis even until 1878, in October, when an attack came on which acted so much like an acute or subacute muscular rheumatism. The case in 1875 was this:

A female child, two and one-third years of age, living in a malarial locality, and the daughter of a gentleman who combines the rheumatic and the strumous diatheses, with the rheumatic notably preponderating, was taken in October of that year with pain near the left hip, chiefly confined to the gluteal region. Lameness came on simultaneously. There was no evidence of any traumatism in the case. At times there was stiffness of the lower portion of the spine and tenderness about the crest of the ilium, suggesting to one expert a low vertebral ostitis. Another inclined to ostitis of the hip, although neither he nor any one of us could find any muscular resistance about this joint. The child was lame, however, for nearly five months, some days less, some days more, some days not at all. There was no screaming or restlessness during sleep, and, indeed, there never was any pain that could be regarded as at all significant. The hip was blistered, moderate rest was maintained, and finally, just as I was coming to believe in an iliac periostitis, all symptoms subsided and the child was well.

It so continued until the second attack, which I studied more closely, and which was easier of diagnosis.

In October, 1878, on the morning of the 17th, without any premonitory symptoms, the child cried on getting out of bed and could with difficulty be dressed, so great was the hyperæsthesia about the hips. She was unable to walk, and was carried carefully down stairs. Remained sitting all day, unless she wanted anything not within reach; then she would hobble along by the aid of a cane, the left thigh being held all the while in flexion, so that the foot would touch the floor only by the ball and toes. If any one moved her she cried. The weather on the 16th—the day preceding the attack—changed from warm to cold, and it rained that night.

On the evening of the 17th she seemed bet-

ter, but was unable to walk upstairs, and cried this night five or six times while asleep. There was nothing to indicate to the father any febrile condition. She had to be carried down stairs on the morning of the 18th, and used the walking-stick in going about the floor. About the middle of the afternoon of this day I called to examine the patient and learned that she was playing in the yard. I could find only a trace of lameness, no swelling about the joint, no rise of temperature, and no resistance to any of the movements of the hip carried to the normal extent. She had not taken any medicine. Next day she went to school, and has remained well and free from lameness to the 1st of July, 1883, when she came in from school crying and complaining of pain in the left knee. In an hour all pain had subsided.

Again, on the evening of the 12th of August, she was quite lame and suffered much from pain about the same knee. She could not get up stairs without assistance. All day long she played without any lameness or pain and seemed to be in excellent health. There was no restlessness or disturbance of any kind during the night, and by the morning all signs and symptoms had vanished.

Now whether the attack in 1875 was one of subacute muscular rheumatism, or not, I am not in a position to decide, yet my belief is that theory is very strong. The strumous diathesis which in her case was, and is now, so well marked, stands in the way of my accepting any theory as to bone or joint-disease undergoing resolution. The parts must be without swelling, and yet the swelling may not be present when the examination is made. But for a clear history of this sign, and an uncertain history of a blow, I might have diagnosed rheumatism in a boy aged nine, who came under observation in April, 1881. The family history was exceptionally good, and he had been complaining only eleven days when he entered the hospital. The first symptom was pain referred to the left gluteal region, and this was on the 9th. It followed a kick on the hip by a playfellow, the boy reported. His sleep was disturbed by pain the same night, but he did not walk lame until the 11th, when he had a chill, which was followed immediately by fever, and the next day there was swelling over the hip. He was treated, as report went, for rheumatic fever, being confined to his bed because of his inability to walk. Finally he was sent to the hospital for supposed "hip-disease." On examination he was totally unable to walk, and it required considerable effort on his part to stand. The spine was normal, and there was no infiltration or swelling about the hip. Flexion and extension, when carried to extremes, gave him pain. The left natis was flattened and the gluteal crease obliterated. As he lay, in the dorsal decubitus the thigh was flexed and adducted to a slight degree. Under expectant treatment he soon recovered, and was ready for discharge six weeks after admission. The slight resistance to movements, the position of the limb, the chill and fever followed so closely by the swelling, which the parents remembered and described so well, and the present recovery, pointed to a traumatic cellulitis, which underwent resolution.

To diagnose, then, a muscular rheumatism in the vicinity of the hip, the following points are necessary if it occurs in a young child:

1. A rheumatic history in one or the other of the parents.
2. A sudden invasion, the first symptom being pain.
3. Muscular hyperæsthesia more or less pronounced.
4. Absence of deformity.

5. Absence of resistance to normal joint movements. In older children it seldom occurs, and in adults it sometimes occurs, but then it is more apt to be confounded with sciatica and to be associated with a lumbago. Difficulties in diagnosis will therefore seldom occur in adult life.

In the rheumatism which affects the immediate periarticular structures it so seldom affects this joint alone that one will have little or no occasion for differential diagnosis.

In youth, however, and in adult life we occasionally have articular rheumatism, affecting this joint, and the symptoms differ little from those of ordinary polyarticular rheumatism. In the subacute and chronic forms, it becomes difficult in certain stages of the disease to distinguish between this and scrofulous arthritis.

In May, 1880, I saw, with Dr. M. T. Scott, in Lexington, Ky., a case of joint disease in a girl fifteen years of age. There was the shortening, and the atrophy, and the deformity characteristic of strumous disease. Yet the amount of motion and the exceptionally clear history Dr. Scott gave me rendered the diagnosis comparatively easy. The deformity was of two years' standing, and there was phthisis in both father and mother. This strumous diathesis, I judge, served to retard recovery, even in the case so clearly rheumatic. I neglected to add to the above report that I found joint roughening in the knee, and in the shoulder, the elbow and the wrist. A year later the right hip became similarly affected but a rest for a week or two and anti-rheumatic remedies served to avert any of the subsequent results to which its fellow was subjected.

When the rheumatic inflammation is limited chiefly to the periosteal tissues in close proximity to the capsular ligament, signs may present that will render diagnosis exceedingly difficult. I have only within a few days satisfactorily accounted for some signs that I found in the fall of 1880 which led me to record as belonging to neuromimesis and some very positive signs in the winter of the same year which led me to diagnose a chronic articular osteitis peripheral and periarticular in origin. The case has been very puzzling for the past two and a half years and I am just now firmly convinced that I have unconsciously had under observation all the while a very interesting form of chronic periarticular rheumatism of the hip. The case will certainly bear a detailed history.

A boy eight years of age was transferred from the Home for the Friendless to the hospital in the latter part of September, 1881, without a reliable history. It was reported that the father was intemperate and worthless, and that the mother was dead; cause not known. Six or seven weeks prior to admission, he was observed to walk as if something ailed his ankles. The gait was unsteady, he complained at the beginning of pain about these joints, yet had no febrile reaction, did not take his bed, and in fact was not regarded as a sick boy. These symptoms were followed within two or three weeks by pain and stiffness at the wrist joints.

On examination nothing in the way of physical signs could be discovered save some rachitic changes in the sternum, in the sterno-clavicular articulations and at the knees. While the gait was a little unsteady there was no lameness, and no spinal tenderness could be elicited. There was no heart murmur that I could discover. When asked to locate the pain he pointed to the knuckles and to the tibio-tarsal joints. It was supposed that the boy was anæmic, and nothing more.

After a month's observation the case was still enve-

loped in obscurity, the gait was evidently that of an ankle-limp, and yet I could not detect any other signs of articular or periarticular disease. The whole limb was hyperæsthetic, the dorsal spine was quite tender, and the foot had been frequently seen hanging in equino-varus. It seemed as if there was after all a neurosis of spinal origin—possibly only a neuromimesis. Topical treatment was directed to the spinal area of tenderness, and there was a decided improvement noted in less than a fortnight. The gait did not become perfect, however, and in the latter part of December I subjected him to a careful examination of the hip, especially as I fancied he was slowly acquiring the hip-limp. I selected a hard table, removed all the clothing and found the following signs: Rotation inward with the leg fully extended could not be made to the same extent as could the fellow limb under the same circumstances, the limitation of motion was very marked; the thigh could be flexed and extended and abducted over as complete arcs as could corresponding movements be made in the other limb. Negatively, there was no atrophy, no infiltration, no signs in ilio-costal space or iliac-fossa. The diagnosis on the strength of the persistent lameness (so light that it could with difficulty at times be recognized) and this resistance to perfect rotation was recorded as chronic osteitis, probably central, in the neighborhood of the hip-joint. By the middle of July, 1881, the lameness was more marked and was regarded as characteristic, yet the signs at the hip had not increased. After an intermittent form of dysentery in the autumn his lameness became still more marked, and in December he complained of pain, referring it to a small area just below the trochanter major. In the spring it became less marked, and the signs seemed so insignificant, that in July even expectant treatment was suspended. He enjoyed perfect (?) immunity from symptoms and signs until the following September when the lameness returned. He complained much of pain in the hip, and there was found marked joint tenderness. A fly-blister was ordered, the symptoms subsided soon afterward, and in November another was applied. He was worse the last week of December. Without any special treatment he recovered from this exacerbation, and has continued well to date. Still, holding on to the diagnosis of bone disease, I wondered why the evolution was so slow, and on the last day of July I submitted him to a final examination, finding no lameness, no deformity, no shortening, no resistance to rotation or any of the joint movements. In fact, all that I did find was a little muscular atrophy back of the trochanter and a half inch atrophy of the thigh in its upper portion. While as above noted there is no lameness there is a certain peculiarity in his gait difficult to describe. He has now a well marked mitral regurgitant murmur.

At all events, my final diagnosis, of his case is this: A chronic rheumatic arthritis at first poly-articular, finally monarticular, the lesions in the last joint being periarticular with exacerbations, the joint becoming involved by contiguity at these times, giving rise to temporary synovitis.

Now I am prepared to state that the diagnosis of a lesion like the one in the case I have just reported ought to be easy, *i.e.*, with a knowledge of all the facts I had in my possession. The muscular element was not a part of this case, except in so far as the nerves affected the muscles. The same law holds good in chronic rheumatism, that holds good in other chronic diseases, *viz.*, the law of exacerbation, and with this before our minds, the peculiar phenomena of this case

are readily explained. At first we had the ankles affected, then the wrists, both perhaps in separate exacerbations. A little later came the hip symptoms, and these continued with long remission for two and one half years. The spinal tenderness and hyperæsthesia may have been due to a hyperæmia of the meninges and may thus have affected the nerves. With his heart lesion now fully developed, the final outcome of the case is a question of much interest.

The disposition of a rheumatic peri-arthritis to invade after long intervals the joint is well known in the history of this disease. We have at present a boy, nine years of age, in the hospital, who came several years ago under treatment for chronic articular ostitis of the knee. There were all the signs, including the deformity, that go to make up the features of such a case, and under the usual treatment a surprisingly good result was had within a few months. It seemed very odd that this boy, in the same ward with other boys who were even less deformed than he, should so far outstrip them in the race for health and soundness of limb, yet such was the fact, and I was compelled to think of his case as an anomalous one. After a year or two he was readmitted with similar symptoms, greater deformity, and in addition a marked distension of the synovial sac. Merely an unusually acute exacerbation, thought I, and surely enough it subsided promptly under rest and extension apparatus. Up to this time, bear in mind, he had not exhibited any signs in any of the other joints—but a few months later the other knee, after a contusion of the shin, took on inflammatory action, and the synovial sac soon filled. A double ostitis now, it seemed to me, only in this instance the synovial membrane became quite early involved. The prognosis was gloomy and the case caused me considerable anxiety. However, these symptoms subsided, contrary to expectations, and the deformity of both limbs was overcome. Later still, he began to complain of pain at his left tibio-tarsal joint, and in a few days redness and swelling followed. Then it dawned upon me that this was a case of chronic rheumatism, beginning as a monarticular variety, and subsequently involving other joints. Occasionally a case presents with an unmistakable rheumatic history, joint swellings, etc., and subsequently develops true bone disease. One is inclined to believe that even bone signs are but rheumatic signs until an abscess forms.

I well remember in all the details, a case that came under my care in 1881. It was in a stout, robust-looking girl, eleven years of age, who came into the hospital on August 26th, and a history was given which ran about as follows: In October, 1880, she began one day, without provocation, so far as the family could learn, to complain of pain in the right groin, and was feverish; two days later her ankles swelled, the febrile symptoms continuing, and among these symptoms profuse perspiration. In a week the wrists were puffy and painful. This attack kept her in bed for three months, and for two months longer she was unable to walk. Since March, however, she had been getting about, after a fashion, on crutches.

I found on examination that she stood with her weight on the left limb, the right nearly parallel with this, but rotated outward over a small arc. She was not able to walk without crutches. The right natis was very broad and quite prominent, the crease lowered. This fullness at the nates extended along the thigh in its upper third. Resistance was offered to extension of the limb beyond 165° , flexion was very nearly perfect; on rotation, which was limited to a small arc, a distinct roughening could be felt within

the joint. There was no joint tenderness elicited by examination. I could get no articular roughening at the knee, but at the ankle-joint the roughening was present and the movements were limited to very small arcs. The left ankle-joint presented limited movements, but it was not so with the knee and the hip of this side. There was very little atrophy, and while the limb was really an inch shorter, as measured from the anterior superior spinous process the pelvic accommodation was such that there was no practical shortening. There was no heart murmur. After two and a half months an abscess developed on the outer side of the thigh in the middle third, and there was extensive infiltration of the inguinal glands. A month later she passed from under my observation. I found before she left that the thigh could not be flexed beyond 90° or extended beyond 150° . The abscess had not opened. Now, one would naturally expect from this girl's history and from the signs recognized within the joint, that her hip lesion was rheumatic, and yet the suppuration coming on later would dispel this opinion, and the natural inference would be that the bone disease, or suppurative periarticular disease was coincidental. The roughening within the joint was exactly like that found in the ankle-joints. It is not so very rare to find periosteal suppuration about other joints that are rheumatic. I think, though, that if a careful examination be made, with the proper interpretation of symptoms and signs, it will not be impossible to separate the one from the other.

Now, a case like that of a boy whom I saw in the spring of 1881 is not so misleading. He came under treatment for chorea minor of seven weeks' standing. On the subsidence of this disease he developed a sub-acute polyarticular rheumatism. This was two months after he had come under treatment, and among the first symptoms were pains in the knee and thigh of the right side. About the same time he walked lame, favoring this side. It was not a characteristic hip-limp, yet my suspicions were aroused and I gave him a pretty thorough examination, getting negative results, with this exception; I could not make normal abduction. Under salicylate of soda he walked perfectly well in less than a week. But during this week the other hip presented the same sign. I saw him a month afterward and he had no relapse. Of course, with the absence of deformity at the hip and the puffiness at the ankle, one could not well arrive at any other diagnosis than that of subacute rheumatism.

Having illustrated the different phases of rheumatism as it affects the hip, both as an extra-articular and an intra-articular lesion, I feel that one who understands the symptomatology of rheumatism in its different forms, and examines the case with the fullness of detail that an obscure case should always demand—I feel, I say, quite sure that no flagrant error will be committed in diagnosis. The prognosis is nearly always good, both as to life and as to perfect restoration of function. If death ever does occur, it occurs from the heart complication. If deformity persists it grows less marked in time, and the ultimate result may be complete cure. The myalgic affections are very favorable as to prognosis. Even if recurrence of symptoms come on the tendency is not, like bone-disease, to impair the tissues more and more after successive exacerbation, but to gradually wear itself out. The tendency is always toward recovery.

THE TREATMENT of rheumatism need not occupy our attention long, for this is well considered in all textbooks in general medicine. Of course, if one makes the diagnosis of muscular rheumatism in a child there

is no special treatment indicated. The treatment on general principles will yield good results. It is the deformity we are called upon to treat, and this sometimes becomes very difficult. The majority of cases of stiff, or partially stiff, rheumatic joints require passive motion under an anæsthetic. This treatment is the orthodox treatment, but many find that poulticing the parts for several weeks and then employing passive motion is very effective. This is the plan essentially of the "bone-setters," and the success with which they meet should induce us to make more frequent use of it. Passive motion without an anæsthetic only induces muscular resistance, and on each attempt the resistance is the greater. I am not speaking now of the plan wherein previous poulticing forms an essential part of the treatment. In studying cases of ankylosis of the hip, in which bone-setters have achieved success, I find that their most brilliant results have been in rheumatic cases.

An important question in therapeutics is this: should the part be put at rest for a week or two after a brisement force under an anæsthetic, or should passive motion be continued daily without the anæsthetic? In other words, how long should one wait to begin such daily motion? There is testimony on both sides, but I am very sure that I have seen the best results in cases where at least a week's rest followed the operation.

I saw a case about a year and a half ago, in a young girl eighteen years of age. Both hips had become horribly deformed after an acute attack of rheumatism. She was entirely helpless, and the ankylosis seemed almost complete. For months she had not been out of an invalid chair. The patient came, on my recommendation, under the care of Dr. Jno. H. Ripley, in St. Francis Hospital. He employed great force under an anæsthetic in freeing the right hip of its adhesions, and placed it, after a few movements in flexion and extension, at an angle of about 150° and put the parts at rest. He did not repeat the operation for several weeks, and then the force was very slight. Two operations on this limb served to bring it not only in good position, but to bring about a good arc of motion. Later he moved the left hip, and found adhesions here much greater than those of the right side. The final outcome was a pair of limbs with which she could go about with comparative ease.

Mr. Brodhurst very properly insists on complete flexion in these attempts. Extreme extension should be avoided for fear of surgical fracture.

II.

CHRONIC RHEUMATIC ARTHRITIS (MALUM COXÆ-SENILE.

We find a disease of the hip appearing in the latter part of adult life, described by authors as *malum coxæ senile*, and while there are many cases in which no rheumatic history can be found, the impression prevails, nevertheless, that there is a rheumatic diathesis present, called into action by traumatic influence. I have met with a large number of cases, and I must confess that I fail to find in the majority any characteristic rheumatic element present. The inception is not marked by notable symptoms. Frequently it is not unlike that of a chronic articular osteitis. Bone changes do occur, yet they occur as a result of osteoplastic inflammation, and then we have more properly an arthritis deformans.

The pathological changes are not constant enough to assign to the clinical features of the disease a name

based on morbid anatomy. In some cases the structures within and without the joint are implicated to a large extent, and resolution occurs to such a degree that one appreciates on late examination nothing more than the characteristic intra-articular grating of chronic rheumatism. In some cases, again, the tissues immediately involving the joint, such as the ligaments and periosteum, seem to be the only structures involved, and the resistance to movement in the convalescent period depends on periarticular adhesions. While in another and a more formidable class, bony changes take the form of osteophytes, or stalactites, locking in a measure the articulation. If one looks over the pathological specimens in the different museums a feeling of therapeutical despair comes over him as he examines the old rheumatoid hips. The head of the bone has assumed all manner of shapes; osteophytes and stalactites encircle the rim in irregular arrangement, the cartilage has disappeared, and one really wonders how any measures looking toward the restoration of the joint functions could have ever been successful.

It is a clinical fact, notwithstanding these cabinet curiosities, that much in the way of relief, either through time or therapeutics, is accomplished. It is also a clinical fact that the ankylosis is in many cases far from complete, and that a patient with a limited amount of motion, and with the limb not deformed to any exaggerated degree, gets about quite comfortably.

Before proceeding to the clinical history of these chronic forms of rheumatism occurring in persons beyond the age of forty or fifty, I shall refer, at least, by way of illustration, to certain forms that begin as acute, or subacute inflammations, and are found in adult life prior to the age of forty.

A very good case for study came under my observation in 1879, in the person of a vigorous looking man twenty-five years of age. His vocation for several years had exposed him much to cold and wet weather, and in the winter of 1876-77 he had an attack of what was called lumbago, from which, however, he recovered in two or three months. In the spring of 1877 he was thrown violently from a sleigh, striking upon the left hip, but was not bruised in the external parts so far as he could determine. Yet he was stiff and lame for a week or two thereafter and suffered a moderate amount of pain at the hip. Within two weeks the symptoms subsided and he was quite well again.

A week later, after unusual exposure to wet weather, he "took cold," and this "seemed to settle in his joints." The hip, knee and ankle-joints were affected. The two last named were much swelled, very painful, and very tender. He suffered also from shooting pains in the thigh and groin, yet he did not give up work for a month. The symptoms and the signs became so severe that he finally had to desist, and for a couple of months he was barely able to hobble about on crutches. Then the knee and the ankle symptoms subsided, while the hip was subjected to treatment by weight and pulley and a hip-splint for a year. At one time in the early part of the extension treatment there was very annoying reflex muscular spasm about this joint. On examination I find four inches atrophy of the thigh; resistance to flexion beyond an angle of 135° , to extension beyond 165° , to complete abduction, and to both adduction and rotation even to a limited degree. Pain is felt in the joint and in the distribution of the sciatic nerve on concussion and on pressure over the trochanter. The inguinal glands are large, and the natis is flattened. There is moderate lordosis. Under either the thigh was moved over a large arc, and ad-

hesions apparently within the joint were pretty thoroughly broken up, but no bony grating could be recognized. The muscular resistance which before was so marked had now disappeared. There was some muscular resistance, however, to complete extension. I could not detect any real shortening of the limb, but there was an apparent shortening of a half inch. The circumference of the thigh measured four inches less than that of the right, and the calf measured one inch less. No rheumatic signs could be discovered at the knee or at the ankle. On coming out from the anæsthetic the movements could be made quite as easily, though the muscles were so deficient in tone that he could not voluntarily flex and extend. In other words there was found the remains of an arthritis and a marked loss of power in the periarticular muscles. The faradic reactions were good, thus eliminating a true paralysis.

Now, while the man presented a case of true joint-disease, with the characteristic muscular atrophy, the process had been unusually acute, and yet I cannot help believing that the same tissues were involved as are involved in older persons. Senile changes in tissues we know proportionately modify the inflammation. That this was a case of monarticular rheumatism, although apparently excited by trauma, I think there is abundant evidence.

I had an opportunity of seeing a case in the active stage. The patient was a continental traveler, and he was thirty-nine years of age. He was very helpless, and any attempt at passive movement of the right hip caused great pain. The whole groin and girthed region were infiltrated to a marked degree; the limb was lying nearly parallel with its fellow, but was in outward rotation. There was no real shortening, the position of the pelvis giving a shortened appearance to the limb.

The parts about the knee were the seat of pain and swelling. He had been suffering very acutely for two weeks or more and was much exhausted. Hence my examination was not very satisfactory.

The first symptoms were a heavy dragging feeling and pain in the right thigh, three months before. He had been much exposed to damp weather while traveling in the West. The symptoms were aggravated by walking; in fact, it was not more than a week before he was confined to bed with the usual constitutional disturbance of an inflammatory disease. The inguinal glands soon became infiltrated, and the physician in attendance found suppuration. After a six days' exacerbation, he had a remission lasting two or three weeks. The symptoms subsided, but the lameness and stiffness of the hip continued without abatement. A relapse followed.

I saw him January 23d, and employed hot fomentations. He was able to get about on crutches by the first of February. Anti-rheumatics were administered, massage employed and later the faradic current was used daily for a couple of weeks. By April 1st he was walking without any assistance, the limb presented very little deformity, and he went "on the road" again, pursuing his vocation. He made a very fair recovery.

The case illustrates a clinical fact recognized throughout the whole range of medicine, viz., that acute diseases resolve with infinitely less impairment of function than those that are essentially chronic in nature. My prognosis in this instance had been gloomy enough.

In the early part of the present year, a man fifty years of age, came under my care for a peripheral

paralysis, and I saw in him a peculiar limp that led me to examine the hip, which was found ankylosed in the straight position. He claimed to have been perfectly well two years ago, and to have come of a family free from any rheumatic disease. Never in his life had any other joints been affected. In 1869, a man gave him a kick in the groin, and the superficial parts suffered contusion, which was followed by pain and lameness for six months. He did not give up work and had no special line of treatment, but gradually got better, and within less than a year the functions of joint were regarded as normal.

There was no return of symptoms or signs until the beginning of 1881, when his attention was drawn to the limb again by a peculiar cramp-like feeling in the groin immediately before or after a storm. He found, too, that the joint this year was not so useful. He favored it at first and finally a well-marked limp was manifest. At no time has he been compelled to give up work, and at no time has he had any very acute exacerbation. The case, it would seem from the history, had progressed slowly and almost without an incident. What connection the lesion fourteen years ago has with present one it is hard to determine. That the case at present is one of senile joint disease I am well satisfied.

I knew a man fifty-eight years of age who attributed a similar condition of the hip to the wearing of a truss, and a surgeon of world-wide reputation, after examining him on two different occasions, wrote me that he looked upon the truss as the cause of the chronic rheumatic arthritis! The hernia first appeared at the age of fifty-five. A year later, he began to walk lame, and during the next twelve months the following signs slowly developed: limitation in the arc of motion, morning stiffness, pain in the groin after a storm, rotation outward, and apparent shortening. I could not elicit any facts pointing to a rheumatic element either in himself or in any member of the family. He walked when I first saw him (which was two years after the first symptom) with a very marked limp and was compelled to use a cane. From both the umbilicus and the anterior superior spine I made out an inch and a half shortening of the limb. The patis was very broad and while the trochanter stood out very conspicuously from the pelvis, it did not appear above Nelaton's line. The position was slight flexion, and abduction. The limit to extension was 160° , to flexion 135° , and the arc of rotation was very small. Abduction was resisted the moment the act was attempted. I could not recognize any joint grating, but there was a peculiar crackling sensation imparted to my hand as I moved the hip. This I found was in the periarticular tissue. The thigh was three inches smaller than its fellow, and the knee and the calf one inch respectively.

Now the two cases I have just narrated show quite clearly the clinical history, and from these and others we can learn that:

1. The invasion is not marked by any distinct train of symptoms.
2. The progress is exceedingly slow, and marked by long remissions and short exacerbations.
3. The signs are, first, stiffness; second, change in position or limb; third, shortening.
4. That a clear rheumatic history is absent in the majority of cases.

Exceptionally, however, we do get a well-marked rheumatic history. My attention was called to a case while writing this article in which a chronic polyarticular rheumatism began first in the right hip, slowly invading the right knee, then the left hip and the left

knee. On examination I find the left hip strongly adducted and the foot everted, while the other signs are further characteristic of joint disease. The right is limited as to movement, and the knees on movement impart to one's hand the distinct rice-body sensation.

The diagnosis is not always unattended with difficulty. I have seen cases of sciatica with the peculiar deformity, pain on movement, and periarticular infiltration that belong to rheumatic hips.

As a rule, the neural symptoms are sufficiently well marked to enable one to decide the question in a differential diagnosis. Anterior crural neuralgia gives more of the neural signs that belong to rheumatic arthritis of the hip than does sciatica.

A good point in differential diagnosis between sciatica and joint-disease is this: place the thumb of your hand corresponding to the hip involved over the tuber ischii, the middle finger over the trochanter, and the tip of the index finger fully extended, will fall over that part of the gluteal region along which the great sciatic passes.

Pressure now with the index-finger will elicit pain in the terminal branches of the nerve. If painful sensations do not follow this procedure, take the other hand and place thumb and tip of middle finger over trochanter and tuber ischii as above. The tip of the index-finger will fall over the capsular ligament, and deep pressure here will produce pain in the joint. This simple test I have found very serviceable in practice.

Fracture of the neck of the femur presents many signs in common with senile arthritis, and the differential diagnosis becomes very awkward if the fractures have been impacted. The solution of the question will rest largely on the history of the invasion. If one learns that the patient within the first week following the injury was confined to bed, or was unable to walk, and that several weeks elapsed before the ability to walk was regained, presumptive evidence is furnished in favor of a fracture. And a fair amount of cross-examination in a patient, however stupid he may be, will enable one to judge whether the disease began insidiously or not. The greatest obstacle in the way of making a diagnosis is incomplete examination. The ease with which one can glance at a hip, estimate measurements by the eye, and take for granted certain probabilities as facts, will always be a stumbling block in the way of correct treatment.

The treatment of chronic rheumatic arthritis of the hip is not so simple as one would imagine. It is not as easy to secure rest in the adult as it is in the child. Time is of more value to one than it is to the other. Naturally it would seem that counter-irritation in a disease so sluggish is a very important factor in therapeutics. It is exceedingly hard, though, to carry out a thorough course of counter-irritation outside the wards of a hospital. The disease, too, will have made considerable progress before medical or surgical advice is sought. The family physician, it may be, is asked in a casual way about this peculiar stiffness, or this pain after exercise. A liniment may be ordered and directions given the patient to "call in some time soon" and submit to a thorough examination. Temporary relief may follow the application of the liniment; the case goes into a remission, and the thorough examination is not made. It is so easy, too, to tell the patient that this is simply a neuralgia, or a cold, or a strain, or an infirmity of age. Finally when the stage of shortening and deformity appears, the examination is made for the first time. So that treatment rarely begins until this period is reached. My own experience in the use

of the iodides and of the salicylates does not enable me to speak with any confidence as to the value of these remedies. If fibrous ankylosis exists, I favor breaking up of the adhesions under an anæsthetic and the subsequent employment of faradism and massage to the muscles that have been so long in disuse. I have seen some decidedly good result follow this plan of treatment. I have already reported a case in which the result was very gratifying.

Dr. H. P. Geib, of Stamford, asked me to see a case with him last spring, and as the clinical history is not only well illustrated, but also the value of the treatment I have just advised, I propose giving some of the more-important details. The patient was a gardener of robust frame, forty-seven years of age, and had always been in good health prior to the beginning of his present infirmity. About a year ago, while much exposed to wet weather, he first experienced a dull pain in the vicinity of the hip and at the knee. It did not cause him much annoyance until lameness came on a few weeks afterward. No interest was aroused in his case because he rarely made any complaint. Exacerbations of pain and stiffness were induced, he thought, by weather changes. Still he became more lame, the lameness increasing very slowly, yet even this did not occasion any alarm. I found him standing with the right limb advanced, in slight flexion and outward rotation. He walked exactly like one who had made an unsatisfactory recovery from a fracture of the neck of the femur. There was a half-inch real, and an inch and a half practical, shortening of the limb, one inch atrophy of the thigh and no atrophy of the calf. The thigh was fixed on the pelvis at an angle of 165° ; though if a little force were employed a small arc of motion was secured, and at the same time a crackling sensation was felt, as if adhesions in the joint were giving way. The changes in the appearance of the nates were very marked and very characteristic.

What pain he had was referred to the trochanter and in the course of the anterior crural. I could not get any evidences of rheumatism in the history, or any account of a fall or injury as exciting cause. Blisters and anti-rheumatics did not effect any good, and two months afterward, assisted by Drs. Geib and Hungerford, I broke up the adhesions very easily under ether. He was kept at rest in bed two weeks without an anæsthetic; the parts were soon quite free of any resisting bands and under friction and rubbing the recovery was nearly complete when I last heard from the patient.

When the exacerbations are present, symptoms are to be treated, and for the pain hot fomentations yield the best results. Stimulating liniments naturally suggest themselves, and pain disappears after a few applications. Anti-rheumatics internally certainly modify the duration, and whichever drug the practitioner is best pleased with is the drug to employ.

SELECTIONS FROM JOURNALS.

THE USE OF ANTIMONY IN CERTAIN SKIN DISEASES. MR. MALCOLM MORRIS, F.R.C.S. Ed., Surgeon to the Skin Department of St Mary's Hospital, writes:—

Considering the close chemical affinity of the three important drugs, phosphorus, arsenic, and antimony, it is somewhat surprising that little use should have been made of the last in the treatment of diseases of the skin. Of the three, arsenic is the one which has gained the greatest notoriety. It has passed alternately

through the phases of great popularity—being considered by some a specific for every form of skin affection—and of equally undeserved disrepute. Now, however, we are forming a more rational estimate of its value; and, while acknowledging its utility in a few certain well defined conditions, I have thought it might prove useful to bring before this Section some of the results observed during the administration of its near ally. A certain share of attention has also been paid to phosphorus, but antimony has hardly been noticed. The probable reason for this is that antimony has been looked upon as a drug to be avoided, on account of the dangerous symptoms produced by even apparently moderate doses. But the same argument that applies to arsenic, and strychnia, and other drugs, applies with equal force to antimony—that the action depends entirely on the dose employed. We find in text-books that it has two actions, in the smaller pharmacopœal dose depressant or anti-phlogistic, in the larger dose emetic. But no mention is made of its alterative action in repeated small doses. The sulphide, in combination with mercury and guaiacum, is the only preparation that has been used for this purpose.

Tartar emetic, or tartarated antimony, is the preparation I have used in these investigations, the largest dose being 1-32 of a grain, or $7\frac{1}{2}$ minims of the vinum, only half of the minimum dose of the *British Pharmacopœia*. I must mention that, in all cases in which the effect of the drug has been watched, little or no local treatment has been used.

I will state now, in as concise a manner as possible, some of the more important diseases in which I have used the drug, leaving a more complete and detailed account for another opportunity.

Eczema.—It is now several years since my colleague, Dr. Cheadle, pointed out to me the value of antimony in the treatment of the acute form of this disease. In the majority of the cases which have come under my care, its beneficial effect has been both marked and rapid. In the acute general eczema of adults, which usually commences somewhat suddenly by heat and burning on the flexor surfaces, and on other characteristic positions, and is soon followed by abundant exudation of clear fluid, and in the form known as eczema rubrum, I generally begin with four or five minims of the vinum antimoniale three times a day, increasing the dose gradually up to seven minims. After a few doses the exudation ceases, and the local irritation is much relieved; but, in order to prevent a relapse, it is necessary to continue the treatment until all traces of the eruption have disappeared. In acute eczema of children, the dose should be in proportion to the age of the child—half a minim or less up to six months, and one minim or less up to a year. As a rule, I have found both children and adults bear these quantities well, neither sickness nor diarrhœa being produced. In the case of aged persons, however, the dose should not exceed three or four minims to begin with, as diarrhœa may result from the administration of a greater amount.

In the subacute forms, both of children and adults, similar doses, but continued for a longer period, are necessary. In chronic eczema, especially when localised, the use of antimony is less often successful; but even in this troublesome form, it relieves the acute exacerbations, and is occasionally followed by cure, when other methods of treatment have failed.

In eczema impetiginodes of children, I have noticed little benefit from the drug till the scabs have been removed, and formation of pus checked by local treatment. Simple impetigo contagiosa from a local cause is not included in this category.

In the various forms of so-called lichen that occur in children, I have found antimony in the previously mentioned doses of the greatest value in relieving the irritation—a feature in which it resembles arsenic.

Erythema.—In most of the cases of erythema met with in practice, the eruption disappears without any special treatment; occasionally, however, when the disease is continued by fresh outbursts, antimony is of great service in modifying the course and relieving the burning and heat. There is a condition which is not clearly described either in special books on the skin or in those on general medicine, that I have found to be greatly benefited by antimony, whereas it is aggravated by arsenic. The attack usually commences suddenly, with heat and burning of the skin of the face, which is followed very rapidly by great swelling, that often involves the eyelids. The smarting is severe, and pain is experienced when the part is touched. Occasionally, vesicles or bullæ are formed on the swollen and inflamed skin. The patient feels ill, but there is no special rise of temperature. The disease usually runs its course in from three or four to ten or even twenty days. The chief feature of the disease is that it is almost certain to relapse. By some authorities, this is considered to be idiopathic erysipelas—the public always call it so; by others, it is looked upon as a peculiar form of eczema, and said to be associated with gout. I have seen several cases, and am inclined to think it may be called relapsing erythema, as it has none of the dangerous qualities of genuine erysipelas. Antimony acts in this disease as in acute eczema, by shortening the attack and diminishing the severity of the symptoms. It should be continued for a considerable time after recovery, to prevent, if possible, a relapse.

Prurigo.—In this troublesome affection, frequently met with in our out-patient rooms—the relation of which to the severe form known on the Continent as Hebra's prurigo, Mr. Marrant Baker pointed out at the International Congress of 1881—antimony is of great use. Three or four minims of the vinum, continued for a long period, allays the itching to a large extent, and often prevents the relapse of eczema. In several cases, after arsenic, iron, iodide of iron, cod-liver oil, and numberless other tonics had been tried, antimony was the only drug that produced any benefit whatever. When given in the before mentioned doses continuously for more than a year, I have never seen sickness, diarrhœa, sweating, or debility; but, on the contrary, the appetite improves and the weight increases. I have not had the opportunity of trying the remedy in a patient older than $18\frac{1}{2}$ years suffering from this disease; but in one particular case of that age, the benefit was most marked while the drug was being taken.

Sycosis.—I have given antimony in five well-marked cases of this disease; in four, it did not seem to produce any effect, either beneficial or otherwise; in the fifth, there was considerable improvement after the vinum had been taken a fortnight in seven-minim doses. It seemed to relieve the pain and burning; but, although the remedy was persevered with for over three months, the improvement was only temporary. The local treatment while the drug was being administered was olive-oil or vaseline. In none of these cases was there any bad effect; no depression, diarrhœa, sickness, or sweating.

Urticaria.—In a few cases of chronic urticaria, I have found antimony, like arsenic, of service in checking attacks, so long as the remedy was continued.

Psoriasis.—Though, in the majority of cases of

psoriasis, arsenic is to be preferred to antimony, I have elsewhere called attention to the fact that, in certain persons, arsenic not only fails to relieve, but even aggravates the disease. I have, in some of these cases, tried antimony, and have noticed in a few instances that improvement took place, while in others it seemed to have no effect.

I have been obliged to condense the facts in this paper into very brief space, but two points I wish especially to lay stress on; first that tartar emetic—in doses of 1-240 to 1-32 of a grain, according to age—can not only be tolerated, but seems to have a decided tonic action: secondly that it proves useful in those acute forms of skin disease that are usually aggravated by arsenic.—*British Medical Journal*.

HOT WATER IN PUERPERAL SECONDARY HÆMORRHAGE.

BY ZINA PITCHER, M. D., KALKASKA, MICH.

September 10th, at 8 P. M., I was called to see a case four miles north-east of this place. No word was left as to the trouble. I went immediately and found on arriving, the patient, a stranger, a weak, anæmic looking woman, suffering from puerperal secondary hæmorrhage. I immediately gave a full dose of fluid extract ergot and proceeded to make my examination. Externally I could not detect the uterus at all. On passing my hand into the vagina I felt the organ. The impression imparted to the hand was that of a half filled bladder. Manipulations were of no avail. Ice and cold water, which had been thoroughly tried by a mid-wife, before I arrived, produced no effect. Remembering that I had a Fountain syringe in my valise, I detached the rubber hose and taking a teakettle off of the stove, I fitted it to the spout, and passing the other end into the vagina elevated the vessel. The result was all any one could wish for; the hæmorrhage diminished rapidly and in a very few minutes had completely stopped. I then withdrew the tube, applied a wide bandage and compress, elevated the hips, and administered another dose of ergot. I waited about an hour, but as all was quiet, started back, after having given directions as to the patient and the medicine I left. On calling next day I found the patient weak but comfortable. I gave her a tonic and she continued to improve rapidly and is now in good health.

This little experience is calculated to teach two things: First, that the greatest care of a patient after parturition cannot be dispensed with; secondly, that the good results derived from the liberal use of hot water are unquestionable, and that it is one of the most valuable hæmostatics that nature has given us.—*Medical Age*.

EPITHELIAL CANCER OF THE GLOTTIS AND TRACHEA—TRACHEOTOMY—DEATH.

BY W. M. FUQUA, M. D.

November 15, 1882, Mrs. C., a widow with one child, came to my office for consultation relative to some obstruction in her breathing. She had always been well and strong until six or eight months previously, when she began to suffer from cough and expectoration of muco-pus, and occasionally a little blood. Her breathing gradually became shorter, more difficult and distressing, so that she was unable to attend to her household duties. Prior to this dyspnoea she had been an excellent vocalist; is thirty-eight years of age, and

weighs one hundred and forty pounds. There is no evidence of organic disease of the heart or aneurism of the arch of aorta or syphilitic history. She sleeps but little, and this under morphia, and when asleep the stridulous breathing is very distressing. Auscultation revealed sibilant and sonorous râles in the upper portion of the left lung, and the tracheal sound was of the same character as we hear in membranous croup. Externally there was an enlargement quite perceptible just in front of the body of the thyroid cartilage. Examination with the laryngoscope revealed an ulcer at the base of the epiglottis, with thickening, induration and congestion within and around the glottis. The vocal cords could be seen very imperfectly. She takes her food cautiously, and is often greatly distressed by the escape of fluids into the trachea. The danger of her situation was explained to her, and no hope of relief was held out except by tracheotomy, and this only as a "dernier ressort." She was directed to spray the ulcerated surface with a solution of bromide of potash, the external enlargement to be painted with iodine, and to take the arsenite of potash in ten-drop doses three times a day. From this period up to March 1st I saw this lady several times without any change for the better. She had lost flesh, and it became evident that there was some malignant disease, presumably epithelial cancer of the larynx and trachea. After this period I saw this patient no more until the second of June, when Dr. Fairleigh and myself were called in consultation with Dr. J. C. Whitlock, when we unanimously agreed that tracheotomy was imperative, only for present comfort and prolongation of life.

On the 6th inst. the operation was done, Drs. Clarke, Dulin and Williams being present, together with Drs. Fairleigh and Whitlock. After laying bare the cricothyroid membrane and the three upper rings of the trachea, this space was divided, which was followed by blood from the thickened mucous membrane pouring out within the trachea, which momentarily threatened her life. After the bleeding ceased, the tracheal tube was introduced, and at once her respiration was improved, but not to that extent we expected, and it now became evident that some obstruction existed farther down the trachea or within the bronchi. This obstruction was doubtless due to infiltration of carcinomatous matter and narrowing of the large bronchi.

On the 9th inst. I visited the patient again with Dr. Whitlock, and introduced a larger tracheal tube. Her breathing was much better, and she was more hopeful. On taking fluids, I found that at least half was expelled through the tracheal tube, which was due to destruction of tissue. Her condition continued about the same for several days, when finally she was awakened from sleep by cough at night, which was followed by copious hæmorrhage, evidently from her lungs, which, in a short time, induced death by strangulation.

Remarks.—This case is only remarkable because of its rarity. Dr. Delafield, of New York city, before the New York Medical and Surgical Society, April 22, 1882, reports a somewhat similar case, and states that, so far as he was informed, there were only three or four cases on record.—*American Practitioner*.

ABSTRACT OF A PAPER ON DEFLECTION OF THE NASAL SEPTUM.

BY

JOHN N. MACKENZIE, M. D., of Baltimore.

After some introductory remarks on the influence of nasal obstruction in the evolution of morbid conditions of the lower organs of respiration and middle ear, Dr. Mackenzie proceeded to comment on the frequency of the deformity and the unsatisfactory manner in which the subject is treated in surgical works. Differences in the direction and form of the external nose depend to a great extent upon corresponding peculiarities in the septum, so that when Tennyson sings of the "nose, tip-tilted like the petal of a flower," it is only the poetical expression of the fact that the septum narium of his heroine was deflected. Adherence to national custom was given as the probable explanation of the relative infrequency with which asymmetrical position of the septum is encountered among different races. The elegant aquilineity of the Caucasian nose is attributed to the careful manipulation of the nurses, and we are told, that, among the Persians, the eunuchs who had charge of the royal offspring, were accustomed to introduce tubules into the nostrils to preserve that symmetry of the organ, which was essential to him who aspired to the throne. Acquired malposition is most commonly met with in youth, and usually, and more frequently in men than in women, the defect is more exposed to the agencies by which it is produced.

Malposition also occurs as the natural result of the changes in the skull of old age. The congenital character of the nasal deformity is a matter of individuality of the same family would lead to the belief in an inherited proclivity to deflection, and, according to the author's observation, the same is true in regard to certain deformities of the turbinated bones. The anomaly may be congenital or acquired. In the latter case it is either the result of traumatism, or occurs as the sequel of a pathological process. Under the first head may be included asymmetrical conditions of the bony and cartilaginous firm work, which accompany or follow irregularities in the embryological evolution of the nasal chambers and their dividing partition. Morgagni thought that the more rapid growth of the septum itself, as compared with "the other bones of the upper jaw," must be reckoned among the causes of the malformation, and elongation in its vertical diameter has been insisted on by subsequent observers as provocative of the same result. Undue arching of the palatine process of the superior maxilla and a diminution, therefore, of the vertical diameter of the corresponding nasal fossa, as well as other asymmetrical conditions of the nasal chambers, furnish the explanation of the malformation in a certain number of cases. These asymmetrical states are usually associated with imperfect development of the corresponding side of the skull, and are either the result of a teratological process or are due to the operation of accidental influences. They have been found, for example, in the embryo and foetus, and occur in connection with the imperfect cerebral development of idiots, and Ziem has shown that nasal disease itself may be an important factor in their production. Among the causes of acquired deflection, the most common is traumatism. Dislocation of individual parts of the septum, fracture of the cartilage or bone, or both, occur in depressed fractures of the nasal bones, the accident generally involving the cartilaginous septum, fracture of the vomer being rare. It is possible that injury to the nose and

consequent deflection of the septum may occur during difficult parturition, and it is also conceivable that the introduction of the finger into the nose, as suggested by Queralmalzius, Cloquet, and others, may lead to displacement, but this as well as the use of the hand in cleansing the organ, must be looked upon as an infrequent cause of the deformity. Deflection may also be produced mechanically by tumors of the nasal and accessory cavities, excessive hypertrophic states of the turbinated bodies and bones, and other irregularities in the conformation of the outer nasal wall. Diathetic diseases (rickets, syphilis, osteo-malacia, etc.) by involving the nose, lead to malformation of the septum. Queralmalzius thought the prolonged use of sternutatories and astringents brought about deflection, by contracting the pores of the vessels—a process which he compared to incurvation of the written side of a sheet of paper when held before the stove to dry.

The deformity may consist either in simple deflection to the right or left, in which case the inclination is usually confined to the cartilaginous portion and anterior part of the bony septum, deflection of the posterior third of the vomer being exceedingly rare, or the septum may be bent in a more or less sigmoid curve, or flexed in an angular manner. Not infrequently it is inclined neither to one side nor to the other, but presents, usually, in its bony portion (but sometimes at the junction of the cartilage with the vomer and ethmoid), an oblique, rounded, bony ridge, which produces more or less occlusion of the nostril into which it projects. The crural surface of the septum, corresponding to that of the alar bone, is usually concave. This form of curved septum, which has been recently carefully noted by Zachewskall, did not escape the observation of Morgagni, who was the first to describe it. The deflection may affect the septum as a whole or be limited to the cartilage, the perpendicular plate of the ethmoid, or the vomer. In the latter case it usually takes place at the juncture of the latter with the perpendicular plate, or the articulation of the latter with the cartilaginous septum, the condition here being, according to Harrison Allen, one of hyperostosis of the sutural line. A very common point of irregularity in the vomer is along its interior edge, in the neighborhood of the nasal spine, where it is associated with a similar projection of the cartilage, the two together forming a more or less wedge-shaped process, whose apex lies across the floor of the nostril. Occasionally an s-shaped incurvation, from above downwards, of the bony septum is seen, in which both the vomer and perpendicular plate participate. By far the most common seat of deflection is, however, the cartilaginous septum, which presents a great variety of irregularities and abnormal positions. The principal are; 1. Simple bulging on one side and concavity on the other, the smooth rounded dome of the deflected portion occluding the nostril of that side and giving to the eye the impression of a polypus. 2. Wedge-shaped projections, the apex of the wedge projecting into the obstructed nostril, and running either in an antero-posterior or vertical direction. The opposite side of the cartilage may or may not show a corresponding depression. 3. Spurs of the inferior border, either confined to the anterior portion or running the whole length of the cartilaginous septum. These are often associated with a depression of the septum above them, which bulges into the fossa of the opposite side. 4. Irregular nodular growths of the cartilage of varying size and appearance, often extremely vascular, and giving rise to deformity, which may be looked upon rather

as cartilaginous outgrowths than true deflections. 6. S-shaped incurvation, producing obstruction of one nostril anteriorly and the other posteriorly. 6. Lateral displacement of the inferior border. 7. Two or more of the above combined. Dr. M. next dwelt upon the evils which follow as the natural results of the deflection, and its importance as an etiological factor in the production of throat and middle ear disease, and, in connection with this part of his subject, called attention to the development of laryngeal and aural disease through the reflex agency of the vaso-motor and trophic nerves as the result of pathological conditions of the turbinated tissues of the nose. Passing, then, from diagnosis and treatment, the operations with the galvano-cautery, knife and snare were mentioned, and resection, as practiced by Dieffenbach, Heylen, Chassaignac, Demarquay, Ingals and others was commented upon. Adams' operation, with the modification practiced by Jurasz, were described, and the procedure known as Steele's, viz : triangular division of the cartilage and subsequent replacement, was shown to have originated with Dr. Bolton, of Richmond. Of the various forms of plug used to retain the septum in its position, gutta percha was specially recommended, and the use of rubber bags, introduced into the nostril and inflated, were suggested, as producing less irritation and securing more equable pressure than the other forms of plug in common use. In reference to the operation of perforating the cartilage, as practiced by Blandin and others, Dr. M. said : "Apart from the creation of a condition which disturbs the physiological relations of the air-current, the tendency to scabbing and the difficulty of thoroughly cleansing the nostril after the perforation, this operative procedure must be regarded at the best only as a palliative measure, the anatomical relations, and, therefore, the most disagreeable feature of the case, remaining the same, and the nostril deprived of its natural functions. It is only, therefore, in exceptional cases, where other operative procedures are contra-indicated or impossible, that the operation will be called for." After referring to the operations on the bony septum with the dental engine and saw, and the suggestion of Dr. Delavan to remove the turbinated bone of the unobstructed nostril in cases where it was hypertrophied before resorting to straightening the septum, Dr. M. called attention to certain cases of deflection of the bony septum where operative procedures are difficult of execution, and recommended as a substitute for operation on the septum itself removal of the turbinated bone of the obstructed nostril, relating a case where he had successfully performed the operation.—*Maryland Medical Journal*.

MEDICAL NEWS AND NOTES.

The Remains of Harvey.—We are requested by the Registrar of the Royal College of Physicians to state that the remains of the illustrious Harvey, now lying in the vault under Hempstead Church in Essex, will be removed, with the sanction of Harvey's next-of-kin, to the Harvey Chapel, and placed therein in a sarcophagus provided by the Royal College of Physicians. The ceremony will take place on Thursday, October 18th, being St. Luke's day; and Fellows of the College intending to be present on the occasion must signify the same to the Treasurer or Registrar of the College on or before Thursday, the 11th instant, from whom all necessary information may be obtained.

Professor Lister in Buda-Pesth.—Professor Lister has been spending a few days at Buda-Pesth. A Vienna telegram announces that on Saturday night he received an enthusiastic ovation from the medical students of that city, who held a torchlight procession in his honor. On arriving at the Queen of England Hotel, Pesth, where Professor Lister was staying, the students drew up in line in front of the building, and Professor Lister appeared on the balcony, surrounded by a number of professors of the medical faculty of the University of Buda-Pesth. One student then addressed the distinguished surgeon in Hungarian, and a second presented the homage of his fellow-students in English, Professor Lister returning his thanks in German.

Propagation of Disease by Books.—When preventive medicine is searching out and checking all possible means by which infectious and contagious maladies are spread, the part which books may play in the propagation of disease should not be overlooked. There can be no doubt that the specific contagia of many zymotic disorders, and especially of scarlatina, small-pox, and typhoid fever, in the form of particles of material emanations from the bodies of patients, may attach themselves to the covers and pages of books, and so carried from the sick to the healthy. In private families, all books and periodicals used by a patient during his illness from a zymotic disease had best be burnt upon his convalescence. In general hospitals in which zymotic diseases are treated, scrupulous care should be taken that all literature used by patients suffering from contagious and infectious maladies shall be reserved exclusively for use in the special wards devoted to such disorders. We are afraid zymotic diseases are sometimes spread by books through the agency of lending-libraries and second-hand bookshops; and it would be well if the literature of such establishments were occasionally subjected to efficient disinfection. Persons recovering from zymotic disease should remember that it is one of their duties to take all care to avoid their infection of the healthy, and they should be taught to refrain from handing to others the books they have used during their illness.

Danger from Flies.—Dr. Grassi is said to have made an important, and by no means pleasant, discovery, in regard to flies. It was always recognized that these insects might carry the germs of infection on their wings or feet, but it was not known that they are capable of taking in at the mouth such objects as the ova of various worms, and of discharging them again unchanged in their fæces. This point has now been established, and several striking experiments illustrate it. Dr. Grassi exposed in his laboratory a plate containing a great number of the eggs of a human parasite, the *tricocephalus dispar*. Some sheets of white paper were placed in the kitchen, which stands about ten mètres from the laboratory. After some hours, the usual little spots produced by the fæces of flies were found on the paper. These spots, when examined by the microscope, were found to contain some of the eggs of the *tricocephalus*. Some of the flies themselves were then caught, and their intestines presented large numbers of the ova. Similar experiments with the ova of the *oxyuris vermicularis* and of the *tenia solium* afforded corresponding results. Shortly after the flies had some mouldy cream, the *oidium lactis* was found in their fæces. Dr. Grassi mentions an innocuous and yet conclusive experiment that any one can try. Sprinkle a little lycopodium on sweetened water, and afterwards examine the fæces and intestines of the

flies ; numerous spores will be found. As flies are by no means particular in choosing either a place to feed or a place to defecate, often selecting meat or food for the purpose, a somewhat alarming vision of possible consequences is raised. Dr. Grassi invites the attention of naturalists to the subject, and hopes that some effectual means of destroying flies may be discovered.

New Views on Bright's Disease.—At a recent meeting of the Académie Médecine of Paris, Professor Semmola of Naples communicated to the Society the result of his latest experiments on Bright's disease, under which term he understands chronic parenchymatous nephritis only. The primary cause of albuminuria in that disease is, according to some, a lesion of the kidneys themselves, while others explain it either by a pathological condition of the albumen in the blood, or by a combination of these two causes. Semmola's experiments go far to show that the lesion in the kidneys is a secondary process. He injected daily under the skin of dogs ten to seventy grammes of white of egg ; after four to five days, there were signs of a congestion of the kidneys, which led to hæmorrhage when the dose of albumen was large. After seven to ten days, leucocytes were found in the urine, and the renal epithelium, began to show signs of fatty degeneration. This, after a fortnight, was well-marked ; and about the twenty-fourth day, there was evidence also of an interstitial lesion of the kidneys. The introduction of albumen into the blood produces a peculiar dyscrasia, and the quantity of albumen eliminated by the urine is larger than that which has been injected ; in the animals experimented upon, the bile contained albumen, which is also the case in patients suffering from Bright's disease. As for the cause of the peculiar dyscrasia alluded to, Semmola thinks that it is an alteration of the nutritive functions of the skin. He tried also the subcutaneous injection of blood-serum, yolk of egg, and milk, the first caused a slight albuminuria, but the last two had no effect.

The Cure of Abscesses without Cicatrices.—Dr. Quinlan, in the *Philadelphia Medical and Surgical Reporter*, advocates the introduction of a fine silver wire through the walls of the abscess, the ends being tied outside. The wire acts as a drain ; and to secure the advantage claimed for this method of treatment, it must be introduced before the pus reaches the surface, when it is about half-an-inch from the sur-

face. Poultices must not be used ; and after the contents of the abscess have been evacuated, a compress should be applied. Dr. Quinlan claims that this treatment has never failed in his hands.

Insane Witnesses.—The United States Supreme Court has recently decided that—"A lunatic or person affected with insanity is admissible as a witness if he has sufficient understanding to apprehend the obligation of an oath, and to be capable of giving a correct account of the matters which he has seen or heard with reference to the questions at issue ; and whether he has that understanding is a question to be determined by the Court upon examination of the party himself, and any competent witnesses who can speak to the nature and extent of his insanity.

An Operation for the Cure of Masturbation.—Dr. Haynes records in the *Boston Medical and Surgical Journal*, the removal of parts of the spermatic ducts. An incision is made midway between the external inguinal ring and the testis laid bare, the duct, from which a half inch was resected, and the slight wound closed by sutures. By this simple operation, leaving behind it no deformity of the genitals, Dr. Haynes has succeeded in all three cases in improving the mental and physical condition of his patients, while the sexual appetite was as effectually destroyed as by castration.

A Lithopædion.—At a recent sitting of the *Académie des Sciences*, Dr. Sappey exhibited a fœtus which had died at the end of six months' extra-uterine gestation, and had afterwards been retained in the mother's abdomen for fifty-six years. The mother became pregnant at the age of twenty-eight, but labor did not come on at term nor afterwards. At the age of eighty-four she went into the infirmary at Quimperlé, where she died three weeks after admission. At the necropsy a large hard cyst, with calcified walls, was discovered adjoining the uterus. This was divided by a saw, and found to contain a fœtus in a state of almost perfect preservation. The skin, lungs, muscles, and other parts had preserved their normal softness and appearance. M. Sappey explains the preservation of the fœtus by means of Pasteur's theory concerning the exclusion of air and aerial germs. It is a noteworthy fact, that these cases of lithopædions have been in the most authenticated instances, of extra-uterine origin.

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LECTURES.

INTERNAL URETHROTOMY.

A CLINICAL LECTURE DELIVERED AT THE NEW YORK HOSPITAL.

BY

ROBERT F. WEIR, M.D.

Reported by C. H. May, M.D., to whom was awarded the First Harsen Prize in 1883.

GENTLEMEN: The first case I present to you is a case of stricture in which I shall perform internal urethrotomy. You will remember at the last clinic I also performed this operation, and I suppose you wish to know how the patient is doing.

I am sorry to have to report very adversely—the patient died. At the last clinic, while operating upon the patient, I spoke of the risk of dividing or dilating a stricture, and I told you that there was a comparatively small mortality from these procedures, and that in simple cases the risk from division was not greater than from dilatation of the stricture; and this is true. In the case which died there was no complication of the kidneys; these were sound as far as we were able to tell from chemical and microscopic examination of the urine during the life of the patient. I had hoped in this fatal case that there would be very little urethral fever. During the first twenty-four hours the patient was doing fairly well, although he was suffering from a little more than usual shock; during the first twenty-four hours he passed 18 ounces of urine. At the end of this time, however, his condition began to change. He had no regular urethral fever, in fact, from this time to his death he never had the symptoms we classify as this disease; he had no chills, and no elevation of temperature, nor delirium. His heart began to fail, and his pulse was weak and rapid, and his respirations sighing, and there was no more urine being secreted, or only a small quantity—2 ounces. There was almost total suppression of urine.

As this case is very interesting, and in order that you may thoroughly appreciate it, I will read you the course of the disease from the time of operation to the man's death.

From the history-book, the day after the operation, the patient's temperature was 97.4°, and he had passed a good night, although he had vomited. Now, vomiting is an early symptom of trouble and should always awaken solicitude, but you must remember at the same time that in most cases it is the effect of the ether. To control it, if from the latter cause, you should use the ordinary remedies, such as carbonic acid water, vichy, or champagne. At this time the pulse was already feeble; the man had passed 18 ounces of urine in 24 hours, and there was no hæmorrhage from the urethra. Later in the day, the man not having passed any water since morning, a catheter was introduced by the house surgeon, and 2 ounces of urine found; and next day the catheter was again introduced, but the bladder was empty. You may ask why was a catheter introduced. Could you not tell whether the bladder was full or not by percussion? I admit it is not usually a good thing to do in such cases, but you cannot always tell whether the bladder is full by percussing the abdomen, and this is especially so if the man is inclined to obesity. In this case, if I had been on hand, I should have passed an aspirator needle above the pubis instead of introducing a catheter. I do not say this in order to criticise what was done in the case under consideration, for no bad results followed as a result of this catheterization, but the treatment by passing the aspirator needle above the pubis is, rather than to futher irritate the urethra, now recognized as the best and safest.

The man was now put upon infusion of Digitalis, $\frac{3}{4}$ ss., and Spiritus Frumenti, $\frac{3}{4}$ ss. every three hours; counter-irritation was applied over the kidneys. The next morning his condition was worse. There was now very feeble heart action, and no pulse at the wrist. There was nausea and vomiting; the man was covered by a cold sweat, and the pupils were contracted. He was stimulated by hyperdermic injections of digitaline and whiskey and of ether. Dry cups were applied over the kidneys and a hot air bath given. In the afternoon there resulted a profuse sweat; the temperature rose to 105°, and we were now getting the first evidences of an acute inflammation. He now passed 3 ounces of urine. This was examined and found to be acid, and to contain blood, pus, and epithelial and hyaline casts.

The results of this examination of the urine were significant, and it looked as if a wave of congestion or inflammation were passing over an already damaged organ.

The next morning cups were applied over the kidneys; pilocarpine and a hot air bath were given, and the heart stimulated by convallaria, the fluid extract of the Lily of the Valley, which is now extensively employed as a cardiac stimulant. He was now only semi-conscious. At noon he became entirely unconscious, had a rigor, and died at 12:30 p. m.

Post-mortem examination showed that no fault could be found with the operation. The incisions were two in number, corresponding, one to the cut in passing in, and the other in a different direction to that made in withdrawing the blade. Both were cleanly cut. The bladder was uninjured. The kidneys were found to be intensely congested, and, on minute examination by the pathologist of the hospital, no alteration in the substance of the kidney could be found, except recent changes acute results from causes reflected from the bladder. This showed that we were right in regard to our belief that the man was free from kidney disease before the operation. I can only explain the man's condition and the fatal termination of

the case by supposing it to be either the result of nervous impressions on the richly endowed mucous membrane of the urethra which were reflected to the other end of the urinary tract, or else, that the urine became changed in some way so as to have a poisonous character, and that some of this poison entered the blood through the cut in the urethra and set up a poisoning, the effects of which were settled chiefly on the kidneys, or it may have been due to a combination of these two explanations. I can explain it in no other way.

This risk, after division of urethral strictures, is commonly not great, and it is rare to have a fatal case in a patient whose condition is as good as this man's was and hence, this misfortune does and should not deter me from operating again on the present patient. The case before us is also a young man, only 32, but his condition is not as good as was that of the case two weeks ago, and his antecedent history is worse and much more irregular.

He had gonorrhœa for the first time eight years ago, and since then has had a number of attacks. Two years ago he began to notice that his stream of urine had become smaller and twisted, and that he had to micturate very often. He applied for treatment at the out-door department of the hospital 7 weeks ago. His stricture was recognized and dilatation begun, but this treatment by dilatation was very seriously interfered with by the fact that whenever the stricture had been a little dilated, it as rapidly recontracted; moreover, another obstacle was the difficulty of entering the stricture. He entered the hospital on the 16th inst., and an attempt was made to pass the stricture, but the difficulty of entering the bladder already referred to was encountered, and the house surgeon very wisely determined not to use too much zeal. The patient was allowed to rest for two days to recover from the effects of the manipulation and of drink in which he had indulged considerably before coming to the hospital. Yesterday, I distended the urethra with oil, and passed in several very small bougies, and I found the reason previous attempts had failed was because there were a number of pockets which seemed as if they might be follicles enlarged by the points of bougies having passed into them, and in these pouches the bougies were arrested. It is a great advantage not to give an anæsthetic in passing these bougies, for then every time your bougie enters one of these pouches, it pains the patient, and he will let you know this fact promptly; and so you will not be likely to enlarge these follicles or make any false passages, and you will be prevented from using too much force. Fortunately I passed one of the instruments into the bladder, and I say fortunately, for it is often rather a matter of luck than of skill; but in passing the stricture I did not get the characteristic grasp or bite; the instrument was not held as it usually is. I do not therefore definitely know the size of the stricture. As regards its position, a steel sound passed in 6 inches—the penis is rather a long one—and there was arrested. I left in the filiform bougie which I had passed into the bladder, for I hardly dared to withdraw it for fear of not succeeding in getting another one in, but I am told by the house surgeon that he was compelled to withdraw it. I will now have to get it in again, and may fail, for the case is a much more difficult one than was the case two weeks ago. I have passed the bougie at the first attempt. This illustrates how the passing of stricture is often a matter of chance; one day you may try an indefinite number of times, and not succeed, and the next may be successful at the first attempt. Etherization will often cause this difference. I now attach the instrument, which is

that known as Maissoneuve's urethrotome, and divide the stricture in two directions. I have succeeded in passing first a No. 29 afterwards Nos. 31 and 32 sounds after division of the stricture. At first you noticed that I had some difficulty. This was either because the bougie was caught at the triangular ligament, or else that the point of it entered the cut, the latter happening much less frequently when the stricture is cut along the upper than when along the lower wall of the urethra. [The meatus being rather small, was divided and now a No. 32 bougie à boule probe was readily passed.]

ORIGINAL ARTICLES.

REPORT ON MEDICO-LEGAL PROGRESS IN EUROPE AND AMERICA FOR THE YEARS 1882 AND 1883.*

By N. E. BRILL, A. M., M.D.

There is a curious contrast between the Anglo-Saxon countries and other lands as regards the cultivation of the field of legal medicine. In France, Germany, and Italy there are successful and active societies, including in their ranks the leaders of both the medical and legal professions. In England there are none such, and in America the history of their growth is not as yet a theme for expatiation. On the continent there are published a number of journals of the highest literary and scientific excellence, specially devoted to medico-legal topics, and in more than one European capital, well-equipped medico-legal laboratories are added to the universities. Where is a medico-legal laboratory to be found either in England or America?

Evidently the fundamental difference between the spirit of the Roman and the English Common Law, as far as medico-legal topics are concerned, is the remote cause of high cultivation which is given to medical jurisprudence in those lands whose laws are based on the Roman law; and the neglect to which it has been persistently treated, in those whose laws are the outgrowth of the Common Law of England. There is something, too, in the character of the races which may in part explain the difference in their manner of regarding the mingled issues of science and law. The continental citizen is accustomed to the guidance of a paternal government, which takes care of his roads, houses, cattle, and health, and in fact frequently saves him the trouble of thinking for himself on any topic; while the Anglo-Saxon, as the published opinions of more than one eminent judge, the verdicts of juries, and the editorial expressions in the daily journals prove, is a born expert on every possible subject, and requires neither ordinances, laboratories, lecturers, nor expert evidence to enlighten him. It cannot be said that this independent, self-asserting tendency is without its good features, even in a field which is pre-eminently the property of thorough scientific thinkers. The spirit of investigation is fostered by contradiction, and science is apt to gain more than it loses by continual attrition with public and lay opinion. But whatever ultimate benefit medico-legal science is to derive from such attrition, is shrouded in the uncertainty of the future. We, who have to deal with the present, are compelled to acknowledge that the history of the progress of medical jurisprudence during the past two years is almost exclusively continental; a fact

*Secretary's Report. Read before the Society of Medical Jurisprudence and State Medicine, Oct. 10, 1883.

which has seemed to your reporter to necessitate this preliminary explanation.

We have also deemed it desirable to make the progress of forensic psychology the subject of a separate report. This subject is so vast that it cannot be dealt with in a single chapter; its consideration is well worthy the time of a separate meeting, and it will therefore not be taken up in the present communication.

MALPRACTICE.

With regard to the subject of *malpractice*, but few novel contributions have been made. Of these the most interesting is one by Kornfeld, relating to the death of a vigorous man in the prime of life in consequence of the application of caustics to a nasal polypus. It appears that the patient had suffered from this ordinarily benign affection about nine months, went to a quack, and that the latter had repeatedly applied a nostrum (externally) which as the subsequent judicial procedure revealed was composed of 21 parts of caustic soda, 50 parts of carbonate of soda and 29 parts of ferruginous clay. He was taken ill seven days later, and, after a regular physician determined his illness to be an inflammation of the brain membranes, died. The autopsy showed that the polypus had undergone purulent disorganization, and sinuses containing pus could be traced through the root pedicle of the polypus to the cribriform plate of the ethmoid. The entire brain surface showed purulent inflammation, most of the pus being collected over the ethmoid plate. There was not the slightest indication of any other disease, nor did the brain reveal anything that did not confirm the view that its present diseased condition was due to the treatment of the polypus. Of the five experts who gave an opinion, all were agreed that the meningitis was to be so attributed, four of them regarding it as a direct result, and one as a remote sequence. The one who believed it to be an indirect result suspected the meningitis to be the result of septic absorption of the ulcerating surface of the polypus, while the others maintained a transmission of inflammation by contiguity. The defense maintained, and the court held that the accused charlatan had acted in good faith, having previously witnessed good results from his method of treatment, as was testified to have been the case by a number of lay witnesses. Under this curious ruling he went unpunished.

POISONING BY OVERDOSES OF OPIUM.

The subject of *poisoning by overdoses of opium* has recently attained a painful interest in our community. It may be recollected how grossly the imperfections of our coroners' "system," or rather "lack of system," were made manifest in this connection, and hence a brief synopsis of an able paper by Emmert on a similar case may not be out of place here. It seems that a physician treating a child ten months for bronchitis and catarrhal conjunctivitis saw fit to prescribe two mixtures, one for external and the other for internal use. The external application intended for the eye trouble, contained extract of opium and sulphate of zinc; the remedy for internal use was a mixture commonly used in cases of bronchitis. The druggist, as in the similar cases which recently occurred in our own midst, was the agent of distinction; he mixed the labels up, and pasted the direction "a teaspoonful every two hours" on the bottle containing the eye-water. The following questions were given to the expert by the investigating judge: 1st. Is the quantity of opium and zinc presumably taken by the child K. sufficient to produce the death of a healthy child ten months old. 2nd.

Have the medicinal substances administered to the said child alone produced death, or have they only precipitated a demise, unavoidable by reason of its previous disease. It being shown that the child had received the equivalent of a grain of the extract of opium, poisoning being so distinctive that the attending physician, having his attention directed thereto, instituted an examination of the bottles and their contents, it was replied that the death of the child must be attributed to the opium. It was admitted that the effect of the drug was facilitated by the febrile affection, the impeded respiration, the the resulting enfeeblement of the child; but it was denied that if these elements had been absent, that the opium would have been incompetent to produce a fatal result. The druggist was arrested and prosecuted for criminal neglect. The defense claimed that as no autopsy nor chemical examination of the body had been made, proof of the poisoning was faulty. This defense was rebutted by the experts in the following lucid propositions: 1st. It is proven that two prescriptions were filled in the said drug store, given for the child K. aged ten months, one being prescribed for a catarrhal affection and the other for an inflammation of the eye, the latter containing opium. 2nd. That the bottles containing the mixtures, put up in accordance with the aforesaid prescriptions, were confounded and so labeled that the one intended for external use was directed to be used internally in the dose of a teaspoonful every two hours. 3rd. That the child K. had received several teaspoonfuls of the medicine containing opium. 4th. That the said child had, previous to the administration of that drug, only manifested signs of a catarrhal affection of the chest, and no symptoms of any brain affection. 5th. That but a short time after the ingestion of the drug, the characteristic signs of opium poisoning appeared. 6th. That these signs increased until the death of the child, which occurred twelve hours after the administration of the first teaspoonful. 7th. That the amount of opium administered was according to the unanimous testimony of all concerned, and the chemical examination of the mixture remaining in the bottle, a poisonous dose for a child of the age of the one in question. With regard to the omission of an autopsy, it was replied that the signs of opium as of certain other poisonings were so characteristic that they did not require the doubtful support of an autopsy; and the necessity for a chemical examination of the body was repudiated, inasmuch as it was admitted that the child had received a certain quantity of a given drug, the chemical examination of whose remaining portion proved it to have been a poison.

GOVERNMENTAL MALPRACTICE.

There is a kind of malpractice rarely discussed under that name, but which really is more dangerous and far-reaching than the crimes of omission and commission of careless and ignorant individuals. It may be aptly styled, *governmental malpractice*, and was appropriately stigmatized before the English parliament last year by Dr. Farquharson. He said that patent medicines were within the section under which it was necessary to label every thing containing poison; but the provision was neglected. There were patent medicines that contained virulent poisons and some more than one, with the occasional result, perhaps, that antagonistic poisons neutralized each other. One of the most dangerous compounds was an "essence of linseed" containing a large quantity of morphia, from the use of which painful cases of poisoning had occurred. An established druggist had something to lose by negligence; but these

medicines were sold by booksellers and grocers, who had not the same sense of responsibility. The anomalous state of the law was illustrated by the fact that the pharmaceutical solutions of chloral could not be sold except by registered chemists, while a patent medicine containing a solution of double the strength was freely sold by grocers and others. It is seen that in England the "soothing-syrup" abuse has a fair prospect of being done away with, after which we may hope that our law-givers may also take this matter in hand.

BODILY INJURIES.

The subject of *bodily injuries with relation to claims for compensation* is nearly allied to that of malpractice. Of the various kinds of injury those resulting from railway collision to-day claim attention most prominently. The reaction against the views announced by Erichsen, under which it is alleged that railway companies have been extensively mulcted by simulating hysterical and hypochondriacal patients, is signified by a treatise from the pen of Herbert W. Page. This writer having himself been physician to one of the great English railways for many years, might be suspected of undue leaning to the side opposed to the claims of Mr. Erichsen. But his work is singularly impartial and undoubtedly marks a turning point in the history of litigation for "railway spine." A very good perspective of such litigation is given by Dr. Güntz, a German physician. This physician was requested by one of the highest courts to report whether a certain railway employee was either wholly, partially or not incapacitated from work. It appears that this employee was in a railway van at the time of a collision. The injured man claimed that the collision was severe; he was contradicted by the other employees present at the time. In weighing this evidence the court took into account the fact that both parties were interested, the other employees being dependent on the good-will of the railroad corporation on behalf of which they testified, and also were in part actually responsible for the collision. At all events the subject examined had been thrown against the inside of the van with such violence that he sustained a bleeding wound an inch and a half long over the right eye-brow. He fell senseless and on recovering consciousness, which was in about two minutes, he had vomiting. He felt quite well subsequently while traveling to the end of his contemplated trip; but on returning had severe headache, scintillation before the eyes, and felt ill generally. He consequently reported to the railway-physician, who certified to the existence of the wound, of dizziness and disturbance of sight, the certificate being dated Jan. 20, 1877. Since then H. the claimant, alleges that he has become much worse, that irritability developed, insomnia supervened, that his sexual power as well as his memory had diminished, and that pain had come on in the lower limbs. He at first wished to return to his employment, asking to be assigned to short trips, but the railway-physician declined to pronounce him fit for duty.

Curiously enough this same physician, on a subsequent occasion, denied over his signature, that H. was either in whole or in part unfit for work, maintaining that he was just as good in this respect as he had ever been. At the hearing, he testified to the existence of other symptoms not yet named, such as trembling and weakness of the limbs; but attributed this to old age. Unfortunately for this theory of the railway-doctor, the patient had not passed his forty-fifth year. The physician appointed by the court found beginning atrophy of the optic nerves, the hearing impaired and certain other physical signs, these being of a kind com-

monly found in general paralysis of the insane; with this there were general mental failure and a deep emotional change. He concluded that using the railway-physician's first certificate as a basis, there could be no question, that the patient had lost considerable ground since it had been granted. He rebutted the claim of the railway-physician that the claimant's mental dullness was natural to him, as his duties, which had been satisfactorily performed before the accident, were partly of a mental kind, and could not have been carried on if he had then been in his present condition. It had also been claimed that as the more serious symptoms had not shown themselves until a considerable period had elapsed after the accident, that they could not be due to the latter. This was declared erroneous, as it is a well known fact that the initial signs of paralytic dementia and similar affections are often very subtle and quite imperceptible, unless a careful examination is made. Besides, the statistics of Schlager show that of forty-nine cases of insanity resulting from head injuries, only nineteen developed within a year after the injury, and in four cases after more than ten years had elapsed. As there could be no question that the claimant had sustained a concussion of the brain, as concussion of the brain produces vaso-motor disturbance of a character analogous to that observed in the earlier periods of paralytic dementia, as paralytic dementia has been actually recorded as following concussion, and finally as none of the other known causes of that disease could be discovered in the claimant, the reporter concluded that his disease was due to the injury received, and that it incapacitated him from work, justifying his receiving a pension from the company.

The intricate and debatable issues involved in the study of concussion of the nervous system are being gradually cleared up by the reports of carefully conducted autopsies. Schlier reports the case of a man of thirty, who had been knocked down and kicked on the head by persons wearing heavy boots. The patient died ten days thereafter, and a bloody extravasation was found between the dura mater and the skull as well as over the brain itself, the bloody mass being confined to the left side. The curious feature of this case was that the patient died suddenly, having been during his illness completely conscious and complaining merely of constant headache. The characteristic symptoms of brain pressure were absent.

SUDDEN DEATH.

An interesting contribution to the question of *sudden death* is made in the same bi-monthly periodical from which we have so much to cite, "Friedreich's Blätter" for February, 1883. It appears that the body of a child was found dead in the cradle by its mother apparently suffocated. The visiting physician declined to give a death certificate owing to the presence of suspicious-looking spots of an irregular shape, partly red and partly brown in color, found on the inside of the thighs. Nowhere did these spots show any indication of having been produced in the living body, and the expert who made a thorough examination discovered the disgusting fact that they were due to the attacks of countless roaches on the dead body, a contingency which is not impossible in certain of our tenements. A post-mortem revealed the existence of spasm of the glottis, and the report was made that death had suddenly occurred by such spasm in connection with a convulsion. The likelihood of this occurrence was augmented by the fact that the skull of the child presented that form of defective ossification

known as *craniotabes*, with which convulsions are not uncommon.

SIGNS OF DEATH BY SUFFOCATION.

Considerable discussion has been recently held on the subject of the *signs characterizing death by suffocation*. A valuable contribution on this subject was made by Dr. Leuff in the paper on the post-mortem appearances of the murderer Walsh, executed in Brooklyn. It is the more valuable as the examination was made within half an hour after the culprit was declared dead. Friedberg has published a series of post-mortem examinations, which are models worthy of being followed everywhere, and which would doubtless prove of great use to our deputy coroners. The point of particular interest to which he calls attention is the condition of the carotid artery in persons hung or garrotted. He arrives at the following conclusions: Attempts at strangling may produce extravasation of blood into the walls of the carotid artery with or without rupture of the internal coat. This results only when the carotid is pressed sufficiently to tear its own nutrients. Hence this sign is not constant. Where no rope-mark or other sign of pressure of the neck is found, the presence of an extravasation into the walls of the carotid becomes an exceedingly valuable indication that strangulation has occurred or has been attempted, because it is sometimes the only sign of such an attempt.

DEATH BY STRANGULATION.

Death by Strangulation, which is comparatively a common method of criminally disposing of the newborn, is rare in adults. The following case illustrates how profitable to the ends of justice the independent position of the continental expert may be in the detection of foul play: A woman of thirty who a few hours previously had been seen by her neighbors in apparently good health, was found dead seated against the wall on the floor of her apartment, her lower limbs extended, the arms pendent, her clothing and hair undisturbed. The face was somewhat livid and a few drops of blood which had come from the nose were on her dress. A chair was standing near her, on which there was a scattered game of cards. The physician called in, opened her collar and noticed three impressions on the neck, arranged up and down. These impressions corresponded to the clasps of the collar. He opened a vein but no blood flowed. The absence of injuries, of disorder and the other signs induced him to express an opinion that death was not due to violence but to apoplexy. Her husband alleged that he had come home several times, finding the door locked, had finally gotten a locksmith to force it, and on entering the apartment with some additional witnesses, found his wife sitting in the position described. He declared that his wife was subject to fits, and believed that she had been consulting the cards, in regard to investments in the lottery, when surprised by the "apoplectic attack." The judicial authorities suspected a suicide and ordered the experts to pay particular attention to the question of poisoning. Among the signs found at the autopsy were bloody suffusion of the eye, ecchymotic spots on the mucous membrane of the mouth, collapse of the lung, injection of the great veins, fullness of the right side of the heart, and dark fluid blood in the brain sinuses. There were found also three excoriations on the left side and one on the right side of the neck, which a closer examination revealed to be finger marks. The chemical examination was altogether

negative in its results, and the examiners reported that death had occurred in the apoplectic form of suffocation. This was a surprise to the authorities; but the husband was placed under arrest, as it was suspected from his story, combined with the fact that some one must have placed the body of the victim in the peculiar position in which she was found with the evident purpose of misleading the physicians, that he was that person. He was subjected to an examination by the medical men, who from the fact that much frothy mucus denoting a long agony had been found in the trachea of the victim, and that she was a powerful woman, inferred that her assailant would show some marks of a struggle. Several scratch-marks were found on his hands, which he said had been produced by a dog. Other irregular recent scars on the thumb, resembling marks of a bite, were also found. On being spoken to about these, he said, that for all he knew the dog had also bitten him. The inner surface of the thighs exhibited bruise marks. When the prisoner's hands were measured, to see whether they corresponded to the impressions on the victim's throat, he showed much agitation and became very pale. In the evening he broke a pane of glass and attempted to bleed himself to death by the fragments. Prior to this the physicians had given the opinion that the marks on the prisoner's body were of such a character that they might have been the result of an encounter with his wife, and that the marks on her throat might have been produced by his fingers. Just before the suicidal attempt he wrote a confession of the murder on the seat of the water-closet, with a piece of plaster broken by him from the wall. He was convicted and executed. The examiner cited calls attention to a tragico-comical scene which he fell into, and which might have vitiated the investigation. It so happened that two other female bodies had arrived at the dead-house of the Swiss Canton Berne, together with the body of the murdered victim, and that he made a very thorough medico-legal examination of the wrong body before her personal identity was established. This is nearly as curious a picture as the one frequently presented in the coroner's office in the good old days of yore, when the brains and viscera forgotten to be included with the sewed up remnants of the person to whom they properly belonged, were crammed into some other, perhaps more capacious abdomen, giving rise to the saying, that many a one has left the coroner's office with twice as much brain as he had when entering. This referred, however, only to defunct inmates.

In a second case of strangulation by criminal hands, the cause of death was somewhat obscure. In addition to the signs pointing to suffocation, there was noted an unusual pallor of the parts ordinarily suffused with blood in death by suffocation, and there is some reason to believe with Zenker that death was due to shock, produced by a blow on the abdomen, which had been so powerful as to cause hæmorrhage in the pancreas.

It was recently stated before a society in this city that the signs of death by asphyxia are constant and invariable. This was in connection with the Savin Rock mystery. The thorough pathologists of the continent are not of this way of thinking. The so-called "*lung floating test*" in the case of new-born children is not always reliable, and Schröder has shown that the lungs of children, who have breathed and cried, may be found void of air, and consequently sink. In these cases the function of respiration gradually fades away, more air escaping from the lung with each breathing act than finds its way thither. This combination of

circumstances is supposed to have been present in a case described by a Bavarian physician; and the corroborative confession of the mother proved that the child who had exhibited the pulmonary condition of children who are ordinarily supposed not to have breathed, was carried out into the garden in a living condition, crying and breathing, and there died from neglect, a fact which led to her being sentenced to imprisonment for two years.

DETECTION OF POISONS.

The progress made in *detection of poisons in the dead body* is so strictly within the domain of the chemist, that it is impossible to duly chronicle it without becoming over-technical. A remarkable test for small quantities of alkaloid poisons was suggested some time ago by Rossbach. Frogs, mice, and other small animals have long been used for the detection of such, and this investigator proceeded to refine matters still further by employing the microscopic animalculæ. An American observer, Rockey, failed to find this test reliable, and supplements his adverse report by the remarkable dictum, that American animalculæ are much tougher and more obdurate to the action of poison than those on the other side of the water.

Some years ago, an Italian patho-chemist, Selmi, described bodies named *ptomaines*, which form spontaneously in the slowly decaying dead body, and have a similar action on small animals as strychnia and other poisons. The recognition of this fact is of the very highest importance to the medical jurist. The same observer was induced to extend his investigations to the domain of the living body, suspecting that in some cases poisonous substances formed within the body were responsible for the death of the subject. In the urine of a paralytic patient, he found a substance resembling nicotine which was found to act as a spinal poison on animals. Two other Italian analysts, Paterno and Spica, found that substances resembling the poisonous *ptomaines* can be extracted from fresh animal tissues. Thus is the question of the demonstration of poisons administered with criminal intent, yearly becoming more complicated. It is to be hoped that reliable differential methods will be devised, as in the case of the alcohol test for urine. It may be recollected that the ordinary test for alcohol was found to produce the so-called alcohol reaction in persons who had been total abstainers, and that fortunately for those who might have been suspected of secret bacchanalian excesses, or of distilling alcohol within their own bodies, a distinguished French chemist discovered the same substance in the soil of this earth, and it was then demonstrated to be a different substance.

The *condition of the various parts of the dead body as indicating the length of time it has been buried or otherwise disposed of*, is one of the important subjects studied at the continental laboratories. Little has been known of the uterus in this relation until Tamassia made it the subject of special inquiry. He found that the folds of the mucous membrane are recognizable for about seventy days after death, subsequently they become obliterated and the mucous membrane becomes detached and dissolved. He found that Caspar's statement that the uterus is most resistant to decay of all soft organs is not accurate, as the liver resists decay twice as long. The uterus requires 100 days in the atmosphere, 115-120 days in water, and 140-150 days in the earth to undergo complete dissolution.

VACCINATION.

A very decisive series of contributions to the much

agitated question of *vaccination* is being continually made in Europe. Facts speak louder than figures here, and seem to demonstrate the advantages of vaccination beyond the possibility of a quibble. It was thus found that a certain detachment of French troops in Langers, where vaccination was not practiced, had small-pox cases at the rate of 222.6 in 10,000, while the German troops at Berlin, under similar circumstances, but revaccination being the practice, had but 5.8 to every 10,000. In a discussion of the Berlin Medical Society, the majority of the speakers, comprising such men as Guttman, Thilemus, and Boerner, maintained that the right of the government to decree compulsory vaccination was never more unquestionable than the right to decree compulsory education, on the ground that an ignorant man's influence for evil does not extend far beyond his own person and associates of his kind, while a non-vaccinated person may prove a source of danger to whole communities, without himself suffering from or betraying the existence of the dangerous agency which he may carry with him.

MEDICAL MEN IN COURTS OF LAW.

As regards the *position of medical men in courts of law*, but little change is to be recorded. We are evidently in a period of uncertainty, probably preceding a transition to a better condition of things. As showing how little unity exists in this respect in the systems of practice in use in the various States, it may be noted that in a trial in a Western State that medical books could not be used in the courts in Indiana, Maine, Maryland, Massachusetts, Michigan, North Carolina, Rhode Island, Wisconsin, California and New Hampshire. They can be used, however, in Iowa, Alabama, and probably in a number of the remaining States. "The theory upon which the exclusion seems to be based is that the jury might be drawn away by the different theories presented in the books from the proper consideration of the facts relating to the death as given by the witnesses of the deed."

REMUNERATION OF MEDICAL WITNESSES.

The question of the *remuneration of medical witnesses* is still a vexed one on both sides of the Atlantic, as numerous complaints in the correspondence column of the English medical journals and the following case from this side of the water show: "Dr. S. J. Brooks, of St. Johnsbury, having made a post-mortem examination of the body of a murdered man, was recently called upon at a trial to testify as to the cause of death. He refused, on the ground that he could not be compelled to testify as an expert without remuneration. Thereupon the judge committed the doctor to jail for contempt, but after a few hours' confinement he testified and was released. The other physicians who were present at the autopsy answered that they had formed no opinion as to the cause of death, thus avoiding a collision with the court." It is a question whether the doctor, who was submitted to a sort of torture for having the courage to resist an unjust demand, or those who were frightened out of their opinions by his fate, were in the least enviable position.

The foregoing presents but a fragment of the history of progress in the field which this society has undertaken to cultivate; but if the somewhat incongruous items in it should provoke fruitful discussion or elicit more thorough researches on the part of this body, its object will be fulfilled.

ABSTRACTS AND SELECTIONS.

EDITORIAL SUMMARY OF THE COLLECTIVE INVESTIGATION OF DIPHTHERIA.

BY

J. J. MULHERON, M. D.,

Editor Therapeutic Gazette.

We venture the opinion that the reader will find in the foregoing replies not only much positive information, but also much food for profitable reflection, as well as suggestions calculated to broaden his conceptions of the disease. The latter result must be particularly favored by the apparent discrepancy in the views of competent observers as they are contained in these replies. That gentlemen equally qualified to observe should come to conclusions diametrically opposite, in their observations of an indefinite number of cases of disease classified under the same head, is a circumstance which should not be idly overlooked. It certainly behooves the reader in such cases to discover, if he may, some harmonizing element. In the present instance if such element shall appear, the value of the testimony offered will but be enhanced by the positiveness which may make it appear all the more contradictory and valueless to the superficial student. It will be our endeavor in connection with our summary of the views on the respective points discussed to introduce this element, leaving it, of course, to the individual judgment of the reader to decide on the question of our success. In view of the indifferent success which has attended the efforts of the exact scientist to explore the well nigh impenetrable arcanum of this fell disease, and particularly its etiology and treatment, the harmonizing element between the diverse opinions touching it must be largely speculative.

1. What is your opinion in regard to the local or constitutional nature and treatment of diphtheria? and 2. On what clinical facts, observed by you, do you base your opinion?

The nature of the replies to the first of these queries has satisfied us that it is somewhat ambiguous. It was intended to elicit an expression on the questions: 1. Of the local or constitutional origin of the disease, and 2. On the comparative value of local and constitutional treatment. While a number of our correspondents have so interpreted it, some have not. Among the former we would state, without "polling the vote," that the house is quite equally divided, as regards those whose opinions are positive. There are some very decided expressions of opinion on either side, and these furnish an illustration of the discrepancies to which we have above referred, as characterizing the observations of equally competent observers. These discrepancies will present themselves with peculiar force to the gentlemen themselves, who, when they see the direct opposition of their convictions to those of physicians to whose ability in all the requisites of the scientific practitioner they are prompt to defer, will inquire for some explanation which may harmonize their differences on this question. Those who regard the disease as primarily local adduce strong evidence to sustain this conception of it, and their opponents fortify their position with proofs none the less worthy of credence. What is more natural under such circumstances than to hold that both may be right? And we think the facts tend clearly to show (1) that diphtheria may, and probably most frequently does, exist as a purely local affection; (2) that it may be first local and then constitutional; and (3) that the local affection may be

secondary to grave constitutional infection. No physician, be he the sternest of advocates of the local origin of the disease, but will concede that constitutional disturbance may be violent before any local trouble is discernible; and on the other hand, the existence of a membrane without the slightest rise of temperature, acceleration of pulse or other symptom of constitutional disturbance is so frequent as to constitute a large percentage of the cases met with during severe epidemics. The existence of the diphtheritic sore throat, or "herpetic tonsillitis," as it has been termed by Sanné, of Paris, an affection which may be purely local in its manifestations, and its close relation to the true membranous diphtheria, are facts which cannot be controverted. A nurse in the Michigan College Hospital, of this city, was attacked with herpetic tonsillitis last fall, before the epidemic had developed sufficiently to create a suspicion in the case of an isolated attack of sore throat. Not the slightest perceivable trace of membrane presented. Before the intense redness of the membrane had subsided she visited her home, thirty miles distant, where there was no diphtheria neither had there been for over a year. In a week her sister was attacked with a typical case of diphtheria, and in another week her brother, a young man of twenty, contracted it. The latter case proved fatal. Last winter a lady fifty-two years of age contracted a sore throat while nursing a child five years of age, who died of diphtheria. This lady's throat, although intensely red and sore, presented not the slightest suspicion of a membrane or patch. In about a week the throat trouble had subsided, but in the third week, dating from the attack, paralysis of the constrictors supervened, and was relieved only after a month's treatment with strychnia and electricity.

Whether diphtheria is primarily a local disease, and subsequently a constitutional, or *vice versa*, or whether it remains purely a local disease, seems to depend on some anatomical peculiarity or some special susceptibility on the part of the one attacked. The child with the large spongy tonsils being afflicted with that special susceptibility to the disease which has been observed to exist in particular families, is most liable to have constitutional symptoms first, the virus apparently being thus afforded a ready entrance to the circulation. In the normal condition of the tonsil the virus is not so apt to effect an entrance, and its first action is on the mucous membrane of the throat, which it irritates and inflames, and places it in a condition which favors subsequent absorption with its causation of the constitutional disease. The nature of this poison we will consider under another head.

3 and 4. What is your opinion as to the contagiousness of diphtheria? What facts in your experience bearing on this question?

The opinion of the profession, as manifested in the replies to these questions, greatly preponderates on the side of the contagiousness of diphtheria. There is, however, considerable conflict of opinion on this point also. Careful and candid observers are arrayed diametrically opposite each other on the question, and it is, therefore, but fair to presume that under different circumstances the disease may be contagious and non-contagious. In considering the contagiousness of a disease, account must be taken of the condition of the person exposed. The seed may fall by the wayside where it never takes root; it may fall on stony ground where its development is but partial; and it may fall into soil peculiarly adapted to its growth, where it takes root and brings forth an abundant fruition. We know that occasionally unvaccinated persons have been

steadily exposed to the contagion of small-pox and yet have escaped unscathed; and again there are those whose susceptibility to the virus is so strong that successful vaccination and even re-vaccination are not sufficient to prevent a more or less modified form of variola. May the case not be precisely similar in the matter of diphtheria? We think that while the evidence is quite conclusive that diphtheria is a contagious disease (using the term in its broadest signification, which embraces infection) it is not what might be termed very actively contagious; the seed is of a nature which requires very favorable conditions to make it germinate. In the absence of these conditions it may fall in vain, as far as propagating its kind is concerned. What are the conditions favorable to its growth? One of our correspondents insists that the virus is never propagated in a healthy mucous membrane, and that the most effective prophylactic is the taking of effective precaution against the occurrence of catarrhal inflammation. While we shall claim, under another head, that inflammation of the buccal mucous lining, and particularly that of the posterior parts of the cavity, is an effect of the diphtheria poison rather than a cause of the growth of the membrane, we cannot but admit that the previous condition of these parts has much to do with the question of the contagiousness of the disease in individual cases. As already intimated the anatomical and the anatomico-pathological configuration of the tonsils and adjacent parts has much influence on the question of predisposition in a given case, as it also has on the course of the disease. The child with the enlarged tonsils with patulous follicles, either through chronic hypertrophy or acute congestion, furnishes, we believe, an exceptional soil for the deposit and germination of the diphtheria poison. To anticipate the question of the prophylaxis of the disease, it is not unreasonable to suppose that the great value of the tincture of the chloride of iron and the potassic chlorate, is traceable quite as directly to the local effect of this combination on the mucous membrane of the vestibules of the respiratory apparatus, as to any constitutional effect these drugs are supposed to have. Doubtless, too, the virulence of the poison is intensified by the conditions under which contagium of kindred nature is made more active, viz., filth, bad hygiene, defective ventilation, etc. The influence of age must also be considered in connection with the question of contagion. The susceptible period is between the ages of five and six and the occurrence of the disease after ten is exceptional. Observations on this point have been made by Dr. Henry B. Baker, secretary of the Michigan State Board of Health, an illustration of whose graphic method of summarizing statistics is given in his communication.

5. What microscopic examination, if any, have you made of the diphtheritic membrane?

The replies to this question have been comparatively few, but they are exceedingly interesting. The detailed report of microscopical examination by Dr. J. H. Kidder, U. S. N., is a very valuable contribution to the literature of the vexed question of the existence of specific micrococci in diphtheria. Drs. J. N. Salisbury and Ephraim Cutter also give a description of the *mucor malignans* which they hold to be the specific etiological factor in the disease. Dr. Alonzo Clark's observations are suggestive, and it is barely possible that the granules which he has latterly conceded to be micrococci, may still be "a form of fibrine such as appears in coagulation before the fibres of the clot are formed," as he originally supposed them to be. With a few exceptions (notably those of Dr. Fenn, who dis-

covered mycelium and spores resembling those found in mould; of Dr. Czartoryski, whose specimens were "alive with vibriones;" and of Dr. Bion Whelan, who detected nothing beyond the usual amount of pus and some muscular tissue), the other contributors have made no microscopical examinations, and we shall only refer to those by Drs. Kidder, Salisbury and Cutter. These reports differ very diametrically, and we are at a loss in this instance to introduce any harmonizing element. Dr. Kidder's examination of the membrane revealed micrococci which differed in no sensible characteristic from those which may be found in healthy saliva, while Drs. Salisbury and Cutter report the presence of the *mucor malignans*, which they hold to be characteristic, and the specific cause of diphtheria and scarlatina. In this opinion these latter gentlemen, as far as our knowledge goes, stand alone among the microscopists of the day. Dr. Kidder's observations are, we think, in very full harmony with the preponderating opinion on the subject, and confirm the growing conviction that the micrococci which have been discovered in the membrane are not peculiar, and that the only causative relation which they bear to the disease is that of carriers of the virus, the latter being an entity which has thus far escaped the power of the lens to make it visible. The claims which have latterly been made that constitutional diphtheria is "bacteræmia," or the churning of the blood with bacteria or *micrococci diphtherici*, is unsupported by any sufficient microscopical revelation. The suggestion of Dr. Kidder that the colorless granules which he detected are due to the breaking up of the leucocytes under the influence of the diphtheritic poison, points, in our opinion, to a more intelligent pathology of this disease than has yet obtained.

The evidence is quite conclusive that when micrococci are found in diphtheritic blood they have entered it after it has been withdrawn from the circulation. Wood & Formad in their experiments carefully examined the blood of the rabbits on which they experimented, and found no micrococci. They drew the blood directly from the jugular veins and examined it at once, but when after the lapse of a few minutes the post mortem was concluded and the heart opened, the blood therein was found to contain an abundance of these low organisms.

From the evidence under this head we would conclude that the diphtheria poison *per se* cannot be, or at least has not been as yet, discovered by the microscope. It is probably a gaseous substance to which the micrococci found in the membrane bear a similar relation to that which the red blood corpuscles are supposed to bear to oxygen, of which they are the carriers to the ultimate tissues of the body. While it is not in evidence that the micrococci enter the blood with the death-dealing virus, the fact that they may carry it to the mucous surface of the throat seems very clear from the experience of Formad, who by washing the micrococci in plain water rendered them innocuous, by cleansing them of their poisonous load. That this virus is intensely irritant is manifest from its local action, its effect on the mucous membrane differing in no discernible particular from that which would follow the application to the same tissue of cantharides, ammonia, hot water or other chemical irritants. It may spend its force on the mucous membrane, or it may find an entrance into the blood where it exerts the disintegrating action noted by Dr. Kidder.

6. What measures, if any, have you adopted by way of prophylaxis, and what success has attended those efforts?

Prophylactic treatment of a medicinal nature does not seem to have been very generally employed. Isolation is with very few exceptions deemed essential, and that, too, singular as it may seem, even by those who assert the non-contagiousness of the disease. The necessity of the diluting influence of fresh air and the destructive effect of oxygen on the *materies morbi*, are recognized, in the universal insistence on ventilation as a means of prophylaxis. The value of a proper hygiene is also recognized, while a few of our correspondents insist on what we should regard as a precaution of paramount importance, viz., careful attention to the mucous membrane of the throats of the well during the prevalence of the disease. Chronic sore throat, pharyngitis or tonsillitis, and large flabby tonsils are standing invitations to the disease.

As medicinal means of prophylaxis, the tincture of the chloride of iron, chlorate of potassium and quinine, are spoken of as of unequivocal value. Although their *modus operandi* is not discussed, their value seems indisputable. Dr. Buckham has especially insisted, both in his communication on the present occasion as well as in previous contributions, on the well high specific properties as a prophylactic of this combination. Besides the tonic influence on the blood of the iron and the quinine, thus increasing the power of the system to protect itself against the virus, together with the well-known influence of the potassium salt on mucous membranes, they are probably largely beneficial through their local action on the parts over which they pass on their way to the stomach. Whether the thorough local application of the combination would successfully take the place of their internal exhibition, there are no facts to determine.

7. What local treatment have you found most efficacious?

It follows, quite necessarily, from the views suggested by the opinions on the question of the local or constitutional origin of diphtheria, that the direct value of local treatment, as regards diphtheria proper, must be largely dependent on the circumstance of the entrance or non-entrance of the specific cause into the circulation. In cases in which it has been intercepted in its way to the blood and has set up its local inflammation, early attention to the local disturbance is manifestly of prime importance. Should the poison, however, have directly entered the round of the circulation, the value of local treatment must be subordinate to the constitutional. But in either case the local trouble may be the source of grave complications through the unabsorbed virus or the septic matter which may be taken up from it. In any case, therefore, local treatment of the diphtheritic exudate is so important as scarcely ever to warrant its neglect.

The list of remedies recommended as local applications is a very long one, and our space forbids even their enumeration. But although the number is large, it does not embrace any great diversity when the physiological action of the drugs is considered. A division into three classes would leave but very few of them unclassified. These three classes would be antiseptics, disinfectants and astringents. It is important in this connection to recall the distinction, which seems to have been more or less lost sight of, between antiseptics and disinfectants. By an antiseptic is properly meant an agent which simply prevents putridity, and has nothing to do with destroying the products of putrefaction. A disinfectant, on the other hand, while it may also arrest putrefaction, is chiefly valuable because of its power of destroying the morbid effluvia from decomposing matter. It is well known that cer-

tain agents, as carbolic acid, for instance, are improperly employed as disinfectants, their effect being rather to conceal the odor of noisome exhalations than to neutralize them.

From such knowledge as we possess, the diphtheria poison is a gas, or a combination of gases, generated by the decomposition of organic matter. The relation of effect and cause between it and sewer gas has often been urged. Sewer gas consists of sulphuretted hydrogen, sulphide of ammonium, carburetted hydrogen, oxygen, nitrogen, carbonic acid gas and organic matter. Of these ingredients sulphuretted hydrogen and sulphide of ammonium are extremely poisonous. Experiments on rabbits have shown them to have a very destructive influence on the hæmoglobin of the red blood corpuscles. Dr. Hoehling, U. S. N., has especially insisted on sewer gas as the cause of diphtheria. It cannot be successfully urged against this hypothesis the fact that diphtheria occurs in rural districts, where sewers are unknown. Although there may be no sewers, it does not follow that there is none of that decomposition of excreta and organic matter from which sewer gas arises. The unsanitary condition of many rural homes is particularly favorable to this decomposition. Probably were greater care taken to examine into these conditions, they would be found to very generally co-exist with diphtheria, whether existing sporadically or endemically, outside of cities provided with sewers. The inspection which Drs. Hurd and Smart make of the water supply, etc., it would be well for physicians generally to practice in connection with cases of diphtheria occurring in the country.

The relation which has more recently been suggested between diphtheria and typhoid fever is of interest in this connection, and particularly in view of the very generally conceded prominence of defective sewerage as an etiological factor in the latter affection. Dr. Mortimer Granville contributes to the London *Lancet* an article on the subject, from which we make the following quotation:

"As a matter of clinical fact—a fact too commonly overlooked, if, indeed, it be widely recognized—typhoid fever is generally preceded by an affection of the throat, which, if minutely examined, will be found to be characterized by the presence of minute pellicles of diphtheritic membrane, usually situated on the upper and posterior surfaces of the tonsils, and nearly always accompanied by a few small patches in the fauces. This is particularly noticeable in the Paris fever. There would seem to be a tendency to the development of this membrane in direct proportion to the intensity of the poison and the vigor of the constitution—if I may use this term—of the patient attacked, and in inverse proportion to the rapidity with which the glands of the intestine are infected. To state the results of inquiry—somewhat too dogmatically perhaps—it may be said when a patient is affected by the specific morbidities of diphtheria or typhoid, the poison being the same in either case, it depends on the subject more than the disease, whether the malady will take the form of diphtheria, conventionally so-called, or of typhoid fever, and in a case in which the diphtheritic throat affection is strongly marked at the outset, there would be special danger from hæmorrhage, not from deep ulceration, but from rupture of minute vessels during the course of the disease, when the diphtheritic sloughs are thrown off from Peyer's patches; the hæmorrhage, if it occurs, being preceded by the appearance of exceedingly minute streakings of bright blood in the yellow, ochre-like (Budd's) portions of the stools."

The agent which shall successfully neutralize the diphtheria poison must, if the hypothesis of its gaseous nature be correct, be a true disinfectant and not a mere antiseptic. In the remedies as recommended, the decided preference is given to agents of the former class, experience rather than *a priori* reasoning, doubtless, having determined this preference.

Another object of the topical treatment of diphtheria, is to allay the local inflammation and to diminish the absorptive power of the surface with which the virus lies in contact. To accomplish this, the application of an astringent would be very naturally suggested, and in the experience of our correspondents, the value of astringents has been vouched for.

If we were to select an agent which should combine in itself the essentials of treatment, according to the theory we have advanced, viz., disinfectant and astringent principles, we should find few, if any, which would answer our purpose better than the tincture of the chloride of iron, the very agent the testimony in favor of which so preponderates in the replies to our question covering the local treatment of diphtheria. The tincture of the chloride of iron is also antiseptic, limiting the growth of bioplasm, according to Beale, and thus checking necrobiosis. Its disinfectant power has been demonstrated by an experiment in which half a gallon sufficed to disinfect 6,600 gallons of polluted water. It required three pounds, avoirdupois, of chloride of lime and 36 1-3 pounds of lime to produce the same effect.

Without discussing *seriatim* the individual local agents recommended, let it suffice to indicate the conclusion from the testimony.

Local treatment demands a combination of disinfectant and astringent principles. The tincture of the chloride of iron combines these very successfully, and other agents or combinations of agents must compare with it in efficacy in proportion to their success in combining these principles. As yet no agent has been suggested which more satisfactorily effects this combination. When it has been discovered it will take the place of the tincture of the chloride of iron.

8. What general treatment has been most successful in your hands?

From amid the confusion of the recommendations of different ingredients, in reply to this question, there comes up in pronounced tone a demand for a combination of blood tonics, cardiac stimulants and eliminants, while in a tone less accentuated, but still distinct, the necessity for diminishing the fibrinity of the blood is urged. Of the numerous means to these ends, the tincture of the chloride of iron, alcohol and calomel stand chief. The testimony in favor of these three drugs is confirmatory of the views of the pathology of the disease which have been suggested.

IRON. The effect of the *materies morbi* is unquestionably to deprave and disorganize the blood—to cause leucocythæmia. We know of no remedy in this condition, regardless of the cause, equal to the muriate tincture of iron. It is well known that iron not only augments the quantity of red coloring matter in the red corpuscles, but actually increases their number. While this effect is not noticeable on normal blood, it is very marked in the condition which obtains in anæmia or leucocythæmia. In proportion to the richness of the blood in hæmoglobin is its power to carry oxygen, and it is further claimed that the ferrous salts have the power of converting oxygen into ozone. It was, probably, because of the belief which formerly obtained, that the chlorate of potassa parted with its

oxygen in the blood that this salt was given in such large doses in combination with muriate tincture of iron. The explosion of this view of its action, associated with the undoubted ill effects of the salt on the kidneys, has caused it to be much less freely used than formerly. The fact that much larger doses of the tincture of the chloride of iron than can be absorbed are found necessary in diphtheria, as is also the case in erysipelas, would seem to argue the added influence of the acid in the combination. Small doses of this preparation at long intervals are useless. Another effect of this preparation is noticeable on the nervous system. Referring to its action on the system in diphtheria, Dr. Jacobi, in his excellent Treatise on Diphtheria, says: "It has been found that of all the preparations of iron, the chloride possesses the power of stimulating the nervous system. Possibly this effect may be traced to an increase of the arterial pressure in the nerve-centres. It has been said that this effect has been vividly illustrated in certain forms of chlorosis. If this be true, iron would be all the more indicated in diphtheria, since it would act as a prophylactic against a series of nervous phenomena that so frequently present themselves, both during and subsequently to, the diphtheritic process."

ALCOHOL. The value of alcohol in diphtheria seems to be one of the most firmly established points in its treatment. The only limit to the amount necessary seems to be the capacity of the patient to take it short of its intoxicating effect, and the quantities which are reported as having been given to children without producing this effect, are well nigh incredible. We shall not attempt to discuss the *modus operandi* of alcohol in such doses, further than to hint at its influence in reducing body heat, and its effect in retarding tissue metamorphosis. It is quite possible that its beneficial action in this disease is as directly due to these latter effects as to the stimulating properties.

CALOMEL. The testimony to the value of this drug in diphtheria, though coming from comparatively few witnesses, comes with such force and directness as compels attention. Its *modus operandi* being scarcely hinted at, we are left to conjecture the action through which it works the remarkable results claimed. These reports following so closely on the claims for specific properties of the drug by Dr. Reiter, and reproduced in the *Therapeutic Gazette* for November, 1882, will have the effect of directing renewed attention to it. Dr. Reiter attributed the disease to an excessively fibrinous condition of the blood, due to suspension of the fibrine-destroying function of the liver, which function he sought to restore by the exhibition of enormous doses of calomel, twenty grains as a commencing dose, to be followed every hour, in a child eight years of age, by ten grains until half an ounce has been taken. He declares that neither excessive catharsis nor emesis follows this use of the drug. We shall not stop to argue the question of the action of calomel on the liver. It is, however, a recognized effect of mercury to decrease the fibrinity of the blood and to diminish its coagulability. It must, moreover, in the doses given act as a decided depurant. It must, however, require considerable fortitude on the part of the practitioner to continue the large doses recommended by Dr. Reiter, and we are pleased to note that the practice of our correspondents is to discontinue these large and frequent doses as soon as the stools have assumed the greenish color characteristic of free catharsis by calomel. It would seem to us that its use should also be confined to sthenic or more dangerous cases, and that its indiscriminate

inate employment, especially in asthenic types of the disease, must be bad practice.

CHLORATE OF POTASSIUM. This salt seems to retain a very tenacious hold on the esteem of the profession. It seems to be regarded as an almost necessary adjuvant to the tincture of the chloride of iron. That it is entitled to the esteem in which it is held is not clear, and there are grounds for suspecting that its popularity is a result of the mistaken conception of its physiological action on the strength of which it first achieved popularity, viz., that by its decomposition within the system oxygen is set free and the blood thus purified. There is abundant reason to believe that the very free and indiscriminate use which has been made of it has been productive of a vast deal of injury, especially to the kidneys, the integrity of which organs it is extremely necessary to conserve during an attack of diphtheria. The warnings which have been uttered against its too free use are sufficient to admonish to great care in its employment.

Quinine occupies a very prominent place among the drugs recommended for internal use. The manner of its employment is, however, very slightly touched on. It has been given as a tonic, to reduce temperature, and applied locally for its effects on the pseudo-membrane. In our opinion small doses of quinine during the existence of fever in a case of diphtheria are harmful rather than beneficial. Such use of it is harmful in typhoid fever, and there is no evidence to commend it in diphtheria. If employed it should be given, as in typhoid fever, in large doses and for its effect in reducing body heat. It is questionable, however, whether this end cannot be better attained by means of alcohol. While the local action of the drug is claimed by some to be beneficial, the testimony is not sufficient to warrant a very positive conclusion in its favor.

Carbolic acid. This agent enters into the formulæ of a few of our correspondents, for local application. According to the theory of the nature of diphtheria as deduced from the replies received, it is a useless application, and in the light and knowledge of the dangers of carbolic acid poisoning through absorption from the mucous membrane, it is worse than useless; it is positively harmful. It is antiseptic, checking putrefaction, and suspending the amœboid movements of the white blood corpuscles, but it is not a disinfectant, and therefore has no effect on the gaseous principle which we have assumed to be the virus of diphtheria. In the light of Dr. Cutter's experiment, in which after immersion of a piece of diphtheritic membrane for three years in a much stronger solution than it would be judicious to apply to the living membrane, the bacteria were still found active, carbolic acid must appear even to those also who hold to the micrococcus diphtheriticus, to be lacking of value.

Lime water has been employed by a number of correspondents in the form of spray, for its supposed solvent action on the membrane. We do not believe that it has any specific action in this direction, but that it is chiefly useful in the same manner that a spray of plain water is useful, viz., in favoring cleanliness and adding to the comfort of the patient through the moisture.

CONCLUSIONS.

We have endeavored, in the foregoing, to give an analysis of the views of our correspondents, with the comments they have suggested. It is impracticable to enter into a consideration of all the remedies or

methods proposed, but their careful study will prove extremely profitable. To briefly summarize our conclusions we would state:

1. Diphtheria may be either local or constitutional in its origin.
 2. It may continue as a purely local or as a purely constitutional disease, or the local disease may be followed by constitutional infection, or *vice versa*—the disease in the vast majority of instances manifesting itself in both the constitutional disturbance and the local affection.
 3. The comparative value of local and constitutional remedies is dependent upon the nature of the affection in individual cases.
 4. Diphtheria is a contagious disease, but not liable to attack a healthy mucous membrane or to find an entrance through it into the circulation.
 5. The contagium of diphtheria is not a micrococcus, nor is it visible under the most powerful microscope yet manufactured.
 6. The contagion of diphtheria is of a gaseous nature (the result of decomposing fæcal and other organic matter), and can be neutralized only by a true disinfectant and not by an antiseptic.
 7. The best local application is the tincture of the chloride of iron. It may be supplemented by other applications according to the indications in individual cases.
 8. In a typical case of asthenic diphtheria, administer large (10 grains) and frequently repeated (hourly) doses of calomel until the characteristic stools are secured. Following this give large doses of the tincture of the chloride of iron every two hours and administer alcohol within the limits of intoxication. In asthenic cases the calomel should be omitted and the main reliance placed on the iron and alcohol.
- It, of course, goes without saying that these conclusions on the question of treatment are applicable only to typical cases. While they may answer as a guide, the cases in which they may be slavishly followed must, in the very nature of things, be few. There are many valuable suggestions in the replies to which we cannot refer but to the value of which, as they are applicable to the various shadings and complications of the disease, the careful reader will fix his own estimate.—*Therapeutic Gazette*.

CASE OF CÆSAREAN SECTION IN A DWARF: RECOVERY OF THE MOTHER.

BY

CLEMENT GRAY, M.R.C.S.

It is happily rare that such a formidable operation is required as the removal of a child from the uterus by abdominal incision; but when the pelvis is too distorted to allow the head to pass through it, and craniotomy cannot be undertaken, the Cæsarean section offers the only chance of saving the life of the mother and her child.

The following case of operation, performed under the most disadvantageous circumstances, without antiseptic precautions, and amid the most unsanitary conditions, is probably unique of its kind, and will be read with interest by the profession.

On July 8, 1883, at 9.30 A.M., I was requested to visit a single woman, aged 41, who was suffering from abdominal pains. She was of very diminutive stature, being only four feet in height. Her head was of unusual dimensions, and the carpal extremities of the radius and ulna were much enlarged. At the age of 8

she ceased to grow; at 24 she had a severe attack of rheumatic fever, which laid her by for nine months. From that time she had led an active life, and was regarded with much sympathy by her neighbors. Although her abdomen had been getting prominent for some time, not the slightest suspicion of pregnancy was raised by her friends. Three days previous to my visit the membranes had ruptured, and there had been a drain of watery fluid from the vagina ever since. The os uteri was dilated sufficiently to admit the tip of the finger through the narrow brim of the pelvis. I came to the conclusion that she was in labor, and that the foetus was dead. As the antero-posterior diameter of the pelvis was only three-quarters of an inch, it was impossible at this visit to ascertain the nature of the presentation. It being evident that delivery *per vias naturales* would be impossible, and the patient's strength must soon succumb if the only available remedy were not resorted to, I decided to perform Cæsarean section without further delay. With the assistance of Dr. Gray, Mr. Fyson, Mr. E. Fyson, and Mr. Hutchinson of this town, I proceeded to operate at 10 P.M. The cottage in which the patient lived is situated in a small yard, off the main street in Newmarket, and the drainage and ventilation are very defective. The bedroom in which the operation was performed was barely large enough for the four medical friends who gave me their assistance; one of them, indeed, was obliged to stand on the top of the passage-stairs. The wretched apartment was so close and the weather so sultry, that we were compelled to keep the window wide open during the operation. The patient having been placed on a common deal board, in a half-sitting posture, and the bowels and bladder having emptied, Mr. Hutchinson proceeded to use the ether-spray. When the integuments of the abdomen had become insensitive to the knife, I made an incision in the line of the linea alba, commencing just below the umbilicus, and terminating within an inch of the pubes. The tissues were carefully divided down to the peritoneum; and, a director having been introduced, it was opened to the extent of the abdominal incision. The uterus now coming into view, I laid it freely open by a longitudinal incision. Both wounds (uterine and abdominal) were held together by the fingers of Mr. E. Fyson, placed within the extremities of the incision, whilst I rapidly extracted the foetus and placenta. The foetus weighed 7 lbs., and had been dead about a week. It was grasped by both hands, and extracted breech first, the head quickly following. The placenta was easily detached. The uterus contracted so closely, that the sides of the incision were soon in apposition. There was no escape of blood into the abdominal cavity, which was, therefore, only lightly sponged. Five equidistant wire sutures, including the peritoneum, brought the wound together, which was now covered with a compress of lint, supported with bands of adhesive plaster and a broad bandage. The operation lasted twenty-five minutes. After the patient had been removed to her bed, a grain of opium was given by the mouth, which secured a good night's rest.

I was amazed to find, on the following day, five children down with the measles, in the only available room for the use of the family, eight in number: the narrow stairs connecting this with the dwarf's room above, which thus received the foul air from the lower apartment. A catheter was passed night and morning. The condition of the patient for the first few days following the operation was discouraging enough: the breathing was hurried, and both pulse and temperature ran high. There was much abdominal pain and disten-

sion, and great care was necessary lest the sutures should give way. Small doses of opium and a saline mixture were prescribed. The diet consisted of milk, and from first to last no stimulant was administered. On the fifth day following the operation, the urgent symptoms began to subside; and on the eighth day the urine was passed naturally, and there was a still further improvement. The bowels acted naturally on the thirteenth, when the last suture was removed. From this time, the progress towards recovery was uninterrupted; and on August 8th the wound was healed, and the patient quite well. Uterine discharge commenced immediately after the operation, and continued for three weeks. The patient had no nursing beyond that given by a neighbor, who ran in and out when she could spare time; but it is hardly necessary to say that I watched her with the closest attention.—*British Medical Journal*.

MEDICAL NEWS AND NOTES.

Action of Digitalin on the Heart and Blood-vessels.—Messrs. Donaldson and Stevens have recently investigated with great care the variation in the work of the heart, and the change of resistance offered by the blood-vessels to the flow through them (in the case of the terrapin and frog), caused by digitalin. In so doing, they have revised much of the work already done on this subject, and in the end come to the following conclusions: (1) Digitalin causes a decrease in the work done by the heart. (2) In moderate doses it increases the blood-pressure. (3) It causes a rise of mean blood-pressure by constricting the arteriales and capillaries, probably through its action on the muscular coats. (*Cambridge Jour. of Physiol.*, August 1883.) *Practitioner*.

Diphtheritic Nephritis.—According to Professor Farber, in cases of pure diphtheritic nephritis without passive congestion may be divided into three classes: First, kidneys which appear normal to the naked eye with an anæmic cortex. In these the essential and almost the only histological change is parenchymatous degeneration of the epithelium in the cortical tubules. This is an abortive form closely allied to the febrile kidney. In the second form the cortex of the kidney appears slightly increased, and is pale and turbid-looking on section. The degeneration of the cells in this form is both more intense and more extensive, and extends to the epithelial covering of the glomeruli. Alterations of the interstitial substance are beginning; the medullary tubules are sometimes catarrhal; there are no vascular lesions. The third form is the large yellow kidney, a form which is parallel to the hæmorrhagic kidney of scarlet fever. In this form there is extensive fatty degeneration of the parenchyma and well marked alterations of the stroma. (*Virchow's Archiv*, vol. 92, March 1883.) *Practitioner*.

Fœtid Feet.—M. Vieusse, principal medical officer at the Military Hospital at Oran, states that excessive sweating of the feet, under whatever form it appears (whether as mere supersecretion accompanied by severe pain, or with fœtidity), can be quickly cured by carefully conducted frictions with the subnitrate of bismuth; and even in the few cases where this suppresses the abundant sweating only temporarily, it still removes the severe pain and the fœtidity which often accompany the secretion. He has never found any ill consequences follow the suppression of the sweating. (*Gaz. Hebdomadaire*, July 27, 1883.) *Practitioner*.

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ORIGINAL ARTICLES.

TRANSFUSION OF BLOOD.

BY

DR. L. VON LESSER.*

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The theory of transfusion is difficult of representation. There is scarcely another subject on which we meet with so much fanciful speculation, so much that is unscientific, so much uncritical credulity, and so much carelessness. To search in this haystack for the scientific needle, and to evolve the practically useful principles, shall now be our task.

Even the history of transfusion shows us so indistinct a picture of obscure tendencies and ambiguous indications, that the actual history of the development of the doctrine of transfusion begins in fact only with the latest acquisitions to our knowledge of the physiology of the blood.

We best distinguish four larger historical periods.

The oldest, which finds its sources in the description of Greek and Roman poets (Ovid's *Metamorphosis*, lib. vii.) and starts from the legend of the transfusion of blood with which Medea is said to have rejuvenated the father of Jason. This is the *mythological* period. The second, the *mystic* period, reaches to the 17th century after Christ, and included all the rude attempts to produce by infusion of nutritive and medicinal substances, and also of blood, into the vascular system, certain changes either in the character, or the disposition of the mind of the respective individual. These chances savored only too often of the miraculous.

The third period reaches into the beginning of our present century: it is the *empirical*, excelling by controlling animal experiments, which were undertaken by men in whose science confidence may be placed, and who were universally held in high esteem. In France Denis and Emmerey gave the first impulse to scientific discussion of the question of transfusion; indeed, it was partly due to them that this subject occupied for a long time the scientific minds and learned societies in England as well as in Italy. In England the experiments made by Clarke, Lower, King and Boyle, with

scientific judgment, deserve special mention, while in Italy Michael Rose made interesting observations on the exchange of blood between species of animals. He also discovered that large quantities of blood can be injected into the vessels, and that even if no previous phlebotomy has been made, yet plethora is in no manner observed in the subject of the experiment.

Transfusion soon fell again into disrepute, and indeed from very plain reasons, when they began to use it for all possible chronic and even psychic diseases (as in *lyssa humana*, cancer, *febris putrida*). And first through Bischoff, Prévost and Dumas, Panum, Brown-Séquard *et al.*, by their partly historic and partly chemical studies on blood, the doctrine of transfusion entered its fourth and scientific period, which we shall briefly call the *modern*.

Here we meet for the first time the important knowledge, that it is the red blood-discs which constitute the important factor of transfusion, and that only arterial or arterialized blood possesses vivifying power.

The utility of defibrinated blood and the greater facility for its injection contributed materially to the popularization of transfusion, and forced the use of the formerly favored animal blood quite into the background. Human defibrinated blood has since received exclusive preference. Thus Blundell transfused in puerperal hæmorrhage and puerperal fever. Waller in chronic anæmia, Neudorffer, after prolonged suppuration, in chronic pyæmia, Polli in neuropathies, Diefenbach in cholera, Blasius in leucæmia, Traube and Martin in carbonic oxide gas poisoning. But as Martin had successfully employed non-defibrinated human blood, the question was again discussed whether preference should be given to beaten (defibrinated) blood or to not-beaten (complete) blood. Violent disputers urged the loss of vitality of defibrinated blood, and the fear of introducing coagula in its use. Though no scientific proof was offered in support of the above allegations, they were important factors in the resumption of the employment of intact (non-defibrinated) blood. And thus also the recently recommended transfusion of animal's (lamb's) blood was extensively employed. Yet it was soon discarded, because the sanguine expectations which were attached to it, especially in chronic affections (particularly phthisis) were by no means fulfilled.

Previous to formulating our attitude, and designating the really practical methods, we will briefly recapitulate the procedures which have been proposed and executed.

According to the form in which blood is used, we distinguish:

I. Transfusion of intact (not defibrinated) blood.

1. Conduction into the vein of the recipient directly from the vein of the donor by means of special apparatus (Roussel, veno-venous transfusion).

2. Conduction of blood obtained by venesection, which is introduced into the recipient's vein by pumping apparatus (Moncocq, Collin, Mathieu) or syringes (Martin).

3. Transfusion of capillary blood (obtained by cupping) by means of pumping it into the vein (Gesselius).

4. Transference from artery to artery by pumping (Schliep, arterio-arterial transfusion).

5. Direct transfusion from artery to vein. As yet this procedure has been employed only by using the carotid artery of the lamb directly into the human median basilic vein.

II. Transfusion of defibrinated blood (almost exclusively that of man):

* Translated by F. A. Lyons, M. D.

1. Into veins, by syringes (Landois, Uterhart, Braune) or with the use of simple receptacles for measurement (Nagel, Casse).

2. Into arteries (Hueter's periphero-arterial injection of blood.)

We distinguish, according to the donor: A transfusion of the blood of the same species (man to man). To this division belong: (a) Most of the transfusions with defibrinated blood; (b) Veno-venous transfusion of non-defibrinated blood (directly from the vein, or the product of venesection, or capillary blood); (c) Arterio-arterial transfusion (Schliep). B. Transfusion of the blood of different species.—Transfusion of animal blood to man. This comprises: (a) All of those direct transfusions made with intact arterial blood (see Hasse's Monograph). (b) A great part of the arterio-venous transfusions of intact blood, by means of pumping apparatus; (c) Injections of defibrinated animal blood and of the serum of animal blood.

How shall we select the most rational procedures, and upon what principles shall we judge of their utility?

The object of transfusion is the introduction of viable red blood-discs, which are destined to serve respiration and the metamorphoses in general. To these ends, it is necessary that the blood-discs be in a liquid favorable to their existence and that the recipient's blood be not of such a character as to endanger their vitality. It is well known that the power of resistance of the blood-discs differs in different animal species, and that the serum of different kinds of blood does not injure the blood-discs of a number of animals, while other blood-discs invariably die in it. These facts are of the greatest possible importance in transfusion of animal blood, because perhaps the blood-discs of the organism which requires blood will not be affected by the injected blood (*e. g.*, lamb's blood). Again, the injected blood-corpuscles can retain their vitality but a short time in human blood. Landois asserts that the reverse condition prevails when dog's blood is employed.

Among other points which must be considered, are the gaseous constituents of the blood (Brown-Sequard, and P. num.). The dyspnea which has often been observed in most alarming form after transfusions with lamb's blood, has been attributed to the large amount of carbonic acid which it contains. This called forth Traube's proposition to render the animals apnoeic previous to performing the transfusion.

Alexander Schmidt's investigations of the fibrin-ferment and its tendencies to the furtherance of coagulation, resulted in new views as to the utility of defibrinated blood. Coagula within the circulating apparatus, which have been observed after the transfusion of beaten blood, are attributed to faulty procedure, especially defective filtering off and allowing the transfused fluid to regain coagula. Thence the transferred coagula of fibrin should give rise to further coagulation, as the plugs of fibrin, even if they appear as simple emboli in a larger quantity, would not be followed by threatening phenomena. A. Schmidt has shown that the defibrination of blood may generate fibrin-ferment, and that, as soon as it is introduced into the circulation, may produce multiple coagula. It is probable that a febrile state of, or septic processes in the donor, increase the coagulating power of the fibrin-ferment. Possibly similar conditions in the donor may increase the quantity of the fibrin-ferment in the defibrinated blood (Köhler.) According to Köhler the activity of the blood containing fibrin-ferment is also increased, if, upon injection, it is allowed

to traverse a peripheral capillary region of the body, as, for instance, injection into the peripheral end of an artery, as Hueter proposes for his arterial transfusion. But periphero-arterial transfusion should preclude the introduction of coagula into the vessels, as the capillary net would intercept them. Aside from the fact that the difficulties of forcing defibrinated blood into a capillary region oftentimes become great and even unsurmountable, which may be attributable to a spasm of the muscles of the vessels as well as to coagulation, within these regions, Schmidt's experiences must cause us to decide against Hueter's method.

The danger in a transfusion of defibrinated blood is not in introducing the retained coagula, but the fibrin ferment formed by defibrination. Its activity is materially increased in peripheral arterial transfusion. Landois's proposition, to inject into a large vein or the central end of an artery, whenever the surgeon is compelled to employ defibrinated blood, appears far more rational. This proposition, curiously enough, has met with no further endorsement, though it is easily proven that blood loaded with fibrin-ferment entirely loses its coagulating properties as soon as it is injected directly into an artery, towards the heart.

A syringe must be used for central arterial transfusion, and the danger of forcing in air-bubbles is not so great as when the injection is made into a vein which might conduct the air into the right heart.

Venous blood-infusion admits of but two serviceable procedures, viz., the direct admission of the arterial stream impelled by the vis-a-tergo of the donor's heart, and secondly, allowing the infibrinated blood to press its way into the vein by its own weight as it rests in the measuring receptacle. As has been stated, the first method has as yet been employed only in transfusion from animal to man. Still, in an emergency, there would be nothing to preclude the same procedure in transfusion from man to man. A canule might be introduced, with all antiseptic precautions, into the central end of the radial artery of a healthy donor and be united with another which has been fastened into the median basilic vein of the patient, after the hand of the donor has been firmly bound to the arm of the recipient. This, like all other direct transfusions, may be performed without complicated apparatus: easily made glass canules, united by rubber tubes, suffice. Preparatory filling of the canules with an indifferent liquid is unnecessary. A sound inserted between the peripheral canule (*i. e.* the one in the vein) and the rubber tube, amply suffices to prevent the introduction of air, the operation being performed as follows: while the vein is still tied the artery is opened, and the blood, shooting into the canule, crowds out the air before it. As soon as drops of blood instead of air issue at the side of the sound, it is to be withdrawn, as then the connections are filled with blood. All that is requisite then is to loosen the ligature which confines the veins, and the arterial blood will flow unimpeded into the venous territory towards the heart.

Direct conduction from artery to artery will be found possible only in those cases in which the arterial tension of the donor is greater than that of the receiver. Thus, in a profound anæmia it might be essayed, transfusing blood directly, that is, through simple canules from the central end of an artery of the donor into the peripheral end of the artery of the receiver. When the tension of both arterial systems is equal, the effort will prove futile. In the human being these transfers have as yet been made only by means of pumping apparatus (Schliep.) If it be decided to employ

such a forcing apparatus at all, we would recommend central transfusion, *i. e.*, from the central end of the donor's artery to the central end of the receiver's, as being a method of easier execution.

Formerly syringes were used for the introduction of defibrinated blood into the veins. But far simpler and less dangerous than thus to force in the blood, is to allow it to flow in, impelled only by its weight and the pressure it exercises upon the vessel which contains it. There is no danger if the blood carry with it a few isolated air-bubbles, especially if the transfusion is made into a vein distant from the heart, as are the veins of the extremities. But when a syringe is used, the force to be employed for the injection of each quantity of blood cannot be so exactly calculated as to assure against overfilling the right heart, with consequent phenomena of engorgement in the large venous trunks or even a direct forcing of blood into the latter, as for instance the portal system. Experiments made in this procedure have yielded observations of hæmorrhage into the intestines and liver, even to the extent of tearing the latter organ (Casse,)

The dangers resulting from the introduction of air into veins have had their fatal issues explained in many ways. First, it is claimed that the air-bubbles which reach the heart are forced thence into the lungs and there produce a stoppage in the capillaries, with marked hindrance to the pulmonary circulation. But Löwenthal has shown that animals subjected to the injection of large syringefuls of air into the peripheral veins bear the operation quite well. Furthermore, it is known that even an inundation of the pulmonary circulation, as, for instance, with emulsions of fat or wax, is not followed by any direct danger to life.

Panum and others have assumed not only these impediments to the pulmonary circulation, but also a similar circulatory disturbance within the brain, and those nervous centres which are prolonged into the spinal marrow. This can be demonstrated experimentally and graphically (Couty), especially when air is gradually forced into the veins. Yet those cases in which sudden death follows the admission of air, show that the primary cause is found in a pure arrest of the heart's action and must be taken into consideration in connection with such fatal mishaps as may occur in transfusions.

The valves of the heart, of which the tricuspid is most important in this connection, are destined to arrest fluids or let them pass. If air instead of blood enters the heart, the valves, especially the tricuspid, become insufficient in proportion to the abnormal distension, the degree of which depends upon the quality of air and blood which have entered the heart. The contractions of the distended heart are not capable of propelling the blood to the pulmonary vessels and beat the blood in its right side to a froth. *Owing to the valvular insufficiency the abnormal contents of the right heart are thrown to and fro between the pulmonary artery and venæ cavæ.* But few bubbles of air or froth reach the pulmonary circulation and the coronary vessels. The air-bubbles do not prevent the blood from entering the lungs and nutrient vessels of the heart, but the valvular insufficiency allows no blood to flow into the heart from the venæ cavæ. Thus the entrance of air into the heart kills by primary paralysis of the organ, provided that *large* quantities have entered at once. When small quantities of air enter the heart slowly, the blood which enters with it prevents the rapid death of the heart-muscles and does not give rise to a definite interruption of the pulmonary circulation. If, after

longitudinally dividing the sternum of an animal, the heart be exposed without opening the pleura, and air be allowed to enter the heart through a wound in the jugular vein, the ineffectual efforts of the heart to contract upon its contents become evident. Gradually the coronary vessels fill with air or bloody froth and soon contractions cease entirely. If then an indifferent fluid, say a one-half per cent. chloride of sodium solution, be injected by a fine instrument through the heart-muscle directly into the right ventricle to such an extent as to overbalance the air in quantity, the following phenomena will be observed: the contents of the heart are gradually pushed forward by weak contractions, as the valves again become sufficient; soon blood follows, the cardiac impulse becomes stronger and the pulmonary circulation is re-established. Further investigations will be required to demonstrate to what extent and in what manner the above observations may be practically applied, and whether at all life-saving results will be attainable in sudden deaths from the entrance of air.

We will now mention two methods which have been essayed as substitutes for the injection of blood into the vessels, *viz.*: Subcutaneous injection of blood and injection thereof into the abdominal cavity.

Both methods, whether intact or defibrinated blood is used, yield absorption of the red blood-discs by the circuitous route of the lymphatics. Thus the red discs enter the circulation indirectly and but slowly, therefore these methods are not available for those cases in which a rapid restitution of blood is urgently necessary. Casse and several others have injected blood subcutaneously in experiments and in patients, but the results were very doubtful. The sites of injection were repeatedly affected with abscesses. It is claimed that Ponfick injected blood successfully into the abdominal cavities of three patients. Browicz and Obalinski have proved the latter experimentally.

In proceeding to the discussion of the performance of transfusion, it must be noted that *the vessel into which the injection is to be made, must be well dissected out, as in ligations*; and this applies to veins as well as arteries. The use of canules to penetrate a vein through the skin is unsafe and may even become dangerous when large arteries are near, as in the bend of the elbow. After the artery or vein had been dissected from its surroundings, three ligatures are placed about the vessel thus isolated,—one peripheral ligature closing the vessel permanently, one central temporary ligature, and between them a thread with which to fasten the infusion canule into the vessel. The canule is inserted into the vessel after the wall thereof has been incised with a fine scissors. The direction of this incision is made diagonal to the long axis of the vessel. After the transfusion is made the temporary (central) ligature is tied firmly, then a canule is extracted, and finally the vessel is cut between the two ligatures. All arteries into which transfusions have been made must be so treated, while when a vein is used, the canule may in many cases be merely pushed into the lumen of the vessel without securing it further. After the canule is removed a simple compress upon the site of operation will suffice.

The choice between defibrinated and intact blood merits separate consideration. We have seen that the use of beaten blood does not appear less recommendable because the fibrin is removed, but because fibrin-ferment is developed by the beating and may lead to the formation of coagula. This coagulation within the vessels is blamable principally for the fatal issues of cases in which defibrinated blood was trans-

fused, and not, as was formerly assumed, a consequence of the introduction of flakes of fibrin into the circulation, the presence of which was attributed to defective filtration. Still special care must be devoted to insuring thorough filtration. For this purpose filters of satin, from which the sizing has been removed, are most recommendable. The filter is set into a glass funnel whence the blood flows into a most carefully cleaned glass vessel. The blood is best beaten with two thick, thoroughly cleaned glass rods, in a porcelain dish into which the blood of the donor was received. Too little time must not, by any means, be spent in defibrination, lest secondary coagulation take place in the defibrinated blood. The glass vessel into which the blood has been conducted after defibrination and careful filtering, need not be specially warmed, as was formerly strenuously urged. No evil results have followed the injection of blood which corresponded to the temperature of the room, as Polli formerly, and Casse recently proved. Ore, Duranty, Schliep and others, have proven the fact that when using intact blood cold retards coagulation. Therefore they recommend that the transfusion apparatus, after being filled with blood be laid on ice, previous to its employment.

When a syringe is employed for transfusion, blood must be introduced slowly and at intervals, to avoid, as before indicated, the dangers of overfilling the portal circulation, or even rupture of the liver. Yet frequently tenesmus, colics and vomiting supervene. These can be avoided by emptying the bowels previous to the operation.

Among the other symptoms which may arise at a transfusion, we will mention: *dyspnœa*, which, at least in the transfusion of lamb's blood, is attributed by Traube to its containing greater quantities of carbonic acid. The *lumbar pains*, which have been explained on the score of renal hyperæmia, as hæmaturia, often follow transfusions. Frequently a rigor follows some time after a transfusion, and later, especially after transfusions of lamb's blood, the entire skin of the receiver has been covered with violently itching wheals of urticaria.

What, then, are the indications for the introduction of viable blood into the circulatory apparatus? The preceding considerations will indubitably have shown you that a marked degree of *anæmia* gives the principal indication. We would also transfuse in extensive deep burns, as in severe cases the fatal termination is brought about by the death of a large number of red blood-discs (Ponfick, L. von Lesser).

Thirdly, transfusion is suggested in poisonings, which, as in extensive scalds, alter the capacity of many red blood-discs to perform their functions and produce acute functional oligocythæmia (v. Lesser). In this connection poisoning with carbonic-oxide-gas merits serious consideration, which Claude Bernard compared with extensive venesection. Furthermore, there may be discussed in this connection poisoning with chlorate of potash (Marchand), pyrogallol and (Neisser) and nitrobenzole (Yonck, Fehline) in all of which analogous destruction of the blood-discs has been established.

Again transfusion is demanded in poisonings with matters which, owing to their presence in the blood, thereby influence the nervous centers. Such are chloroform, opium and its alkaloids, strychnia, etc. In these cases it is necessary quickly to abstract large quantities of blood and thus remove with it corresponding quantities of the noxious substances it contains. The loss of blood must be covered by a corresponding intro-

duction of healthy blood from without. In those intoxications with such matters as have been mentioned, (carbonic oxide gas, chlorate of potash, pyrogallol acid, nitrite of amyl—and in burns as well) which threaten life almost only through the death of the blood-discs, venesection previous to transfusion is indicated only to lighten the labor of the kidneys, which almost alone must devote themselves to the elimination of the products of the disintegration of the red blood-discs.

In accord with our explanations of the capacity of the vascular system, depletion previous to transfusion, even of great quantities, would, as is self-evident, be quite out of place in the *anæmia* following hæmorrhages.

Previous to again directing our attention to *anæmic* conditions, we must now mention one indication for transfusion, which we intentionally omitted when citing the others. The history of transfusion presents frequent reappearances of the suggestion of injection of blood in chronic diseases. As yet, we know but little of the distinctive modifications which the functions of the red blood-discs suffer in various affections. Equally limited is our information upon the influences of these disturbances upon the changes which modify metamorphosis and the several tissues in chronic affections. Therefore the injection of blood in chronic diseases cannot be considered other than an empirical measure.

We must likewise decidedly regret the opinion which occasionally is still uttered, that an introduction of blood in starvation can elevate nutrition. This view has been thoroughly refuted by Casse's experiments, as well as by Panum's classical investigations. The animals which he had starved could in no manner be kept alive by transfusion. The injected blood at first increases the destruction of albumen through its greater oxidation, and owing to the lack of those albuminous matters which should be introduced with normal nutrition. Then, again, we have demonstrated that the excessive red blood-discs are subject to destruction, with concurrent increase of nitrogenous elimination through the urine (Worm-Müller). Now, if we return to direct *anæmia*, we distinguish, in accord with Worm-Müller's theory on the capacity of the vascular system three territories of *anæmia*.

I. Passive *anæmia* affecting loss of blood of from one and a half to two per cent. of the weight of the body. Most frequently a spontaneous re-establishment of the blood-constituents takes place, as, for instance, after syncope, etc.; therefore we may designate this territory as the physiological stage of *anæmia*.

II. *Anæmia* threatening life in which the loss of blood is as much as three per cent. of the weight of the blood contained in the body. As we have seen that this is the limit in which the pressure of the blood and the number of the red discs in it suffer sudden diminution, dependent on a peculiar distribution within the vessels, we will in view of that distribution perhaps be able to avoid danger by auto-transfusion without being compelled to introduce blood from without. Auto-transfusion will shortly be discussed in detail.

III. *Fatal Anæmia*.—This is the true domain of transfusion, in which not only and alone can save life, because auto-transfusion will neither bring about an elevation of the blood pressure nor be able to reproduce a proper admixture of its constituents, which approximates the normal condition.

We have just seen that loss of blood within a certain limit can be replaced from without by conducting to the heart the blood which has been accumulated in

certain vascular districts, as the consequence of sudden sinking of the blood-tension resultant upon the hæmorrhages which have reached a certain degree. And when centripetal expression of the extremities by kneading and likewise pressing the abdomen was practiced, elevation of the blood-pressure and greater filling of the aorta was attained, as has been shown you in the second lecture. Importance does not attach to blood which normally is found in the said parts, but only to a local stasis, while the aorta system is but slightly filled. When fatal hæmorrhage occurs under such disturbances of the blood-distribution an anæmic individual will die if the necessary assistance be not given him, and yet may possess a sufficiency of blood to maintain life had the blood been properly distributed. The patient dies not from lack of blood but from lack of blood circulation.

Auto-transfusion as a means of restoring engorged quantities of blood to usefulness to the organism was first subjected to scientific explanation through the works of Worm-Müller. It was long known and practiced as a popular remedy, especially in hæmorrhages, during and after parturition (Hausmann).

The proper field for auto-transfusion is that anæmia which endangers life (second territory.) In this a key to the quantity of blood of which the body can still dispose is given us. As is self-evident auto-transfusion is most efficacious in the lightest forms of transitory anæmia (first territory.) In those cases in which the effect of auto-transfusion is so limited that for the purpose of saving life which is being extinguished, we must bring food from without as quickly as possible, auto-transfusion serves as a positive means of diagnosis to indicate to us the quantity of blood which we should introduce. For this purpose it is better and more reliable than the symptoms of hæmorrhage which the pulse and other means furnish, as they depend to a great extent upon nervous reflex. In these cases also auto-transfusion will be of great use as a preparation of the patient for transfusion. It also subserves the purpose of forcing into the circulation all of the blood which remains in the body, and thus to sustain life until the injection of blood can be made.

Furthermore, the execution of transfusion is recommendable in all cases of profound anæmia which are to be subject to operations in which hæmorrhage is inevitable (extraction of the child in the placenta-prævia and after, hæmorrhage, etc.). Finally, it should be used in profound anæmias previous to the administration of chloroform, which, as is well known, diminishes the blood-tension and may lead to a deadly collapse in those who have been exhausted by loss of blood (see Koch, Ueber das Chloroform und seine Anwendung in der Chirurgie. Sammlung Klinischer Vorträge, No. 89.)

Auto-transfusion is very simply executed. The patient is placed with his head lower than his pelvis. The extremities are elevated singly or together to the vertical posture, and either bandaged or stroked from the periphery to the centre. Hereto are added kneadings of the abdomen and a progressive pressure on the intestines from the symphysis pubis to the margin of the ribs, and special compression of the region of the liver. The thorax should also be compressed from time to time by pressure upon the ribs in the axillary line, as in Marshall Hall's Artificial Respiration, the action of which most probably favors respiration, but indirectly, while it principally facilitates the flow of blood to the right heart. Undoubtedly the action of direct mechanical pressure upon the heart assists in this procedure (Böhm). From time to time the head should be elevated for brief moments so as to allow the

blood of the jugular veins to arrive at the heart more quickly. Nélaton's suspension by the heels in the asphyxia of chloroform belongs to the domain of auto-transfusion.

LECTURES.

VOLKMAN'S OPERATION FOR HYDRARTHROSIS OF THE KNEE JOINT.

A CLINICAL LECTURE DELIVERED AT THE NEW YORK HOSPITAL.

BY

ROBERT F. WEIR, M.D.,

Reported by C. H. May, M.D., to whom was awarded the first Harsen prize of \$150 in 1883.

This patient is 39 years old. One year ago she fell from a chair and struck the anterior surface of the right knee. Following this there was no pain or symptoms of acute inflammation, but there was great swelling and the knee increased greatly in size. But she was able to walk until 6 months ago, when she found that the joint seemed to yield under the weight of the body; and after this she was only able to get about with the assistance of some support, either cane or crutch. She entered the hospital on Dec. 16, 1882, with the knee joint enormously enlarged; its circumference at the middle of the patella was 16½ inches. The treatment adopted was to try to diminish the size of the swelling by pressure from an elastic bandage. Actual measurement shows that swelling has only been reduced by half an inch, so that the effects of compression have not been great. The leg can be twisted in any direction, the ligaments are very lax, the tibia is dislocated outward and somewhat backward; this is affected by the action of the abductors above and the outer ham-string muscles. The patella is lifted upward by the fluid in the joint, and it cannot be made to touch the bone even by firm pressure. The joint surfaces are separated and can be knocked together, and then give a characteristic noise; there is no pain, the joint is distended by an altered synovial fluid, there is hypertrophy of the synovial fringes, and there may be separated fibrinous matter from the fringes floating in the fluid.

The capsule of the joint is greatly thickened, and the ligaments I need hardly tell you, are greatly relaxed and elongated. This amount of relaxation of the ligaments is rather rare. I had hoped to get rid of the fluid in the joint by pressure and counter-irritation, but in this I have not succeeded. The husband of this woman, with the consideration which often distinguishes the male element readily consents to have the leg amputated, but the woman does not, and we will try to avoid it.

Before the days of antiseptic surgery, meddling with joints was very risky; but since this great advancement in surgery we can open joints and wash them out with comparatively little danger. In a case of this sort, what we endeavor to do is to get rid of the fluid and then to excite an acute inflammation to take the place of the chronic one, and thus we hope that with the acute process the products of the chronic inflammation will be absorbed. For this purpose Bonnet, of Lyons, used iodine injections into the cavity of the joint; these are now still used in obstinate cases. But first it is well to try the method employed by Volkmann, who was one of the earlier ones who opened

joints, and also by Schede, of Hamburg. The plan of Volkmann was to puncture the joint and get out the fluid, and then throw in a 5 % solution of carbolic acid. The joint is then dressed antiseptically. Sometimes after the injection there is no reaction, or only a slight inflammation, soon subsiding; sometimes an acute synovitis results, which also slowly subsides. It may be necessary to inject several times in order to accomplish your end. I think in this case we can dispense with an anæsthetic.

We will puncture here at the external pouch. The whole will be done under spray; sometimes fibrinous masses are found in the joint besides the fluid, but the issue is then just as good.

Dr. Markoe had a case in which there was a great deal of these fibrinous masses and only little fluid. He passed the trocar in and pushed it in different directions, so as to set up inflammation. I try to go from one of the pouches to the under surface of the patella, avoiding thus the articular cartilage, and in this way you can be sure you are in the joint. The fluid which passes out in this case is rather more sticky than it usually is; it is tinged red from the blood coming from the wound made in punctating. A 5 % solution of carbolic acid is now made to flow into the joint from a bag held at some height so as to get sufficient pressure, and the joint thus thoroughly washed out. This will be done several times. It is then covered with Lister's dressing. I always adhere strictly to Lister in operations about the joints and abdominal cavity and in amputations, and believe it to be the best plan in any of these operations. My experience with bichloride of mercury, though still somewhat limited, impresses me more and more with its advantages as an antiseptic in dressings.

An interesting illustration of the risk incurred in opening a joint without antiseptic precautions came under my observation but yesterday. It was in a young man who about a year ago had fallen upon his knee, and as a result of this there was set up an acute synovitis. This soon subsided but left behind it a sort of chronic inflammatory process, which, however, with the exception of stiffness of the knee joint, gave the man little trouble.

But after a while more discomfort was experienced, and the patient considerably disabled by the chronic inflammation of the joint. Besides this he noticed some foreign body floating in the joint, which every once in a while got between the opposing joint surfaces, and when he attempted to step he would experience pain and would fall. He consulted a surgeon, who told him that this solid body was a piece of detached articular cartilage. He consented to have it removed. The solid particle was crowded up to one corner of the joint and an incision made through which it was extracted. Unfortunately an inflammatory action was thus set up and produced an ankylosis of the limb luckily in a very good position.

SELECTIONS FROM JOURNALS.

SOUTHEY, BARLOW, AND MAHOMED ON SYMMETRICAL GANGRENE.

Dr. Southey has reported the following case to the Clinical Society of London.—F. N., aged 9, (admitted into the Matthew Ward, St. Bartholomew's Hospital, November 25, 1881), was much emaciated, his hair thin and falling off, his abdomen empty and retracted,

skin dry; and he was in a curious, excitable, semi-delirious mental state. He presented a gangrene of the tip of his right index finger; all his extremities felt cold, and he had insomnia. His pulse was 148, very feeble. Respiration, 32. Temperature, 99°. His heart beat with feeble impulse, in the normal situation. There was no increase of normal cardiac dullness; no cardiac murmur; no physical signs of lung disease. Neither liver nor spleen transcended its normal limits. His appetite was bad; he had had no sickness; the bowels acted once daily; the tongue was clear and moist; micturition gave no pain; the urine was scanty, not abnormal, chiefly passed with his stools. After a few days the thumb and second finger of the same (right) hand were similarly involved; they first became red and throbbled, then livid, and finally gangrened. On December 5 exactly similar spots occurred on the pinna of the right ear, and on the extremity of his nose, and on the tip of the middle finger of his right hand. A little later subcutaneous mottlings (tachetés) appeared all over his trunk and limbs, and developed into a raised rash, like urticaria tuberosa, or erythema tuberculatum. The spots first itched, then became painful and tender, but gradually subsided, leaving only some pigmentation to mark their sites. Finally, all the fingers and the thumb of the right hand became gangrenous and slowly separated; also the thumb, index, and the little finger of the left hand. He passed into a condition of most extreme prostration, with broncho-pneumonia of both lungs, and only very slowly and gradually recovered from it. In January 1882, a new and interesting clinical feature was manifested, namely, intermittent true hæmaturia, bloody urine being passed alternately with normal-colored non-albuminous urine. On some days, distinct blood-cells were passed with the urine; on others, blood-coloring matter without blood-cells; on others, albumen with blood enough to give the blood-reaction only. Oxalate crystals were present in great abundance when the hæmaturia was abundant, and *vice versa*. No tubercasts were ever noticed. All symptoms of urinary disorder disappeared in July 1882, when the child was discharged well, but with the loss of his fingers. He had been seen several times since.

Dr. Barlow said he had never seen so severe a case of the disease as that described by Dr. Southey, but he had seen two or three which were less severe. As Dr. Southey had observed, the most important feature they presented was not the gangrene, but the vaso-motor disturbances. In one case, within his own experience—that of a man aged 35, who had been generally regarded as rheumatic—the attacks which usually occurred in winter, were ushered in by pain in the lower extremities, which was followed by bluish-red patches on the integuments. When first seen by Dr. Barlow, he had just suffered an attack, and there was a distinct patch on one trochanter, while one toe was the subject of local gangrene, and all his toes were blue. In two other cases observed, in female children 3½ years old, the attacks occurred between September and April, being rare in summer, and were in the latter case associated with sudden changes in temperature. In one child, the lower limb affected was, when seen, intensely painful and black from above the ankle to the toes, and presented a most alarming appearance. It remained thus for about three hours and then passed off, the child seeming quite well again. She had several attacks of the kind in the legs and forearms. The attacks occurred on cold days in the other case also, and on several occasions were accompanied with violent stomach-ache, while, two or three hours subsequently,

dark-colored urine, containing hæmatin, oxalate crystals, and albumen, would be passed, but only once after each attack. Dr. Barlow considered that the disease presented many points in common with that known as paroxysmal hæmaturia. It was a disease of winter, and was usually preceded by a condition of sleepiness; its resemblance to ague attacks was not well marked, for there was no sweating stage observable, the cold stage being the principal one. He had elicited from the mother of the patient presenting typical paroxysmal hæmaturia, that the child's finger-ends grew distinctly blue during the attack, and so familiar was the appearance, that no special heed was paid to it. Dr. Barlow thought that the application of cold was a more rational treatment than the employment of warmth, being led to this opinion from his knowledge of the effects produced by cold in the treatment of frost-bites. He mentioned the case of a child, which—a sufferer from paroxysmal hæmaturia, and accustomed to be washed in warm water—was submitted to the influence of cold water with good results. The constant current applied down the back had been employed by Reynaud, with a view to diminish the irritability of the vaso-motor centres, and with success. A patient of his own had described how this treatment was the only one which had done him much good while in St. Bartholomew's Hospital, and the method was certainly worthy of extended trial. There was no confirmation forthcoming of the association of rheumatic gout with the disease in his cases. Mr. Hutchinson, however, had described a connection between end-joint arthritis and Reynaud's disease; and a patient under his (Dr. Barlow's) care might be taken to confirm this opinion.

Dr. Mahomed had seen two cases similar to that mentioned by Dr. Southey. In one, intermittent hæmatinuria had existed, and crystals of oxalates were found in the urine. He explained that this frequent association of intermittent hæmatinuria with symmetrical gangrene effectually separated such cases from those dwelt on by Mr. Cripps; and, moreover, the patients in the former cases were not necessarily endowed with a feeble circulatory apparatus. A few male patients of his own had suffered from the disease in a more or less chronic form for seven or eight years. The fingers presented a gangrenous appearance, which varied with the weather, but was not improved by treatment. The tips of two or three fingers had been quite lost. In summer time, the hand was quite useful.—*London Medical Record.*

OLLIER ON RESECTION OF THE KNEE.

One of the most important contributions on practical surgery during the present year is an original memoir (*Revue de Chirurgie*, Nos. 4 and 5, 1883) by Professor Ollier on resection of the knee, giving the results obtained from this operation in the surgical clinique of Lyons during the year 1882. M. Ollier states that formerly he was opposed to this operation, and, on account of the high mortality—75 to 80 per cent.—which followed his first attempts, he thought it preferable in cases not amenable to treatment by rest, drainage, and incision of abscesses, to have recourse to amputation in the thigh, the mortality of which operation in such cases was about 40 per cent. At the present day, however, owing to antiseptic dressings, the proportion is completely changed. Of seven cases in which resection of the knee has been recently performed by Ollier, one only was fatal; and in this death occurred very soon after the operation, and was

due to shock. The mortality of resection of the knee has thus been reduced from 80 to 14 per cent., and the motives which formerly induced the surgeon to abstain from performing this operation no longer exist. The use of Lister's dressing, with which M. Ollier associates iodoform, have completely changed the conditions of operative surgery in the clinique at Lyons. As an example of this, M. Ollier states that, during the six months just previous to the date of his paper, he had performed twenty-two major operations (resections of large joints, amputation in the thigh and leg) without having had a single bad result through infection. Resection of the knee, which now, in M. Ollier's opinion, claims a place in the first rank of conservative operations, is applicable to three principal conditions: osteo-arthritis, or suppurative fungous arthritis; comminuted fracture, or gun-shot wounds involving the joint; ankylosis in a bad position. Thus the resection may be pathological, traumatic, or orthopædic.

M. Ollier does not approve of performing resection of the knee on children in whom osteo-arthritis usually yields to the expectant treatment, and the limb after the resection is likely to become very much reduced in length. He would not, therefore, practice the operation on any subject under the age of eight years and a half. In older patients, the indication for resection of the knee exists not only when the removal of the osseous extremities is absolutely necessary for the preservation of life, but is presented also when it is desirable to remove the source of a suppuration which, though not threatening to become immediately fatal, may prove so at any time, and which condemns the patient to long confinement in bed, and causes all the bad results of a chronic discharge. Formerly, it would have been more prudent under these conditions to undertake a natural cure; but now, M. Ollier holds, it would be blamable not to resect. The operation, when performed at a proper time, will prevent the dangers of articular suppuration, and enable the patient in the course of three or four months to leave his bed and to move about.

In performing resection of the knee, it has been M. Ollier's aim to place the parts in the best conditions for favoring osseous ankylosis, or obtaining an useful new joint in cases where solid union has not been established. Division of the ligaments and ablation of the capsule, as practiced in the operations of Park and Moreau, is attended with the disadvantage of destroying the close relations of the osseous surfaces, and leaves the extremities of the bones quite loose in the wound, and deprived of such supporting soft structure as might assist very much in their ulterior union. By preserving the periosteal-capsular sheath, and maintaining the lateral and posterior continuity of this sheath, the surgeon may retain the ligamento-muscular girdle which surrounds the bones, and would keep them together after the operation. M. Ollier advocates the subperiosteal method of resecting the knee, but points out that this is not done with the view of forming a new joint. A solid limb is needed to support the weight of the body, and osseous union is the best guarantee against any relapse of the local disease. An H-shaped incision is made, which, however, is smaller than that that was formed by Moreau; on each side of the joint, is made an incision for free discharge and for the insertion of drainage-tubes. The outer incision is made just in front of the tendon on the biceps, and the inner one just behind the tendon of the sartorius. In making the transverse incision, the ligamentum patellæ is cut through and the joint opened; the lateral ligaments of the knee are not

divided. The superior flap is then raised together with the patella. If this bone be found diseased it is removed, its anterior covering of periosteum, together with the continuation of the tendon of the extensor muscles, being carefully preserved. The crucial ligaments having next been divided, the inferior extremity of the femur is projected through the wound and stripped of its periosteum, and the insertions of the ligaments as far as the line to which it is thought necessary to apply the saw. The extremity of this bone having been removed in the usual way, the end of the tibia is dealt with in a like manner. All masses of thickened synovial membrane are scraped away, and the saw surfaces of the bone brought together and fixed by two wire sutures. After the application of sutures to the edges of the skin flaps, the ends of the divided ligamentum being also brought together by suture, antiseptic dressings are applied, and the whole limb secured in a splint. This proceeding, Ollier asserts, not only seems to realize all the conditions required for total resection, but is applicable in its primary stage to exploratory arthrotomy, to articular scraping, and to superficial (intra-epiphysal), and partial resections of the knee-joint. Under these circumstances, it is important to preserve the lateral ligaments and to re-establish the continuity of the quadriceps by suturing the ligamentum patellæ. The tendino-ligamentous girdle having been left intact, the elements of resistance and motility are preserved, and the joint is subjected but to the minimum of disturbance. M. Ollier, however, would not at the present day compare these partial operations with total resection of the knee. The former are, in certain cases, rational operations, the dangers of which are much diminished by Lister's dressings and iodoform, but they are attended by the disadvantages of all operations that are too conservative—they expose the patient to the risk of relapse. The patella has always been removed by M. Ollier; and it is considered prudent not to leave this bone in resection of the knee in the adult, when it is deprived of its cartilage and more or less diseased internally. This practice is a guarantee against relapse of ostitis and of fungous disease of synovial membrane. M. Ollier would not, however, adhere strictly to this rule, and thinks that the patella might well be left in cases of traumatic arthritis, particularly in infants. When this is done, it is necessary to increase the number of drainage-tubes. In preserving the patella when sound, in cases of some other lesion of the joint than osseous or synovial tuberculosis, the surgeon might gain the same advantages which he seeks to obtain by preserving the lateral ligaments and the capsule; that is to say, around the line of reunion of the bones there is an addition to the tissues, serving to augment the solidity of the limb. If firm union fail to be established between the bones, the presence of the patella would probably favor the comparability of particular motility with usefulness of the limb.

In dealing with enlarged granular masses of synovial membrane in resection of the knee, the surgeon's practice should vary according to the nature of the arthritis. In articular disease of traumatic or rheumatic origin, these granular masses are converted into sterile necrotic tissue after the removal of their superficial layer, but in tubercular arthritis it is necessary to remove all the diseased synovial membrane and to apply the actual cautery to the raw surface. In cases where well-marked gray granulations exist, and where large masses are observed of caseous material, or of pale and slightly vascular granulations extending under the periosteum, amputation is preferable to resection. Since

the introduction of antiseptic dressings, the prospects of treating severe open injuries of the knee by resection have much improved; and, at the same time, these dressings, by preventing those bad results which resection is intended to remedy, are likely to diminish considerably the number of cases of resection, and to widen the field of non-operative conservative surgery. There will, however, always remain a certain number of cases of comminuted fracture of the epiphyses which should be treated by resection, as for example, when the condyles are broken up into numerous fragments and a projectile or some other foreign body is present in the midst of the splinters. In a case of this kind, M. Ollier would perform the following operation, which he has not yet tried on the living subject, but which seems to possess several advantages on account of its simplicity and of its favorable anatomical conditions with regard to ulterior renewal of the joint if ankylosis should fail. This consists in a single straight median incision carried longitudinally over the patella and through the tendon of the quadriceps and the ligamentum patellæ, dividing these latter structures into two equal parts. The patella having been divided by a saw into lateral halves, the two lips of the wound are separated, the interior of the joint is exposed, and the extent and situation of the injury fully revealed. The surgeon is then able to do what is necessary, whether simply to remove splinters or foreign bodies, or to perform resection.

In two of the seven cases of resection of the knee recorded in this memoir, the operation was performed for osseous ankylosis. This condition had been the result in one of these instances of extension of inflammation from the juxta-epiphysal region; in the second, of acute traumatic arthritis. In dealing with ankylosis of the knee by operation, the surgeon has hitherto had the choice of two methods of procedure: cuneiform excision of the femur above the articulation; resection of the osseous extremities which formerly constituted the joint. The second, M. Ollier states, is that most frequently indicated, and is the only operation applicable in cases where the extremities of the bones are still diseased; where there are patches of osteo-myelitis in the condyles of the femur; and where open sinuses still exist and lead down between the bones. The operation of cuneiform excision of the femur may doubtless be often applied, but in cases where it is not necessary to interfere with the old joint, and where there is no diseased tissue to be removed, this cuneiform resection, in Ollier's opinion, should be replaced by a simple supracondyloid osteotomy, or better still by a bloodless operation, that is to say, by femoral osteoclasis. This supracondyloid fracture is with Ollier the "method of election," whenever such operation is applicable and especially in ankylosis of traumatic or rheumatic origin. In such cases, he would not hesitate to have recourse to osteoclasis, if the amount of flexion at the fixed knee did not pass beyond a right angle. Osteotomy, it is allowed, has no great danger if performed antiseptically, but still it is not so harmless a proceeding as osteoclasis. That method should be chosen in which enables the surgeon to obtain the same orthopædic result without a wound and yet with equal precision.

This memoir concludes with the following summary: 1. Antiseptic dressings have completely changed the indications and prognosis of resection of the knee. As formerly it was accounted wise and prudent to reject this operation, or at least to limit its indications in hospital practice, so now it would be considered unreasonable to continue to amputate the thigh

in cases where resection is applicable. 2. In young subjects, on account of the dangers of resection with regard to ulterior lengthening of the bone, it is still necessary to insist on a methodical expectant treatment in suppuration of the knee, and on the employment of such relatively simple means as arthrotomy, articular scraping, drainage, etc. The surgeon might have recourse in the first place to these means at any age, but he should always prefer resection to amputation, except in dealing with severe forms of tubercular arthritis, for which the latter is the proper operation. 3. The gravity of resection of the knee is not greater at the present day than that of amputation through the thigh. The cases recorded in this memoir show that in resection of the knee success is now the rule where formerly it was the exception, and that the surgeon must be guided by other motives than the gravity of the operation in deciding between amputation and resection. 4. Endeavor should always be made to obtain osseous ankylosis after resection of the knee; but it is necessary in this operation to try to ensure a strong articulation, in case, for some reason or other, ankylosis might fail. 5. The subperiosteal method allows the surgeon to attain this result. The sawn surfaces of the bones are thus left surrounded by abundant ossifiable tissue; and in cases where osseous union does not result, a complete ligamentomuscular girdle is preserved around the new joint. 6. From the scarcity of the observations that have hitherto been recorded, it is yet impossible to estimate the value of resection of the knee in military surgery. It may be presumed, however, that in future campaigns results may be obtained as good as those of modern civil surgery, if only the wounded can be treated with ordinary care. 7. In resection a transverse incision is recommended, together with two lateral vertical incisions. These incisions should not be so extensive as those that were made in Park's operation, and the lateral ligaments of the knee should be left intact. On each side of the joint, far back and near the posterior margins of the condyles, a deep vertical incision is made for the purpose of drainage. 8. In cases of chronic intra-articular suppuration, it is usually found necessary to remove the patella, its anterior covering of periosteum being preserved. The continuity of the ligamentum patellæ should be re-established by nature. 9. In the operative treatment of comminuted fracture of the articular extremities of the bones, a longitudinal incision is to be preferred to transverse incisions. A median longitudinal incision in front of the knee, dividing the patella into two lateral halves, facilitates the operation, and preserves all the constituent elements of a new joint, and at the same time favors ankylosis, if this result be intended. 10. In osseous ankylosis of the knee, supracondyloid osteoclasts should be the method of election. This operation is especially applicable in cases of ankylosis of traumatic or rheumatic origin, when flexion does not reach or exceed a right angle, and when there are not any deep-seated and multiple cicatricial bands in the popliteal spaces. 11. Whenever there is a risk of lacerating any of the popliteal vessels or nerves enclosed in cicatricial tissue, it would be better to have recourse to supracondyloid osteotomy or to resection. It would be necessary in such case always to practice total resection of the condyloid expansions of the femur, if the cicatricial adhesions be deep-seated and multiple, and if the leg be flexed beyond a right angle. 12. Resection of the condyloid expansions is the only operation to be proposed when signs of inflammation of bone are presented. In a case of flexion of the leg passing be-

yond a right angle, the surgeon must remove not merely a wedge-shaped bone, but must take away some thickness of the posterior portion of the femur. This is the sole means of bringing the surfaces of section into contact, without exciting painful tension in the popliteal region and interfering with the circulation of the limb.—*Lond. Med. Rec.*

RICHARDSON ON FEEDING BY THE VEINS, AND ON INTRAPERITONEAL INJECTION IN THE COLLAPSE OF CHOLERA.

Dr. B. W. Richardson, in the *Med. Times and Gazette*, Aug. 1883, pp. 124, 155, 179, 210, recasts in a brief form a number of essays which appeared some years ago in the *Med. Times and Gazette*.

In the main the author was led to the conclusion that every fatal sign and every danger in cholera is due to the one simple act of the removal of water from the tissues, and especially from the nervous structures. The treatment suggested during collapse, and based on these views, introduced the consideration of the plan of feeding by the veins and of intraperitoneal injection. The first point of practice in the collapse was to place the patient in a temperature between 50° and 60° F. The next point was that of feeding. The fluid should be warmed about 15° above the animal temperature, and should not only supply colloidal food, but should yield up heat to the body after it was taken. A food was prepared according to the following formula:—

Two ounces of pure stearine, 2 oz. of fresh butter, 8 oz. of whites and yolks of eggs, well beaten up; 20 grains of carbonate of soda, 80 grains of common salt, 2 oz. of distilled water. In administering this compound, take an ounce of it, place it in a breakfast cup, and rub it up equally with a teaspoonful of glycerine or honey. Next pour upon the mass 3 ounces of boiling water, and incorporate well.

When feeding by the mouth is impossible, the next indication in the stage of collapse is to feed by the veins—to feed in the same way, as nearly as possible, as the venous system is fed in health from the alimentary canal, through the thoracic duct.

In the calm which accompanies the approach of death, there is often a cessation of the discharges from the alimentary canal and in rare cases the patient arrives at this stage and unexpectedly recovers; again, if one inject a warm saline fluid into the veins of a patient during this stage, there is a temporary reanimation, followed, however, by renewal of the discharge from the alimentary canal, and subsequent collapse.

The problem, based on these two sets of facts, is to find a fluid which, being gradually and steadily infused, will keep the animal fire alive while time is given for the alimentary affection to run its course and cease—a result which is all but certain in the majority of cases when time is obtained. What shall the fluid be? Blood is the first fluid to which the mind refers, but the objections to it are too many to permit the recommendation of its use as a practical method. Could we, however, separate the serum of the blood flowing from the vein of a healthy person, and slowly infuse the serum only, we should then be giving the collapsed man an external alimentary system, and should be putting him into a condition in which it would be difficult for him to die.

Milk was injected into the veins in six cases by Dr. James Bovell, of Toronto: two cases recovered, and the others were benefited for a short period. The au-

thor, however, considers that there are disadvantages connected with the use of milk, and suggests the use of the following:—four ounces of white of egg, one drachm of common salt, one scruple of phosphate of soda, one ounce of clarified animal fat, two ounces of pure glycerine, water to one pint.

In reference to the mode of injecting the veins, it must be remembered that no forcing must be used: the syringe is a bad and dangerous instrument.

Dr. Richardson also draws attention to a suggestion which he submitted, in Aug. 1854, to the East Surrey Medical Society, for the treatment of cholera during collapse by the production of artificial peritoneal or of cellular dropsy; the author thinks, however, that the plan of feeding the veins is the sounder practice.

Having disposed of the treatment of cholera in the stage of collapse, Dr. Richardson concludes his paper with a short communication on the treatment of the first stage, and of the stage of reaction. The treatment of the early stage resolves itself into three parts: the hygienic, the dietetic, the medicinal.

Creasote in small repeated doses, in combination with opium and camphor, checks the choleraic discharge, relieves the spasm, and is the most demonstrably curative remedy the author knows.

When the stage of collapse has decidedly passed away, the safest practice is to prevent every artificial means of stimulation. The patient may be relieved of medicine, he must not be rapidly fed, and must be allowed to rest and sleep.—*Lond. Med. Rec.*

KOCHER AND OTHERS ON THE REMOVAL OF GOITRE.

At the twelfth congress of the German Surgical Society in Berlin, on April 4, 1883 (*Deutsche Med. Wochenschr.*, April 11 and 18, 1883), Professor Kocher, of Bern, spoke on the operation for the removal of goitre. Since 1877, this operation has been performed 346 times, 123 times by Kocher alone. He has had to guard against two dangers in the operation, the risk of wounding the recurrent laryngeal nerve, and the difficulty of preventing or arresting hæmorrhage. He ligatures all the veins in two places, after having bared the swelling, then turns the tumor out of the wound, and loosens it from the trachea and surrounding parts; and only after he has ligatured the arteries does he proceed to incise the capsule and remove the tumor. He considers the customary tracheotomy before the operation to be not only unnecessary, but positively injurious, according to the statistics; and he has found that the bending of the trachea which was supposed to necessitate it, can be prevented by a suitable position of the head of the patient. He has never observed the softening of the trachea as the result of pressure, which has been mentioned by many operators. As the consequence of the operation, he has seen great diminution of physical strength, especially in young growing patients, with deficiency of red blood-corpuscles, and other signs of pernicious anæmia, in cases where the extirpation has been complete. Other organs remain normal, as does also the urine; and Dr. Kocher believes this condition, which he calls cachexia strumitiva, to be the result of the loss of the thyroid gland, which must, in that case, be reckoned among the blood-forming glands. He has not been able to refer the cause of goitre to the drinking water.

Professor Bardeleben had not seen so many cases as Professor Kocher, as the occurrence of four during the last session was an increase which, he thought, might

be due to the greater use of water brought by pipes. He agreed in giving up the preliminary tracheotomy, but he had not found any cachectic symptoms to follow the cases of total extirpation which he had had; the patients' strength seemed, on the contrary, to increase from the time of the operation. He had seen one case of great softening of the trachea.

Herr Maas, of Freiburg, had also operated without preliminary tracheotomy, but in one case it was necessary to resort to it afterwards, on account of the bending of the trachea, which threatened asphyxia. He had found the trachea to be usually increased in length and diminished in width, so that its lumen was easily closed in unfavorable positions of the patient. He thought the operation was sometimes undertaken too hastily, as, out of 455 patients seen in his polyclinic and 67 in the clinic, only 23 required operation, the others being cured by iodine treatment. He considered the operation to be more necessary in proportion to the age of the patients.

Herr Wölfler, of Vienna, spoke of the results of 68 cases, of which five had ended fatally. Forty-eight of these were between the ages of 12 and 30, and the remaining 20 between 30 and 65. The only indication for treatment, in his opinion, ought to be disturbance of function, which will be principally dyspnoea. The operation is too dangerous to be undertaken for the sake of appearance, and the resulting sinking in of the skin is often more unsightly than the original malady. Pregnancy, up to the sixth month, is no contra-indication of the operation; after that period, dyspnoea should be treated temporarily by tracheotomy, and further treatment deferred. The most common form of tumor is adenoma, on which may follow colloid degeneration. In the former, the blood-vessels form a network in the swelling; in the latter, they run more longitudinally. Papillary cystic adenoma is more malignant, and gives indications for thorough extirpation; but the hæmorrhagic goitres are the most dangerous, and they may give rise to most alarming bleeding. Dr. Wölfler had had no experience of the cachexia mentioned by Dr. Kocher, and he thought the general health of the patients ought to be thoroughly investigated beforehand, so that a circumstance which would have occurred in any case may not be attributed to the operation. Death resulted generally from septic infection of some kind, and in one case from entrance of air into the inferior thyroid vein.

Dr. Kocher replied that none of the speakers who contradicted the occurrence of cachexia had operated on young persons, in whom he had found it to occur. In the only case of a patient as young as 15 who had been mentioned, a relapse had occurred, showing that the extirpation had not been complete.

Lond. Med. Rec.

PRIBRAM ON DYSENTERY.

A case of acute dysentery, occurring in a patient who had already been for a long time under observation for some other affection, is reported (*Wien. Allgem. Med. Zeitung*, No. 29, 1883,) from Prague. The cause of the acute attack could only be found in the presence of a patient suffering from chronic dysentery in a neighboring bed. Every precaution, however, had been taken to prevent the possibility of infection from the excreta, &c. The clinical features of the case were precisely those of the most acute form of dysentery. The examination of the rectum showed great and tender swelling of the mucous membrane, without breach of surface. No similar attack had ever been experi-

enced by the patient. In his remarks upon the case, Professor Pribram points out the resemblance of these acute forms of dysentery to those of cholera, especially in the very rapid onset of the disease and the speedy occurrence of collapse or suppression of urine. The less severe forms may in their results be almost as fatal, from the continuance of fever, depression of circulation, and tendency to suppression of urine. The truly chronic forms, which are the most frequently met with, are characterized by their marked tendency to relapse, coupled with a condition of alternate constipation and diarrhœa. Digital examination of the rectum in such cases frequently shows cicatricial constriction, and the presence of single isolated polypoid excrescences from the mucous membrane. In some cases, but they occur but seldom in Prague, periproctitis and rectal abscesses may be set up. In others, still more rarely, hepatic abscess may follow. In respect of the acute attacks, much of the success or failure of treatment depends upon the previous vigor of the patient. As a general rule, the more vigorous the patient, the better are his chances of overcoming the depressing effects of acute or subacute dysentery. In the early stages, experience has taught that judicious purgation, especially by castor oil, has been followed by the best results. Occasionally, even the most violent attacks appear to be cut short at their very first onset by this means. With continuance of the diarrhœa, some form of opiate must be used, and Professor Pribram speaks strongly in favor of opium itself in preference to any of the preparations of morphia. Possibly the better action of opium may be due to some of the other alkaloids which occur in natural combination with it.

A special remedy has been found in cotoin (an astringent alkaloid derived from Bolivian bark—*Rep.*), but as yet it has not been very widely employed. Local medication by injection, especially of antiseptic fluids, would appear to be indicated by the very marked local symptoms. Of antiseptic solutions, that of carbolic acid must be avoided, owing to the rapidity with which absorption may take place in the rectum. Solutions of boracic acid or nitrate of silver are more appropriate, but, if there be still active mischief present, they often give rise to excessive pain. The maintenance of strength is one of the principal considerations in the treatment of dysentery. Wine, rum, and ether are recommended. The choice of nourishment is of the utmost importance. Skimmed milk, small quantities of broth, and cold solutions of white of egg, are applicable to the very acute stage. Digestible farinaceous foods and preparations of eggs may follow when bleeding has ceased. No meat should be given until the natural action of the bowels has been nearly restored.

Lond. Med. Rec.

LUCAS ON SURGICAL DISEASES OF THE KIDNEY.

At the annual meeting of the British Medical Association in August (*Brit. Med. Jour.*, September 29, p. 621), Mr. Clement Lucas opened a discussion on "The Surgical Diseases of the Kidney, and the Operations for their Relief," of which the following is a summary. He commenced by stating that the greatest advances in the treatment which had taken place of late years were those made in the indefinite border-land which separates medicine from surgery. It was in this barren and desolate tract that we must look for fresh discoveries. Ovariectomy and the various operations upon the intestines and stomach he put forward as instances of

work recently advanced in this territory; but he claimed as the most remarkable incident of this decade, the sudden light which fell upon the profession in its relation to renal disease and the rapid growth and recognition of renal surgery. The credit of having awakened a new interest in renal disease, and of having by experiment on the lower animals, made sure of his ground, was due to the late Professor Simon of Heidelberg, who in 1869 successfully performed nephrectomy for the cure of a fistula of the ureter following ovariectomy. Since then, extirpation of the kidney has been performed upwards of a hundred times. The operation of nephrotomy has been much more frequently undertaken, and the removal of a stone from the kidney, which used only to be attempted when a sinus or tumor existed, has been several times successfully performed before the kidney had suffered any severe damage.

In casting a glance over diseases of the kidney to determine which might admit of surgical treatment, it is necessary to exclude at once all such diseases as attack equally the two organs; hence, the various degenerations, included under the name of Bright's disease and lardaceous disease, must ever remain outside the province of renal surgery. On the other hand, conditions which disturb the functions of one organ only, for the most part admit of relief by operation.

Painful Moving or Floating Kidney, being only a mechanical disturbance, admits of relief only by mechanical means. Simple exploration and replacement through an incision in the loin would probably be found sufficient in the majority of cases for the cure of this condition; the adhesion resulting serving to retain the organ in position. Stitching of the capsule to the parietes, or, as it is termed, nephroraphy, is a somewhat serious, but still simple, undertaking. In eight cases in which it has been performed, the patients all recovered and were relieved. There may still be cases where intense suffering was experienced, and where the other means had failed, which would suggest nephrectomy. Martin of Berlin in six cases removed floating kidneys through the peritoneum, and four of these recovered.

Hydronephrosis, a dilatation of the pelvis and calices of the kidney with watery fluid as a result of obstruction below, admits surgical treatment when one-sided. After detailing the various conditions of the ureter, congenital and acquired, which may give rise to this condition, the author suggests these cases should be first aspirated then cut down upon and drained through the loin, the cyst-wall being stitched to the parietes. Finally, should the fistula fail to close, the remains of the kidney may be returned through the loin. In women these tumors have often been mistaken for ovarian tumors, and have been operated upon as such. As they are movable and do not form adhesions till late, some may advocate ventral nephrectomy in these cases before drainage, but such treatment would entail more risk than the method advocated. Abdominal nephrectomy for hydronephrosis will, however, show better results than nephrectomy generally.

Large Isolated Cysts of the Kidney having no communication with the pelvis are rare. They should be aspirated and afterwards drained through the loin.

Hydatids of the Kidney, also rare, have a tendency to discharge themselves through the pelvis. When forming tumors, they may be generally cured by aspiration or siphon-tapping.

Pyonephrosis, which resembles hydronephrosis anatomically, but contains pus instead of urine or watery fluid, when unilateral, falls under renal surgery.

The double pyelitis, with suppuration and distension, which commonly results from stricture and enlarged prostate, is, the author said, inappropriately named "surgical kidney." He suggested the term *reflex pyelitis* as better expressing this condition. Reflux pyelitis, when one-sided, is due to some obstruction in the ureter, and then often gives rise to a large pyonephrosis. Other causes of unilateral pyonephrosis are calculus and strumous pyelitis. After speaking of the diagnosis, and stating that these tumors are more adherent, and give rise to more pain and constitutional disturbance than hydronephrosis, he said that nephrectomy for pyonephrosis had been performed twenty-eight times, and of these seventeen recovered and eleven died; but it is most worthy of notice that among these twenty-eight cases six had previously discharged their contents through a fistula in the loin, and all these recovered. Hence, he argued, it is better to drain a pyonephrosis before performing nephrectomy.

Neoplasms of the kidney can only be treated by nephrectomy; and if this be performed early, there may be a good chance of permanent benefit. Generally they are too large to be removed except through the peritoneum, but at five cases removed through the loin, four recovered. Out of sixteen removed by ventral incision, ten died, and six recovered.

Calculus of the Kidney offers an excellent field for surgical interference, but the difficulty is to make sure of the diagnosis. Many cases of supposed calculus would turn out to be strumous kidneys. Two cases were related in which the kidney was explored, and even deeply punctured, but no ill result or rise of temperature followed, and the wounds healed primarily. Several cases of nephro-lithotomy are recorded in the

Clinical Society's *Transactions* and two cases have been performed successfully at Guy's Hospital during the present year. When the kidney is much dilated and damaged, it is a question whether it would not be better to remove it.

After briefly alluding to *Injuries of the kidneys*, which, though not included under the title of the paper, might suggest nephrectomy, the author proceeded to speak of some details in operating. He recommended for the lumbar operation a combination of two incisions which he had employed as giving the most room, viz.: an oblique incision higher than the colotomy incision within about half an inch of the last rib and parallel with it, and a vertical incision on the outer margin of the quadratus lumborum, extending from the upper edge of the last rib to the iliac crest. For the transperitoneal operation, Langenbuch's incision external to the rectus muscle is to be preferred to the median incision, as it enables the operator better to reach the kidney through the outer layer of mesocolon.

In conclusion, he urged, that antiseptic exploration of the kidney through the loin is a simple and not at all dangerous operation, which may be undertaken without anxiety in any case where calculus is suspected; that it is generally wiser to tap and drain fluid tumors of the kidney before proceeding to remove the diseased organ; that, when nephrectomy is decided upon, the extraperitoneal operation through the loin should always be chosen for any tumor which it is possible to withdraw through the limited space at disposal; finally, if this course be adopted, the transperitoneal operation will be reserved for large solid tumors, and, perhaps, some floating kidney. — *Lond. Med. Rec.*

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LECTURES.

A CLINICAL LECTURE DELIVERED AT THE NEW YORK HOSPITAL

BY

THOMAS M. MARKOE, M.D.

Professor of the Principles of Surgery, College of Physicians and Surgeons, N. Y., etc., etc. Reported by C. H. May, M.D., to whom was awarded the First Harsen Prize in 1883.

MORTIFICATION OF THE TOES OF BOTH FEET FROM EXPOSURE TO COLD.—CHRONIC OSTEITIS.—BONY ANKYLOSIS OF KNEE-JOINT; SUBSEQUENT SUPPURATION.—NECROSIS OF LOWER JAW.—SMALL STRICTURE AT CARDIAC END OF OESOPHAGUS.—CRUSHING INJURY OF LEFT ELBOW.

The first case illustrates a not uncommon form of accident as a result of exposure to cold, an example of mortification produced simply by intense cold.

The patient is a comparatively young man, and therefore the great predisposing cause, senility, has not been present in this case.

In old persons the condition of the system tends to produce mortification, with only a moderate exposure to cold.

But even in vigorous, strong, young and healthy people, an intense cold will produce this same effect, just as a moderate degree will in the aged.

So that a case like this may be developed under two conditions. 1st. cause slight, disposition great; 2d. cause great, disposition slight—to the latter class the case before us belongs.

This patient was exposed to an intense cold, about three weeks ago, the result of which was inflammation, rapidly terminating in gangrene, and the affected parts have been dead and mummified for ten days; the gangrene shows a tendency to circumscription and usually presents a line of separation very early in cases like the one before us, but in senile cases, the demarkation is not so rapid and exact.

In the left foot the greater part of the great toe has mortified and also the ends of some of the other toes, but in the right foot it is more extensive and involves

both the toes and the metatarsus, and the line of separation extends pretty evenly all around.

At the base of these dead parts you see a circle of abundant healthy granulations, which illustrates Nature's effort to heal up the injury, if the opportunity were only presented, but the presence of the dead part, which acts as a foreign body, prevents this healing.

The indications for treatment in this case are very plain in a young, vigorous man, the parts which are now dead were doomed from the very first, and the mortification has not spread, but the parts above the line of separation are perfectly healthy, hence the indications are very plainly to remove the dead part, the foreign body, and the case will do very well.

If this accident occurred in an old man, on the other hand, I would not dare to cut into the parts immediately above the line of separation, for the mortification would then be very liable to spread to the stump.

But here I would not hesitate for a moment, and I advise the man to have his right foot taken off.

This advice has been given to him before, but he objects, he thinks he knows more about it than we do, and that the toes are only injured superficially, and will recover.

The man certainly has a right to do as he pleases in the matter, and we have no right to violate his wishes, even though he does belong to a class of people who are noted for their obstinacy and ignorance.

In a case like this it is best to amputate as soon as there is a line of demarkation, but there is no very serious danger in waiting.

In the case of an old man presenting the same amount of mortification, it would not be safe simply to remove the foot as I advised in this case, but you would have to amputate at a distance from the dead part—in the lower part of the leg, and even then there would be great risk of mortification of the stump.

As I have already stated, there is no great immediate risk, although the dead and putrifying tissues are poulticing the granulations; this has some bearing on recent discussions and views of the pathology of the process.

It has been supposed that you must necessarily have a serious infection from the material absorbed from the dead part, but in a case like this, this matter does not have the least effect, and it would be very surprising if the wound presented any trace of irritation from this matter.

These well-formed granulations protect the parts above from septic influences, and this man may go on for two or three weeks and never present any of the symptoms of septic poisoning.

CHRONIC OSTEITIS.

Here gentlemen, is a rather curious case, the leading points in the history of which, are as follows: The patient is a young man who suffered about three years ago from an acute inflammation, characterized by pain, swelling, redness and tenderness in the left ankle. This lasted some weeks and under treatment he recovered and was perfectly well, except that the left foot was somewhat distorted.

About four months ago there developed in the left tarsus a severe pain, and the joint became stiff, and these have continued up to the present and he exhibits a peculiar condition of things, rarely seen.

All the tarsal joints of the left foot are tolerably well, there is now no pain when I move the foot, no friction sound, no indication of any carious process, and no acute inflammation.

But the left foot is twisted outward, or rather there

is a twist to the foot on the outer side, and an enlargement of the tarsal bones on the inner side—the scaphoid, astragalus and cuneiform.

It is a chronic osteitis.

Simple chronic osteitis is almost always associated with inflammation of the periosteum.

All the surrounding structures, periosteal and fibrous, are usually involved in osteitis; there is usually a good deal of periosteal swelling. In this case there is no arthritic involvement; the process is confined to the scaphoid, astragalus and internal cuneiform bones; it is, however, sufficient to keep the patient from walking.

Treatment.—If nothing be done the bones will be more and more inflamed, and the patient more and more disabled. The treatment consists in absolute rest. First, half a dozen leeches and perhaps a blister, and then secure rest by immobilizing the foot. Treat it just as you would any other inflammation, and after you have done this, immobilize by a plaster or water-glass dressing; the patient should walk with the aid of a crutch so that no weight is put upon the foot, and this should be continued for 4 to 6 weeks.

Besides this, iodide of potassium is indicated to control and relieve the periostitis. This drug is efficient in controlling inflammations of fibrous structures.

It is best given in 5 gr. doses, and each dose combined with gr. $\frac{1}{4}$ th of the bichloride of mercury; this is given in solution three times a day. On mixing them a red precipitate ensues, which is the biniodide of mercury, which dissolves in the excess of solution of iodide of potassium, so that you are really giving biniodide of mercury and iodide of potassium. By adding a little compound syrup of sarsaparilla a very agreeable mixture results.

BONY ANKYLOSIS OF KNEE-JOINT; SUBSEQUENT SUPPURATION.

This man, gentlemen, presents a bony ankylosis of the right knee joint, the result of repeated attacks of inflammation, mostly the result of injury inflicted at various times in a period of twenty-five years.

A few years ago the ankylosis was complete, and the joint replaced by osseous tissue.

With this ankylosis he was able to get about perfectly comfortable, until last August, and even now he can walk on it. But beginning last August a number of abscesses formed, and broke spontaneously, and now a number of sinuses exist, which disable him to a certain extent.

If a joint were still present we would expect to have arthritic inflammation, but here the joint has been obliterated and there is one piece of bone from the hip to the ankle.

What do these sinuses signify? Probably we will find some superficial disease of the bone.

Probably the pus is being formed between the bone and periosteum, that the pus has burst through overlying parts at certain spots, leaving behind a necrosis or a caries of the portion of bone involved, it is difficult in a case of this kind to tell which. It may be caries or it may possibly be a superficial necrosis.

But as here we have cancellous tissue chiefly, it is more liable to be a carious condition of bone which keeps these sinuses from healing.

On examination I find that some of the abscesses have healed up, others are still open.

In passing the probe into the openings of the latter it does not pass deeply into the tissues, but here I find one, through which the probe passes over an inch, but I discover no dead bone nor any diseased or exposed surface of bone.

However, on passing the probe through one of the openings which had partially healed, I discover bare and diseased bone; but this opening is not surrounded by the pouting granulations so characteristic of necrosis, and therefore, I do not expect dead bone; the probe passes in under the patella and to the head of the tibia, where I feel a slight roughness.

This is no indication of disease of the bone.

In the treatment I shall lay open these sinuses so that the openings are free and I hope that the disease of the bone is not so extensive that it is not relieved by this method.

In this way you make a free outlet for the matter.

Here I find two sinuses communicating, having between them a sort of bridge of integument, which I shall cut through, as these often conceal the orifices of canals coming from the bottom.

Some of the sinuses I have laid wide open, and others will be opened by the use of sponge tents and they will then be cleaned out daily by injections of a 1 grain to 4 ounces solution of the bichloride of mercury.

The limb should remain at perfect rest for the present.

The man's condition should be put into the most favorable state; he should have the best of food and take cod liver oil.

The involved part should simply be covered by some superficial dressing.

With this simple method of treatment, I think this case will improve, the sinuses heal up from the bottom and the man get just as well as before, still retaining, of course, his ankylosis.

NECROSIS OF THE LOWER JAW.

Here is a case of necrosis of the lower jaw, coming as a result of carious teeth. An abscess has formed at the bottom of which, on probing, I find dead bone.

It is now about six weeks since the process began; I show the case to you simply to illustrate the indications for treatment.

The necrosis in this case is declared, there is not the slightest doubt about it, but the time for operation does not arrive until the dead separates from the living bone, which period in the adult is from 2 to 3 months from the commencement of the process, and very often later, and in the lower jaw the separation does not take place as rapidly as in the limbs and some other parts of the body, so that we have to allow an extra length of time before operating. It will probably be three months from the present time before the dead bone is separate and removable. If I would cut down now and try to remove the necrosed bone, I could not tell where the living bone began and the dead portions ended and the operation would be a very blundering one.

It is a rule, never to operate for necrosis until you are reasonably certain that the dead bone has separated from the living and is removable.

SMALL STRICTURE AT CARDIAC END OF ŒSOPHAGUS.

Here is a young woman of 25, who came into the hospital some months ago, with symptoms of indigestion, chiefly of pain after the ingestion of food, and more lately also of pain as the food passed into the stomach.

The pain she referred to the lower end of the œsophagus. These were her chief symptoms, and they have been very obstinate and very little benefited by medical treatment.

She was transferred from the Medical to the Surgical

Division, because it was thought, the pain on swallowing, was due to stricture of the œsophagus.

The physicians had succeeded in passing bougies readily down the œsophagus until the instrument reached the cardiac end, and then it was arrested, and in no instance has it been passed beyond this point.

On this account, stricture of the œsophagus was suspected.

The pain on swallowing, is not as characteristic a symptom as is the difficulty in swallowing—the dysphagia—and the occasional regurgitation of food; for pain is very often present and referred to the lower part of œsophagus, when only the stomach is diseased and the œsophagus not involved at all. The regurgitation of food is a rather characteristic symptom, and is caused by the food lodging in the œsophagus above the point of constriction, and being thrown out by a reverse peristaltic action. Do these symptoms indicate positively stricture of the œsophagus? Not necessarily, and for these reasons: Difficulty in swallowing—dysphagia—may be caused by a tumor pressing upon œsophagus, by an inflammation or swelling of the œsophagus or its surroundings, by a condition of inflammation of the fauces, or by a foreign body in the œsophagus.

But nothing of the kind exists in our case, so that it is probably a narrowing of the œsophagus.

Stricture of the œsophagus may be of two kinds:

First.—An organic or mechanical stricture, just as we may have in the urethra; in these cases the patients at first are only hindered when they attempt to swallow solid food, but the narrowing grows from bad to worse, so that finally not even fluids will pass, and the œsophagus becomes impervious.

Secondly.—There is the spasmodic stricture, just as you may have in the urethra; in these cases the refusal of the œsophagus to allow the bolus of food is on account of spasmodic muscular action.

The question in this case resolves itself into: Is it spasm or a real stricture we are dealing with? A real stricture is most commonly due to cancer within or about the œsophagus; this is by far the most common cause, but may be excluded in this case on account of the age of the patient, 25, for practically speaking, cancer is unknown at this time of life. Another reason is that the obstruction is at the cardiac end of the œsophagus, which is not the situation of cancer, this occurring usually at the upper part, and sometimes in the fauces. We have then two good reasons for excluding cancer.

Another kind of stricture belonging to the mechanical variety is the fibrous stricture, which, although exceedingly rare, does, however, occur; but its presence is due in all cases to some antecedent cause, just as a fibrous stricture of the urethra owes its existence to a gonorrhœa, or some other cause.

Such a fibrous stricture of the œsophagus would give a history of some cause; either an inflammation or an ulceration, or it may have been produced by a foreign body, and especially by corrosive substances, which have been swallowed.

But here we get no such history. We are justified now in saying, that probably neither fibrous nor cancerous stricture exists.

Now let us examine into the possibility of its being a spasmodic stricture. This occurs in young women especially, and by preference in hysterical subjects and in those already suffering from gastric disturbances, especially with pain, and it is a curious fact that such

pain is referred to the lower or cardiac end of the œsophagus, even when no stricture exists.

As stated before, the œsophageal bougie could never be passed in this case; this would indicate stricture, but it would not differentiate a spasmodic from a fibrous stricture, since on all occasions it was passed without having the patient anæsthetized, and hence the spasmodic contraction of muscles could come into play.

Therefore I have had the woman etherised, so as to eliminate muscular spasmodic contraction, and if now the bougie passes, the cause of its failure to pass on previous occasions will be spasmodic stricture; if it does not pass, then we must suppose a real stricture to exist—one of those rarer forms.

In passing the œsophageal bougie the shoulders of the patient should be pushed forward and the head backward, so as to bring the posterior wall of the pharynx into as straight and continuous a line as is possible, so that the bougie will pass directly into the œsophagus, taking care to protect the rima glottidis from the passage of the instrument by the forefinger of the left hand.

Protect your own fingers by some gag from being bitten; the handle of an ordinary table-knife covered by some fabric will do very well; this is put between the back teeth and prevents the jaws from closing upon your fingers.

Of course, when the patient is under an anæsthetic, this will not happen; but, as I have only one forefinger on my left hand, I am not going to take any chances, since occasionally there is a sudden and unexpected contraction of the muscles closing the mouth.

The lubrication of the instrument is not important, because there is so much thick mucus in the fauces that it lubricates itself.

I have now succeeded in passing this bougie into the stomach. I think there can be no doubt it is into the stomach.

Now I will try to pass the ordinary stomach tube, which has a larger calibre.

Great care must be exercised in the passage of these instruments, especially when they get into the intrathoracic portion of the œsophagus, and then you may push the instrument through its wall, or if the stricture is due to the pressure of an aneurism, the wall of the œsophagus overlying this is thin, and you might by using force, rupture the aneurismal sac, and even when a pure fibrous stricture exists the wall of the œsophagus above the constriction is usually thinned, so you cannot be too careful. I find that although the smaller instrument passed without any difficulty into the stomach, this tube is arrested at the lower end of the œsophagus, and since the possibility of spasm is eliminated by the use of anæsthesia, we have here a real stricture of small size, or rather a slight stricture.

CRUSHING INJURY OF LEFT ELBOW.

This case, gentlemen, illustrates a class of cases rather common in hospital practice.

It is a crushing injury to the left elbow inflicted last night by being run over by a street car.

You see a large lacerated wound on the outer side of the elbow, and three smaller ones on the inner side.

The vital questions now are: Do these wounds communicate with a fracture?

Do they communicate with the cavity of the joint? Is the artery involved or wounded, and of less importance?

Are veins or nerves involved?

I pass my finger into the large opening, to see whether bone is broken; this is a vital question.

I find it is not broken in continuity; there is no false point of motion.

I can feel the bone exposed but not broken, except that there may be a small splinter or chip, but there is no break in continuity, nor are the condyles fractured.

There is also no communication with the cavity of the joint.

The radial artery beats well at the wrist, so that the brachial is not involved.

Thus far all has been favorable, and the treatment can be adopted without considering fracture of the bones, communication with the joint, or injury to the artery, for all these may be considered safe.

But a circumstance of great importance in the prognosis is the nature of the wound.

If it were a clearly-cut wound, we would think less of it, but there is stripping off and laceration of the muscles and integument down to the joint, and this is a serious complication.

The man is 50 years old.

Now, what shall we do with a wound like this, in which the bones, joint and artery are intact?

If it occurred in the lower extremity, and the knee joint were thus affected, I should say at once remove the joint and limb as soon as possible. But we can afford to give more grace in the upper extremity, for it is smaller and usually does better in these injuries than does the lower extremity.

At any rate, we will try to save the limb.

First, we will cut open all the pouches or pockets which exist, and which might harbor all sorts of infectious materials; in this way we make the wound as open as possible.

On the inner side, I must be careful in doing this not to wound the brachial artery, which I feel distinctly.

Now, having done away with any pockets, the wound will be washed out and injected with a solution of carbolic acid, thoroughly, and an ordinary Lister dressing applied.

No drainage tube is necessary, because the wound is so wide and open, and I am not going to bring the edges together, but treat it as an open wound.

If the case "wins past," as the Scotch say, the first three days, without severe and dangerous inflammation, the chances of saving the limb will be very favorable.

But as matters look, the man will probably have a rough time of it before the three days are over. However, we will give him all the chances there are to save the limb.

On Feb. 24th Dr. Markoe again presented this case, with the following remarks:—

GENTLEMEN—This is the man I showed you some three weeks ago; I show him again to-day, to illustrate the result of careful treatment.

This was a bad case of injury. You will remember three weeks ago, his elbow was crushed by being run over by a street car.

Although no bones were broken or arteries lacerated, yet there was so much disintegration of the soft parts about the elbow that it was a question, first, of saving the man's life; and at that time we little thought of saving the limb.

You will remember I said we would try, at any rate, to save the limb. We made free incisions into the tissues, which had been stripped from the bones, so as to obtain the freest possible outlet for all discharges. This was accomplished, and it was decided to leave

the thing to nature, and certain dead parts have sloughed away, leaving the limb in a very favorable condition; and the greater part of this favorable issue has been, no doubt, due to the fact that there has been no accumulation or retention of inflammatory products.

The limb now presents a great hole in the front of the upper and anterior aspect of the forearm, where, you will remember, we made a very liberal incision.

See how kind nature has been. The man can now move his hand, and also to a certain extent his forearm, and we have every reason to suppose that when all this loss of tissue is filled up, and the wound heals, that the man will have a very useful arm.

This illustrates the much greater vitality which exists in the upper than in the lower extremity, and you will remember this was one of the considerations which prompted us to think of saving the limb.

If the lower extremity had received a corresponding amount of injury, the limb could not have been saved.

This case ought to fix in your minds the necessity of making perfectly free openings into parts which are disintegrated and where matter can lodge, so that nothing is retained in the wound, and that there is consequently no tension in any part of the wound.

ABSTRACTS AND SELECTIONS.

A NEW DISEASE.

At the recent meeting of the American Medical Association, Dr. W. M. Beach, of London, Ohio, read a paper on milk-sickness, which embodied an interesting description of this peculiar disease, which has no doubt been observed in its effects by many of our readers, though probably attributed to some other cause than that ascribed by Dr. Beach.

The disease as it affects the human species, is known by the name of "milk-sickness." It prevails in many parts of the American continent, more especially in Ohio, Kentucky, Tennessee, Illinois, Indiana, and Michigan; but in other parts, as in New England and west of the great American desert, it seems to be unknown. In the Old World, it has probably never been known.

"Milk-sickness" is transmitted to the human species from the lower animals by the ingestion of the milk, the butter, or the flesh of affected animals. Among the lower animals the disease (in them termed the "trembles") attacks chiefly the young and unweaned animals, but it is by no means confined to these. Wild animals are liable to become affected as well as domesticated animals.

The etiology of the "trembles" is by no means clear, and various theories have been advanced in regard to it. By some the disease is attributed to the ingestion of some vegetable poison, such as *Eupatorium ageratoïdes* or *Rhus toxicodendron*; others have claimed for it a malarial origin; and others have deemed it due to a specific germ. The specific theory, to which Dr. Beach adheres, seems, on the whole, that most consistent with the facts. But while the nature of the poison remains obscure, there are some well established facts regarding its behavior. The following are described by Dr. Beach as being unquestioned: 1. The "trembles" are rare in wet, and especially prevalent in dry seasons. 2. The poison especially affects wild and densely-timbered lands, and seems to be unknown in lands freely exposed to the sun's rays. 3. The nature of the vegetation does not influence the prevalence.

ence of the disease ; and 4. The poison seems to be impotent during daylight after the fogs and dews have disappeared.

The incubation period of "milk-sickness" is uncertain. In Dr. Beach's experience, it seem to have varied from about twenty-four hours to a week.

As regards the symptomatology of the disease, the prominent symptom exhibited by animals is, as the name given to the disease indicates, the agitated condition of the muscles. At the onset of the trembles, the animal becomes languid and loses its appetite ; soon trembling of the muscles sets in, accompanied by thirst and constipation ; the animal becomes unable to rise, and, in most cases, death closes the scene about the eighth or tenth day.

The symptoms of the disease, as it affects the human subject, are very clearly set forth by Dr. Beach in the following terms :

"In milk-sickness the patient is apathetic, complains of *malaise*, weakness, indisposition for exercise, loss of appetite or loathing of food, and sometimes of slight nausea. This condition may run on for several days, gradually becoming more pronounced, when vomiting supervenes, and the patient finally takes to his bed. There are no chills, no rigors, but usually an unsatisfied thirst. The tongue is large, flabby, tremulous, moist and heavily loaded with a dirty white coating. The temperature of the surface sinks below that of normal. The skin is dry, and sensible respiration suspended. The abdomen is retracted and flabby, and comparatively empty. Peristaltic motion seems absolutely suspended ; and from that cause, probably, and the general suspension of alimentary secretions, the bowels become, from the first, obstinately and persistently constipated.

"The breath becomes offensive, with an odor that some people claim is peculiar to milk-sickness alone. I am led to believe that this may be so, but my observations do not fully confirm me in the belief. The urine becomes diminished, sometimes to eight or ten ounces a day, and generally clear and limpid. The pulse is variable as to frequency, but is always weak and easily compressible, with labored action of the heart and pulsating aorta. The temperature rises in some cases to 99°, but is usually below normal.

"There is a marked degree of hebetude and indifference, and even in cases where the patient expresses no hope of recovery, the ordinary solicitude for the future of the family and friends is rarely alluded to.

"There is an intolerance of covering for the body, especially of the extremities ; and I recall one case in which the patient would give no rest to the nurses except they kept his hands immersed in a basin of cold water ; and the ordinary efforts resorted to for warming up the extremities usually are attended with an aggravation of the vomiting or retching.

"As the disease advances, the exhaustion becomes so extreme that vomiting is superseded by a feeble retching effort, that heard once is to be remembered always.

"The patient seems to become more and more somnolent ; but there is seldom oblivious sleep ; and if there ever is at all, it is of short and fitful duration.

"The vomiting first, and the retching in the latter stages, continue to the very close of life ; or until coma and oblivion shut it off.

"In the latter stage, the fluid ejections from the stomach are tinged like the indigo-bluing water used in laundries.

"These symptoms increase as the disease advances ; the hebetude assumes a semi-comatose condition ; the

respirations decrease in frequency, and are variable—sometimes profound and sometimes scarcely perceptible—like the respirations of a hibernating animal. The prostration sometimes becomes profound, the process of winking suspended, and the conjunctiva and cornea become dry and glazed. The hebetude increases to somnolency, and the somnolency to coma. There is stasis of the capillaries, and the vital forces yielding one by one, the patient dies without a struggle, and almost without a sign."

In mild cases recovery takes place almost always very gradually ; but, in one case, Dr. Beach observed recovery by crisis.

There are no characteristic *post mortem* appearances, so far as has yet been discovered.

In regard to treatment, Dr. Beach has found the best results follow the free exhibition of stimulants, either by mouth or by rectum, combined with mucilage of fresh slippery elm bark as a drink, and occasional small effervescing draughts.—*British Med. Journal*.

VENEREAL AND SEXUAL HYPOCHONDRIASIS.

BY

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I have two reasons for bringing the subject of this paper before you. The first is, the very large number of men suffering from these imaginary complaints : the other is, the difficult question : What is the proper mode of dealing with them ? Imaginary complaints come before all practitioners—whether physicians, surgeons, specialists of any kind, or general practitioners ; and they do not present any great or special difficulties. But those imaginary complaints which come under the names I have given as the title of this paper, present many special features and difficulties, which will be so obvious to you all that I need not stop to notice them. Those who have large experience in venereal diseases will see from time to time persons who believe themselves to be suffering from some form of these diseases, when, in fact, they have nothing whatever the matter with them. Most writers are silent on this subject of fanciful ailments ; but the fourth edition of that excellent and well-known work, *The Pathology and Treatment of Venereal Diseases*, by Bumstead and Taylor, a separate chapter is devoted to Sexual Hypochondriasis. This combines what I propose to separate—taking, first, the case of persons who are, so to speak, venereal hypochondriacs ; and, afterwards, those who believe themselves to be suffering from some deficiency of sexual power, which makes them more or less impotent ; these we will call sexual hypochondriacs.

The following is, I think, a typical case of the first. A man has impure intercourse, and, being of an anxious temperament, especially if it be his first indiscretion, he imagines that he is suffering from that disease, of which, thanks to advertising quacks, he has heard so much. He points to a slight abrasion, an enlarged vein, an excoriated condition of the furrow or glans, or some other abnormal appearance. Or, it may be that a tight foreskin has been for the first time fully retracted, and has revealed the furrow plastered all over with smegma, on removing which will be found the condition known as balanitis. Now, except perhaps in the case of the enlarged vein, a very cautious and guarded diagnosis is desirable. The abrasion or excoriation may be the commencement of a chancre,

simple or indurated ; which, however, may not be fully apparent for some weeks. The balanitis may disappear, and yet gonorrhœa or chancre may supervene. But we will suppose that, after seeing our patient several times, all lesions have disappeared ; ample time has been given for even the latest appearance of gonorrhœa or chancre ; and still our patient is not satisfied that he is quite well. He complains of some unusual appearance of the urine, so slight as to be of no consequence. Or he complains of an unusual heat in the penis and scrotum ; or, it may be, a slight mucous discharge from the urethra at intervals, which troubles him, and he persists in regarding this as proof of disease. Now, I fully grant that every patience and kindness must be shown in these cases. We must make every due allowance for ignorance and anxiety. We must also put ourselves for a moment in the place of our patient, and try to realize what might have been our conduct under similar circumstances, had we not been professional men, fully acquainted with the normal and abnormal conditions of the genital organs. I will assume that we have done all this, and assured our patient, over and over again, that he has nothing whatever the matter with him. Now comes the question : When ought there to be an end of the farce ? Or, in other words, When does legitimate practice cease, and, "not to put too fine a point upon it," quackery commence ? I have heard some of my professional brethren argue that we are never justified in giving such patients up, and virtually driving them to the quacks. I cannot agree with such a dictum. After we are thoroughly convinced that our patient's ailment is purely imaginary, it appears to me that we are perfectly justified in saying : "I am satisfied that you have nothing the matter with you, and that there is no necessity for you to see me any more. If you have not confidence in me, and do not believe this, you had better consult some other practitioner." That appears to me the more dignified and honorable course than a continuance of the farce, even if it be a pecuniary loss to us ; and I hope that most, if not all present, will agree with me.

Coming now to the sexual hypochondriacs, I will quote an extract from Bumstead's work, which gives a more racy and exact description of these patients than any I could attempt. "With some," he says, "the complaint is almost ludicrous ; as, for instance, that one testicle hangs lower than the other—a condition which obtains with the great majority of men ; or the patient thinks that his penis and testicles are smaller than they ought to be, even when they are of very fair dimensions ; or he complains of an itching or crawling sensation in the parts, which is not strange while his thoughts are constantly directed upon them. Again, it is the cheesy excretion which forms in the furrow at the base of the glans ; a few herpetic vesicles appearing from time to time, or a slight eczema of the penis, or the eczema marginatum, which is so often developed in the inguinal fold, that makes him unhappy.... Again, enlargement of the scrotal veins or varicocele is a fruitful source of terror to many men.... But nocturnal emissions are the complaint of most of the subjects of sexual hypochondriasis." All this must be admitted to be true by most surgeons, especially those who make venereal diseases their specialty. But the cases which have given me most trouble are those of men who suffer from slight urethral discharges, purely natural, but which they will persist in believing and asserting to be semen. The general appearance of these patients is so characteristic, that one diagnoses them almost intuitively. They have too frequently been the victims of previous excessive sexual inter-

course or self-abuse : and, thanks again to the advertising quacks, they imagine that they are suffering from "spermatorrhœa" or "nervous debility." Here, again, I freely admit that every patience and kindness must be shown, and especially must we be careful to improve in every way the patient's general health. We will assume that all this has been done, and that we have fully satisfied ourselves, after frequent visits from our patient, that his is a well-marked case of sexual hypochondriasis ; what is now to be done ? We will also suppose that we have verified our diagnosis by a consultation with a brother surgeon, specially skilled in all that relates to venereal diseases and the sexual organs ; but that, in spite of all, our patient persists in believing that he is laboring from some sexual disablement. I have in my mind's eye the cases of several men who have actually been going to one surgeon for two years for literally no ailment whatever. I have seen patients who have consulted surgeons by the dozen, and been told by each that there was nothing the matter with them, but who have still persisted in their own belief, making their lives a burden to themselves. Here, again, it seems to me that there must, sooner or later, be an end to this farce ; for it is scarcely a justification to say that we are to retain the patient, and continue the farce, rather than that he should be driven to the quacks, unless we are prepared to acknowledge that, in certain cases, we are justified in practicing quackery ourselves—which I, for one, never will admit.

In conclusion, there is a still more delicate matter—one which I approach with much hesitation, but which, as it often comes to our notice, had better be boldly met. I allude to the circumstance that some of these sexual hypochondriacs, being anxious to set at rest their doubts as to sexual disability, propose resorting to illicit sexual intercourse, and endeavor to obtain our sanction to such a proceeding. There can only be one proper answer to such a question ; and I should not have alluded to this, had I not known for certain that some of our brethren have been unwise enough to sanction, and even recommend such a proceeding. Now I do not see that special practice in venereal diseases requires a lower standard of moral rectitude or professional honor ; and to such of our patients as are open to such an argument, we may quote the excellent words of Sir James Paget, who, in a lecture on this very subject, says : "Many of your patients will ask you about sexual intercourse, and some will expect you to prescribe fornication. I would just as soon prescribe theft, or lying, or anything else that God has forbidden. If men will practice fornication or uncleanness, it must be of their own choice, and on their own responsibility. We are not to advise that which is morally wrong, even if we have some reason to think a patient's health would be better for the wrong doing. But, in the cases before us—and I can imagine none in which I should think differently—there is not ground enough for so much as raising a question about wrong doing. Chastity does no harm to mind or body ; discipline is excellent ; marriage can be safely waited for ; and, among the many nervous and hypochondriacal patients who have talked to me about fornication, I have never heard one say that he was better or happier for it ; several have said that they were worse, and many I know have been made worse." But, it may be urged, to many of our patients, such a line of argument would be little short of a mockery. This is unhappily too true ; but I think that, without descending a step from the same moral altitude, we have other cogent arguments. We might urge on our patient that

it would hardly be "janak" (to use a Lancashire phrase) to recommend a course which might bring our patient back to us suffering from something infinitely worse than sexual disability, even assuming the latter to be real and not fanciful. We might also urge that, to sanction such proceeding might involve many awkward questions, not the least of which would be as to how often the prescription was to be repeated. I forbear to say more, and would only add, as a last word, that we are not justified in saying in the quiet of our consulting-rooms what we should not venture to say before an assembly of our professional brethren.—*British Medical Journal*.

ON EARLY TAPPING IN CASES OF ASCITES.

BY

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Most writers on practical medicine at the present time, as in the past, recommend tapping in cases of ascites, as a last resort, when the dropsy occasions an alarming interference with respiration, and when other measures of treatment have proved ineffectual.* The practice of most physicians now, as hitherto, I suppose to be in accordance with this recommendation. Many years ago I was led by reasoning, and by clinical observation, to advocate tapping early in cases of ascites. In 1863 I communicated for the *American Journal of Medical Sciences* an article entitled "A Clinical Report on Hydroperitoneum, based on an Analysis of Forty-six Cases." The histories of these forty-six cases I had recorded. The results of the analysis seemed to show the utility of tapping early, and as often as the dropsy returned. Since the publication of that report, in the cases which have come under my observation in hospital and in private practice, I have pursued this course of treatment, and the results have appeared to confirm its utility.

The objections brought against tapping early, and, it may be, repeatedly, in cases of ascites, are these: 1. It is liable to be followed by alarming prostration, and it may even prove fatal in subjects greatly enfeebled. 2. It sometimes proves fatal by inducing peritonitis. 3. Relief procured by tapping is usually but temporary, the dropsy, as a rule, speedily returning. 4. With every return of the dropsy, a large quantity of albumen is withdrawn from the blood. The vital forces are thereby impaired; and, although temporary relief may be obtained, the duration of life is shortened.

In no instance under my observation has either a fatal result or alarming prostration followed tapping. On the contrary, relief, immediate and pronounced, has been invariable. I have met with but a single instance of peritonitis induced by tapping. In that instance, ascites, from cirrhosis of the liver, was associated with general dropsy from chronic Bright's disease; the latter, as is well known, involving a predisposition to inflammation of serous structures.

Danger in the direction either of exhaustion, or peritoneal inflammation, is probably avoided if, instead of the ordinary mode of tapping, aspiration be employed. The slowness with which the liquid is withdrawn by aspiration obviates any risk of exhaustion, and the insignificant puncture, with a very small trocar, can hardly give rise, in any case, to peritonitis. Two objections may be raised to aspiration. One of these is

the length of time required, and the fatigue on the part of the operator in removing, by this method, a large quantity of liquid. It is an answer to this objection, that the manual part of aspiration does not call for a skilled hand: and, therefore, the assistance of a nurse or an attendant may be made available. The other objection is, the inconvenience of having at hand an aspirator. This objection is met by substituting for the beautiful, but cumbersome, apparatus of Dieulafoy, or the adaptation of stomach-pump by Bowditch, a very simple arrangement which I devised many years ago. The instrument used is that known in the United States as Davidson's syringe. It consists of an India-rubber hollow ball, of a size to be readily grasped by the hand, connected with which are two India-rubber tubes. By the introduction, within the central ball, of movable valves, one of the tubes is made afferent, and the other efferent. At the end of the afferent tube is an attachment for connecting with it a small canula. The aspiration through this tube is effected by the expansion of the central ball, and the latter, by compression with the hand, is emptied through the efferent tube. For thoracentesis, and all other applications of aspiration, this simple instrument is all that could be desired, except from an æsthetic point of view. Its advantages are its cheapness, its portability, its durability, and its being always in order for immediate use.

The more important of the objections to tapping early and repeatedly in cases of ascites are, that the relief which it may afford is but temporary, and that life is shortened by the impairment of the vital forces consequent on the loss of nutritive constituents of the blood. Regarding these objections from a rational standpoint, the measures employed by those who delay as long as possible tapping are to be contrasted with the advantages of the latter method of treatment. Measures of treatment other than tapping generally have for their object the removal, or, if this be not attainable, the diminution, of the dropsy. The measures are sudorifics, diuretics, and hydragogue cathartics. Sudorifics accomplish so little, that nothing is to be said in their favor; very little can be said in favor of diuretics. The instances are rare in which much is accomplished by this class of remedies. Hydragogue cathartics are more efficient. Elaterium, the *pulvis purgans*, the sulphate of magnesia or of soda, and other saline cathartics, sometimes diminish considerably, and they may even remove, the dropsy. Their uncertainty, however, must be admitted; and, when more or less effective, the object is usually accomplished slowly, not a little depression and perturbation being caused by them.

Now, is it not a rational conclusion, inasmuch as, by tapping, the removal of the dropsy is effected with certainty within a few hours or even minutes, the operation being harmless and giving very little pain, that this method of treatment is to be preferred? And, in view of the advantages of tapping, why waste time in an endeavor to effect the object by drugs?

Here, as in regard to all therapeutic questions, an appeal must be made from reason to experience; and in deductions from experience, as well as from rational conclusions, the different affections of which ascites is a symptom are to be taken into account. If the ascites be symptomatic of malignant disease, and when it depends on persistent occlusion of the portal vein from thrombosis, embolism, or the pressure of a tumor, tapping, as well as other measures for the removal of the dropsy, cannot be expected to furnish more than temporary relief. But, in the cases falling in this category,

*As an exception to this statement, the *Handbook of Medicine* by Dr. Frederick T. Roberts, may be mentioned.

life has seemed to me to be prolonged by tapping, repeated as often as need be; and on the other hand, life has seemed to me to have been shortened by the use of depressing and perturbatory drugs. In the great majority of cases, as is well known, cirrhosis of the liver is the affection having a causative relation to the dropsy. Now, in a certain proportion of these cases, the dropsy is dependent on auxiliary causes co-operating with the hepatic lesion. Anæmia, anorexia, impaired digestion, etc., the effects of alcoholism or of other agencies, are more or less involved in the causation of ascites. Without these auxiliary causes, dropsy would not have occurred, and the cirrhosis perhaps would have been well tolerated. These co-operating causes are often, to a greater or less extent, removable. The discontinuance of spirit-drinking alone may sometimes suffice for their removal. These statements are based on the study of cases which I have recorded. Let tapping be resorted to as soon as the dropsy occasions notable inconvenience: let auxiliary causes be removed as far and as soon as practicable; let the patient be placed on a tonic and analeptic treatment; let depressing and perturbatory drugs be avoided; let tapping be promptly repeated if the dropsy return; and, notwithstanding the existence of a certain amount of cirrhosis, there may be a restoration to fair general health, and its continuance for an indefinite period. My collection of recorded cases furnishes illustrations of the correctness of this assertion. It may be that the dropsy will not return after a single tapping. More frequently, the tapping has to be repeated. The intervals between the repetitions in different cases differ greatly. Even if tapping be repeated many times, and after short intervals, I believe to tap as early and as often as the dropsy occasions inconvenience, to be better than to let the dropsy remain, or to undertake to lessen it by hydragogue cathartics. In one of my recorded cases, the patient was tapped thirty times within eighteen months. He had come to regard this measure as a trivial affair; and on one occasion, surgical aid not being at hand, he tapped himself, using the blade of a pair of scissors instead of a trocar, and introducing a common clay pipe-stem as a canula. He was accustomed, the day after a tapping, to go about his business as usual. This was a dispensary case, and was lost sight of after the thirtieth tapping. At that time, he was anæmic, but able to take pretty active exercise. There are some cases of ascites in which a causative lesion may remain permanently innocuous, at least when not associated with auxiliary causes, as shown by the recovery and continuance of perfect health. Of my recorded cases, a few are in this category.

In concluding my clinical report on ascites twenty years ago, I used the following language. "Unpromising as are the majority of cases of ascites, I cannot but believe that, as regards prolongation of life, and as much improvement as is compatible with existing structural disease, the success of medical practice would be enhanced by employing less than has been the custom of physicians, diuretics, hydragogue cathartics, and other depressing remedies, by resorting earlier than is usually done to tapping, and by a greater reliance on tonic medication, together with hygienic measures to invigorate and strengthen the system."

In conclusion, now, after the added experience of twenty years, I hold to the same belief, with a stronger conviction of its correctness, as based on reason and clinical facts.—*British Medical Journal*.

ON THE IMMEDIATE TREATMENT OF FRACTURES BY PLASTER-OF-PARIS BANDAGE.

BY

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Two years ago, Mr. John Croft read a paper at the Royal Medical and Chirurgical Society on the Immediate Treatment of Fractures of the leg by Plaster-of-Paris Splints, as practiced by him at St. Thomas' Hospital, and of which he will, I understand, give a demonstration to-day. The object of my paper is to point out that many other fractures besides those of the leg may be most conveniently and satisfactorily treated by plaster-of-Paris bandages or splints, though I prefer the former.

A late American surgeon and friend of mine, Dr. Cowling of Louisville, published, shortly before his death, three years since, a little book entitled *Aphorisms on Fracture*, of great value from its shrewd common-sense, from which I will venture to make a few brief quotations.

"*Aphorism 38*.—Carved and manufactured splints generally fit nobody, and are to be rejected, as not only expensive, but damaging."

"*Aphorism 41*.—The application of the roller bandage immediately to the skin, whether as a protective or to prevent muscular spasm, has resulted in such disaster, that it is one of the curiosities of surgery how it could be repeated at this day. When cotton is placed over such a bandage, it forms an absurdity scarcely credible in a man of ordinary sense."

"*Aphorism 44*.—Continued extension and counter-extension are, as a rule, not necessary to prevent shortening in fractures. This is best done by removing the causes which lead to muscular spasm: first, by early and as complete reposition of the fragments as possible; second, by the smooth application of cotton batting to the limb; third, by the equal pressure of a bandage extending from the distal end of the limb to a point beyond the joint above the fracture; fourth, by the accurate fitting of the splints or plastic material for support; fifth, by as little interference afterwards as possible."

Mr. Gamgee has for so long advocated in this country the advantages of fixation and compression in the treatment of fractures, that it may appear superfluous to go at all over the same ground again; but my object is to induce surgeons to have more faith in the early treatment of fractures by plaster-of-Paris than appears as yet at all general, and thus to save their patients and themselves an infinity of trouble.

Let me take, as a good example of the treatment, an ordinary case of fractured patella. Every one knows that the joint soon fills up with blood and synovia, which takes many days for their absorption; but every one apparently does not know that, if the case be seen before effusion has occurred, it may be entirely prevented by wrapping the knee-joint up in cotton-wadding, and applying a plaster-of-Paris bandage firmly over all. I have treated many cases in this way with only a couple of days' confinement, and believe that I have in some got osseous union between the fragments, so firmly are they knit together.

But, if effusion have already taken place, it is easy to get rid of it, if coagulation of the blood have not already occurred, by the use of the aspirator; and, the wadding and plaster being at once applied, no further

effusion takes place, and the patient begins to walk about with a stiff knee as soon as the plaster is dry.

Unless a fractured tibia be very much comminuted and bruised, I look upon plaster-of-Paris, applied as soon as possible, as the ordinary treatment to be adopted; and certainly, in Pott's fracture of the fibula, with or without fracture of the internal malleolus, nothing is so comfortable to the patient, or of so little trouble to the surgeon, as a boot of plaster properly applied, with the foot carefully held at a right angle to the leg.

In the fractured thighs of children, I believe better results can be got by the immediate application of plaster-of-Paris over cotton-wadding than by any other method—even than by Hamilton's double thigh-splint with cross-bar, which is very convenient. And here let me venture to controvert a part of one of Dr. Cowling's aphorisms and the routine teaching of most surgical works, viz., that the joints above and below a fractured bone should be included in any apparatus and kept quiet so long as the fracture is under treatment. If a fracture be close to a joint, and *a fortiori* if it involve the articulation, then of course its fixation is essential; but why, with a fracture in the middle of a long bone, we should insist upon crippling a patient by doing our best to give him two stiff joints, I fail to see. With imperfectly fitting splints, it may no doubt be desirable to fix approximately the neighboring articulations in order to obviate movements which would disarrange the fracture; but how incomplete the fixation is, any one may see who will watch a case of fractured thigh treated with the long splint. To enclose joints unnecessarily with plaster-of-Paris, is to provide cases for the "bone-setter;" and I should never include the knee or hip-joints in any ordinary case of fractured shaft of the tibia or femur. Many surgeons have exaggerated ideas of the tendency of muscles to produce displacement. They have some tendency to contract spasmodically immediately after an accident; but this soon passes off, particularly when they are firmly and equally compressed.

The apparatus for the treatment of fractured clavicle are too numerous to mention, and perhaps the simplest and best is Sayre's method with three strips of plaster. But I will venture to say that better results will be got by encasing the patient, with his ordinary jersey on, thoroughly in a plaster-of-Paris bandage, than by any other method. The clavicle being a short bone, it is of course necessary to fix the shoulder-joint by encasing the humerus and fixing it to the side; but it is quite unnecessary to fix the elbow-joint, which should be left exposed, the fore-arm being carried in a sling and used with moderation.

Fractures of the neck of the humerus may be similarly treated, if the axilla be thoroughly padded with cotton-wadding, and without a shoulder-cap, which latter is always cumbersome and very apt to gall the patient.

Fractures of the shaft of the humerus may be treated with plaster from the first, alone or combined with three splints; but fractures low down, and separation of the lower epiphysis in young children, I find best treated by thoroughly flexing the fore-arm upon the chest and maintaining it there with ordinary bandaging.

Fractures of the fore-arm are the only ones which seem to me unsuited for treatment with plaster-of-Paris, and for the obvious reason that there would be great danger of drawing the two bones together. Two simple splints, not too wide, should be applied while the fore-

arm is supinated, and then brought by the surgeon into the position between supination and pronation: these answer every purpose, while for Colles' fracture, Carr's splint is the best. In fracture of the olecranon, I am heterodox enough to flex the arm to a right angle and let the patient wear it in a sling, and the result is as satisfactory as if a front straight splint were applied for a month.—*British Medical Journal*.

PLASTER-OF-PARIS SPLINTS FOR IMMEDIATE TREATMENT OF FRACTURES OF THE LEG, ETC.

BY

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In June 1881, I read a paper on this subject before the Royal Medical and Chirurgical Society of London, and that paper is published in the Society's *Transactions*. Since the period to which that paper referred, I have continued the practice of applying these splints immediately for fractures, and many other injuries of the lower extremity.

The practice is as much approved by my colleagues as when I wrote the paper. Mr. Battle, registrar of St. Thomas's Hospital, has kindly ascertained for me that, during 1881 and 1882, 403 fractures were treated in this way, and none but good results ensued. No instances of gangrene, or bad or delayed union, or splint sores occurred. This number, with that already reported, viz., 498, makes up a total of 901 cases treated with the best results.

I would take this opportunity of again advocating the immediate setting of fractures, and their treatment by such splints as these.

The chief obstacles to their use seem to be the lingering old prejudice in favor of waiting until swelling has subsided before finally setting the fracture, and covering up the seat of fracture with bandages. A second obstacle is unwillingness on the part of the surgeon to put it out of his power to see, touch, and tell of the changes taking place in the external appearances of the injured spot. Another obstacle is in obtaining and manipulating plaster-of-Paris.

With regard to the first, I would impress upon those who look upon the swelling as an obstacle, that the equable support given by the splints and muslin bandage is the proper remedy for the swelling. I am speaking of the swelling ordinarily met with in simple fractures, and not the exceptional swelling encountered about once in twenty-five cases. The absolute rest and support form the natural remedies for the extravasation and consequent swelling.

With regard to the second obstacle, I can only ask, How long are we to take in learning that swelling and inflammation are not necessary to the repair of wounds of bone, as they are not essential for the repair of wounds of the soft parts! Subcutaneous, experimental, and antiseptic (or, rather, aseptic) surgery have taught us that much. If these appearances or signs be not needed to enable the surgeon to measure the progress of healing, what need is there for keeping the seat of fracture uncovered and exposed to the ill consequences of unequal support? I beg him to have the courage of his knowledge, and to act upon it. The excuse that he cannot from inspection report how the fracture is going on, is a very lame one. If the fracture have been properly set and fixed in the splints, he may rely upon it that the process of repair will go on to its termination as surely as an acorn, dropped into

suitable soil, will develop into an oak. If healthy repair be not going on, symptoms of it will not be wanting in uneasiness, pain, severe throbbing, obstinate starting, and feverishness.

As to the last obstacle mentioned, the difficulty of obtaining and manipulating plaster-of-Paris, that, I must admit, is a real obstacle to some country practitioners, though it is none whatever to a surgeon resident in a town. I hope that some day a plastic material will be found, which will combine the useful qualities of plaster-of-Paris and poroplastic, without their disadvantages.

I still hold that for the immediate treatment of fractures the splints are superior to the plaster-of-Paris bandages; and for the reasons stated in my original paper, that the bandages form a thick case which is comparatively difficult to remove. It is most desirable, in the cases under consideration, to put on an apparatus which, in case of accident, such as rapid unusual swelling, pain, or misadventure in application, or manipulation can be easily taken off with the least possible disturbance of the broken limb. To remove the complete case made by plaster-of-Paris bandages, it must be cut open and then the limb extracted from it; another case must be built up. These steps cost the injured limb much disturbance and some pain. When the splints have to be removed for some accidental cause, the process is a very easy one. The muslin bandage is easily cut up by scissors; the splints can be removed or turned aside, one at a time, so that the limb is not left without support. In the majority of the few instances in which this change has to be made, the same splints may be reapplied with fresh muslin bandages.

The apparatus consists of: firstly, inside and outside splints made of common house-flannel and plaster-of-Paris; and, secondly, of muslin bandages. The splints for fractures below the knee are shaped somewhat like the old short outside splint; the footpiece is, however, wider. The splint for the inside of the leg is similar in length and width to that for the outside. The splints should be long enough to extend from above the knee to the middle of the metatarsus, and together they should be in width about one inch less than the circumference of the limb at the corresponding part. A rough guide to the shape of the splint may be found in the injured person's stocking when it is laid flat on a table. Each splint is constructed of two layers of the flannel; the outer layer carries the gypsum; the inner layer forms a dry, warm, elastic lining, and protects the skin. These splints are applied by means of the muslin bandages. The bandage is put on like any other, from the toes to the knee; one thickness is enough. Two bandages of five or six yards in length are more convenient than one of ten or twelve yards.

To Make the Splints.—1. A piece of house-flannel, or an old shrunk blanket, or any suitable substitute, is selected. The pieces may be shaped by measurement, taking the circumference of the limb above and below the knee, at the biggest part of the calf just above the ankle-joint, from the front of the ankle-joint round the heel to the front again, and at the middle of the metatarsus. The flannel of each splint should be in width half an inch less than half the circumference at any of those points. The width of the two splints should be one inch less than the circumference of the limb at any corresponding part; it should be long enough to extend from above the knee to the middle of the metatarsus. Four pieces are required—two for each splint. 2. Two bandages of common muslin are prepared, each five to

six yards long, and two inches and a half in width. 3. A handful or two of good dry plaster is mixed with water to the consistence of thin cream. 4. The inside pieces of flannel may be laid on the table or bed, the outer surface being upwards. 5. The outside pieces are to be soaked in the plaster separately, and laid out on their respective inside pieces.

Application.—Whilst traction is kept up, and the ends of the broken bones are maintained in apposition, the splints are to be applied and smoothed; then the bandage is to be put on. Traction is to be maintained during the hardening of the plaster. The latter takes place in about three minutes. Next the limb should be laid on a large soft pillow, the toes directed upwards, and the knee a little bent. In the application of the bandage, great caution should be observed that it is not drawn tightly anywhere, and that no one turn of the bandage is tighter than another. The support is to be equal everywhere. The two splints should not meet by about half an inch either down the front or back. The intervals are spanned by the dry porous muslin; at the sides, the bandage is fixed to the splints by the plaster, which oozes into it from the outer layer of flannel. If it become necessary next day, or later, to ease the splints, or to inspect the limb at any spot, the bandage can be slit up with scissors along the middle line in front. One or both of the splints can then be eased from the limb, and readjusted by the addition of another bandage. It is undesirable to wholly remove the splints. They are hinged together at the back by the muslin bandage which spans the interval there. The trimming of the apparatus may be done as soon as the plaster shall have hardened. Should the surgeon be short-handed with regard to assistance, he may apply the outside splint first, and lightly bandage that on; and, when that splint has nearly hardened, he may put on the inside one. As swelling subsides, and the splints become more or less loose, an additional bandage should be put on. At the end of ten days, if the patient be convalescing, the outside bandage may be gummed, or a fresh gummed bandage rolled on. That apparatus will last until splints are no longer needed. At the end of a fortnight, or three weeks, as the case may be, the patient may leave the hospital for his own home.

This mode of treatment is admirably adapted to oblique fractures, accompanied by displacement of the tibia, to cases of Pott's fracture, and to comminuted fractures.

[The author read letters from Mr. Davies-Colley of Guy's Hospital, and Mr. Berkeley Hill of University College Hospital, in favor of this plan of treatment.

A demonstration of the mode of treatment was given by Mr. Croft, in which he was kindly assisted by Mr. Laimbeer, House-Surgeon of the Liverpool Royal Infirmary.]
—*British Med. Journal.*

CASE OF ASTHMA CURED BY GALVANIZING THE NECK, AFTER FAILURE OF OTHER REMEDIES.*

By

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For every reason, my communication to-day will be short. Were there no other, the crowded state of our agenda paper would urgently suggest it. I shall, therefore, almost confine myself to the one point in the treat-

* Read before the East Anglian Branch.

ment of suitable cases of asthma, which gives the title to this paper.

I have said suitable cases, for the term asthma is, unfortunately, a most elastic one; and, doubtless, numerous cases are classed under this heading which in no sense correspond to our idea of the disease, as being one of the respiratory organs, which either is essentially, or was at its commencement, of neurotic character.

This grouping of many allied affections under the head of asthma, doubtless explains what is euphemistically called the uncertainty of the action of remedies in this disease, and the caprice of its symptoms. I apprehend that no such thing as caprice does really exist in disease, or in health; but that all events, whether healthy or morbid, occur according to definite causes producing definite results; and that, although these may be varied and numerous, yet they are not only definite, but uniform in similar circumstances; the only uncertainty lying in our limited knowledge, and our limited capacity for appreciating the small differences of physiological or pathological condition.

This is theory. In practice, we are still compelled to call many affections asthma, which are probably not so essentially; and to speak of remedies for asthma, which are only useful in merely allied affections of the air-tubes. What an unscientific chaos this leads to may be seen in the fact, that I find no fewer than thirty-one different remedies mentioned, under the heading of asthma, in one of our most popular and valuable therapeutic works of the present day.

The case which I shall now shortly describe is one of tolerably true neurotic disease, which, by long continuance, had led to a free secretion from the bronchial tubes—in fact, had almost become what is termed asthmatic bronchitis. As this patient recovered, there will not be much objection to adding a thirty-second remedy to the above-mentioned list.

CASE.—S. C., aged 49, married, a joiner, was admitted to the Norfolk and Norwich Hospital for "asthma" with much expectoration, for which he had been treated, for several weeks before admission, by one of our best Norfolk surgeons.

His statement was: that he had been ill for seven months; that this was his first attack; and that his family was not subject to asthma. His complaints were: of cough, with thick mucous expectoration; of noisy wheezing; and of great shortness of breath, which latter was always much more worse at night, and prevented lying down or sleep.

On examination, the chest was found to be resonant, full of wheezing *râles*, with some small amount of moist *râles* at the base of the lungs; and the expiration was markedly prolonged and dyspnoeal. No other diseased signs were observed, except a constantly flushed face. The heart was normal. The liver was not changed. The urine was free from albumen, although the phosphates were in considerable excess. The temperature was subnormal (but it may be mentioned that, during the progress of the case, it not unfrequently rose to 99°, or even a little higher).

This patient remained in the hospital for about ten weeks, and the case and its treatment may be well summed up as follows:

On February 21st, he was put upon mineral acids, with a view to check the excessive discharge of phosphatic salts in the urine; and, in a day or two, a nightly dose of chloral and bromide of potassium was added.

On March 7th, he was treated with full doses of compound sulphuric ether and an aromatic, on account of faintness and great respiratory distress.

On March 10th, as he was still unrelieved, he was ordered to take repeated doses of chloral, with iodide and bromide of potassium; and he was also ordered to inhale steam medicated with carbolic acid and tincture of conium.

On March 20th, the symptoms were unchanged. He was now ordered to smoke stramonium cigarettes.

On March 28th, a mixture of lobelia, ipecacuanha, and chlorodyne was tried.

On April 4th, thinking that, possibly, a gouty diathesis might be keeping up his asthma and copious bronchial secretion, I put him upon the ordinary white magnesian mixture, with colchicum. Still he did not improve.

On April 14th, dilute phosphoric acid was tried.

On April 21st, all medicines were omitted, and he was ordered to inhale the fumes of nitre-paper every night. From this he distinctly derived a little benefit, and it was the first form of treatment from which he appeared to have obtained any advantage.

On April 24th, remembering Dr. Burney Yeo's paper on this subject, I had him galvanized, for several minutes, though the upper part of the neck and throat, according to the method therein advised; and this process was repeated daily (with the exception of two days) until May 5th, when he left the hospital.

The effect of this treatment was immediate and decided. He was distinctly better after the very first time of being galvanized, and he steadily and rapidly improved from that day—so that, by May 5th, a period of eleven days, the wheezing was nearly gone, the expectoration had become very slight, and, in fact, he was nearly convalescent. It is worthy of mention that, on the two days when the galvanizing process was omitted, his asthmatic symptoms were distinctly worse.

I saw this patient several weeks after this date, when he told me that he felt quite well and comfortable.

NOTE.—I need not take up much of your time with references to Dr. Yeo's paper, seeing that you all have read it, or can read it, in the *Lancet* for November 13, 1880. But the result of the galvanic current in this case was so marked and so decided, and, in fact, cured the patient so satisfactorily, when I was beginning to feel that I must give up the case as hopeless, that I cannot but think this short record may be interesting.

In the paper alluded to, Dr. Yeo refers to the experience of Dr. Schmitz, of Neuenahr, and of Dr. Max Schäfer of Bremen; and also mentions a case of asthma which he himself saw treated in this manner in Germany, and which was cured after a duration of six years. He says (and I doubt not we all agree with him): "Asthma is probably an irritative and reflex pulmonary neurosis; and in this disease there is often swelling of the laryngeal, or pharyngeal, or nasal mucous membrane, which may cause pressure upon the vagus or other nerves in connection with the respiratory tract." He adds: "The current must be the induced one (the constant current being of no use), and it must be of good strength, so that it can be felt. It should be applied to the throat in the situation of the great nerve-trunks, the vagus or sympathetic, each pole being applied just below the angle of the jaw, and in front of the sterno-mastoid, and must be felt as passing through the soft palate from one side of the throat to the other."

In my case, related above, the foregoing method was pretty closely adopted, and was well carried out by Mr. D. Day, our house-surgeon, with the result that, after being ill seven months before admission to the hospital—without any marked impression having up to that time been made upon his symptoms, by any of

the very numerous methods of treatment adopted—the patient was at once relieved by galvanizing the throat, and was nearly cured in eleven days; whilst he was able to report himself as completely recovered in two or three weeks more.—*British Med. Journal*.

REMARKS ON APHASIA.

BY

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I have read with great interest the report of the very able discussion on aphasia at the late meeting of the Association. I regretted much that I could not be present to contribute my little quota towards the elucidation of the subject; but, even yet, a brief contribution, more particularly on an aspect of the question not much adverted to by any of the speakers, may not be considered out of place.

A question of primary importance is, Are we warranted in considering, with the late Professor Trousseau and others, that the intelligent aphasic has for the most part lost the power of remembering words? * This suggests the other and more fundamental inquiry. Is it possible to think, in the sense of reasoning, without words or their equivalents, such as the finger-symbols of the deaf-mute? We need be at no loss to answer this question, if we homologate the views of metaphysicians and philologists. Thus Hegel says: "It is in names that we think;" Schelling, "Without language, it is impossible to conceive any philosophical, nay, even any human, consciousness;" Dugald Stewart, "We think as well as speak by means of words;" Mill, "The idea and the name have a mutual power over one another * * * the name actually forms a part of the complex idea;" Descartes, "All our ideas become associated with the words in which we express them, nor do we ever commit them to memory without their accustomed signs;" Max Müller, "Thought, in one sense of the word, *i.e.*, in the sense of reasoning, is impossible without language," etc.†

If we, then, adopt the view which is supported by so great a weight of authority, and seems to commend itself to one's own consciousness, that thought—reasoning—is indissolubly associated with language, it only remains to be shown that aphasics do reason, in order to establish the conclusion that words, "the accustomed signs" of thought, are really in their minds, though they are unable to express them by articulate

* "The understanding is less injured than the memory of the acts for producing words, and this latter faculty less impaired than that of remembering words."—Trousseau's *Clinical Medicine*, vol. i, p. 273 (Bazire's translation).

† It is right, however, to state that this nominalistic view of the union of thought and language is not universally received.

sounds, or, it may be, by any other means.‡ Now, I think it must be granted that in many, probably in most, cases, there is but little thought; the reasoning faculty is deeply impaired; more so than the expression may indicate; for the countenance in aphasia, as in insanity, often to a considerable extent retains the lines and general aspect of an intelligence once possessed but no longer present, and perhaps irretrievably lost. According to our argument, if there be but little thought in the minds of these patients, then the amount of language is proportionately small. But, while I believe this deficiency of thought and words exists in the majority of aphasics, it can scarcely be disputed that there are many—Lord Derman's case, referred to by Professor Gairdner, is a good illustration—in whom the indications of sound and abundant thought are quite clear. I have seen a number of similar, though less striking, cases; and it is obvious that speechless patients who can express their ideas in writing think by means of words. There seems, therefore, little doubt that intelligent aphasics do possess the mental use of language.

Physiologically, there is no ground for anticipating that aphasics would lose language, though unable to speak; for the inlets by all the senses to the mind are in no way blocked; notably, Eyegate and Eargate—to use John Bunyan's quaint but expressive terms—are wide open. Impressions on the senses are, therefore, free to travel right on to the highest cerebral terminations of their respective nerves—perceptive centres of Charlton Bastian—where they probably enter into consciousness. Take the case of the auditory perceptive centre; an organic record is produced on it by spoken words, and this re-enters into consciousness as words, from time to time, according to the laws of association, at the same point. In fact, there does not appear any reason to expect, because the way out (Hughlings Jackson) is damaged at some point, and the sufferer cannot express his thoughts in articulate language, that the thinking power itself should suffer severely, or that words, the instrument of thought, should be lost. It is very conceivable, however, that when the third left convolution or its neighborhood is destroyed, and consequently the stimuli for speech are not produced, a backward inhibitory influence may be exerted on the perceptive centres which are specially associated in their function with that convolution, so that the reproduction of words within the sphere of consciousness is not so clear and complete as it ought to be. The effect of such an influence on the functions of these centres might thus be equivalent to a direct lesion of their substance.—*British Med. Journal*.

‡ I have discussed this question at considerable length in a paper published in the *Journal of Mental Science* for January 1867.

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LECTURES.

(1) REMOVAL OF TESTICLE.—(2) SPASMODIC STRICTURE OF URETHRA.—(3) CRUSHING INJURY TO ELBOW.—(4) REMOVAL OF TUMOR OF NECK.

BY

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REMOVAL OF TESTICLE.

History: Six months ago, after a history of straining, which is not, however, referrible to the production of this disease, this old man noticed a swelling of the right side of the scrotum, about the size of an orange. He claims this appeared suddenly.

It was not painful or tender then, but was dark-colored. It has increased slowly in size to date of admission. With this increase in size, it has become painful, and has been discharging a dark grumous material since.

There has been no deterioration in health.

This is a growth in the testicle, having nothing to do with traumatism. Contrary to the usual course in such cases, the testicle has softened, and broken down in the middle, more commonly this occurs on the surface. So that we have, presenting externally, an orifice leading down to a cavity of considerable size in the testicle.

You notice I can pass the probe in for a considerable distance, although not as deeply as at my last examination—the cavity seems to have contracted somewhat since then. The great question is, whether this spontaneous condition of the testicle is benign, or whether it is due to malignant disease.

I have searched for enlarged glands, as an indication of the nature of the disease. I find the glands in the groin a little larger than normal; but no larger on the right than on the left side, which is free from disease.

The cord on the right side is a little larger and firmer than is usual.

I am inclined to believe it is a malignant disease.

The evidence is, however, so uncertain that it may be a benign tumor; in either case, there is no objection to operation. The operation of removing one testicle is not castration; the latter operation includes the removal of both testicles, and thus emasculates the patient. The operation of removing the testicle is very simple; it consists in exposing the testicle, tying the cord and cutting off below; the point of division varying with the condition of the testicle; here I shall go up as high as I can, to avoid contamination.

In doing this operation, after you have cut through the cord, if you are not careful, it will be retracted into the abdominal cavity, and there will be free hæmorrhage internally from the spermatic artery. Therefore, before you cut the cord, secure it by a thread passed through it, which an assistant holds, and thus prevents the stump of the cord from slipping away; then you can deliberately proceed to tie the bleeding vessels in the stump. [An incision was now made along the side of the entire length of the scrotum on the right side, and another joining this so as to inclose an elliptical space. The scrotum is somewhat infiltrated and involved in the inflammatory process; I do not like the appearance of it, or its feel under the knife, and am afraid it is malignant disease; and if so, we have gained but little by the operation.]

After making the incision, I separate the testicle from the scrotum by a process of tearing and not of cutting; and especially is this to be observed at or near the orifice of the ring, so as not to have any more bleeding than is necessary.

I now have isolated the testicle; the cord seems thickened.

Next, a coarse thread is passed through the cord at its upper part, and the latter then cut off. I will then tie the spermatic artery and a few smaller bleeding vessels; and in this I am helped by the walls of the arteries being here thickened, so that they are more prominent than normal. You must be careful not to tie or include the vas deferens in your ligatures.

Some surgeons tie the stump of the cord with a single string, and then are done with it. But in this way the string is apt to slip or become loosened, and then there will be arterial hæmorrhage; on this account, I prefer to tie all the arteries separately, taking care not to include the vas deferens.

I am careful to tie all the vessels; while cold, many cease to bleed; but when the part is dressed and gets warm, they would be apt to bleed, unless secured; so I go over the ground several times, after bleeding vessels.

Notice the perfect control we have over the stump of the cord by means of this thread; if it were not for this, it would be liable to retract into the abdominal cavity before we had secured all the vessels.

In my judgment this is a case of malignant disease. Of course, the scrotum may be inflamed and infiltrated and indurated, as the result of benign disease; but it is here so hard and brawny that I am afraid it is malignant. The section which has been made in the specimen passing around throws no light on this point.

Dr. Peabody will examine it microscopically, and I will let you know the result; if the examination shows it to be non-malignant I shall be very much pleased. [The testicle was removed with the elliptical piece of the scrotum included in the lines of incision. Altogether it was about the size of a moderately

large orange, and its interior presented a number of large cavities]. The edges of the incisions are brought together loosely by a few stitches; I do not expect them to heal by primary union, but to have the space filled up by granulations.

A large drainage-tube having openings in the side is inserted, the ends projecting both above and below through the wound, in its entire length.

Having left the controlling suture on the cord, a little while, to see that there is no further hæmorrhage, we cut it off and free the stump of the cord.

There is still a slight oozing from the wound, but drainage will take care of that, and it will no doubt soon cease.

Both ends of the drainage-tube are passed through holes in the gauze; the whole is then covered by sundry layers of gauze, and rubber plaster to hold them in place.

Through-drainage is much better than where only one end of the tube projects from the wound. The ordinary way of applying drainage is, in my opinion, not efficient. For, in order that the accumulations in the wound can drain away effectually, the lower end of the tube must be open; in the ordinary Lister dressing, it is covered, however, by gauze, and although a little of the discharges will leak into and be absorbed by the dressing, yet the larger part is kept in and cannot get out; and especially is this so when from any cause, such as a clot of blood, the end of the tube becomes stopped up. With through-drainage, as you see it here, these objections do not apply; for by putting the nozzle of an ordinary syringe into the upper opening we can inject a solution of carbolic acid, and thus wash out all the inner surface of the wound and also remove any thing which may occlude the lower opening of the tube.

Carbolic acid controls and modifies inflammatory action, and protects the parts from some of the inflammatory action.

I have been trying to show you the working of the drainage and the injections through it and the cavity of the wound, but the edges of the incisions have been so loosely approximated that the injection runs out by this avenue, instead of through the tube, as it ordinarily would.

SPASMODIC STRICTURE OF URETHRA.

History does not elicit any traumatism. The patient is 33 years old and was admitted to the hospital on Feb. 13, 1883.

There is no history of gonorrhœa, but 1½ years ago had a chancroid, the scar of which is still visible on the glans penis. The symptoms of the existence of stricture have been a twisting and diminished size of his stream of urine, but he has never had retention.

Two weeks ago his urine began to dribble away.

On examination: A No. 26 bougie was arrested at 5¾ inches; a No. 10 flexible bougie at 6¾ inches, and a filiform or whalebone bougie at the same point. There is no accumulation of urine in the bladder.

His urine has been examined and nothing abnormal found. He still is able to pass a pretty fair stream of water; so that we can be certain there is no absolute physical obstacle to the passage of an instrument; for where urine can come out in a fair sized stream, an instrument ought to go in. I do not say that I or any one else can pass one, however, for the canal, although perfectly pervious, may be tortuous and thus would prevent the passage of an instrument.

First, we ascertain the location of the stricture by seeing where a full-sized bougie is arrested. I try first

with a No. 26, and find it is arrested at the bulbo-membranous junction, and then passes into the bladder. So that there is no necessity of performing urethrotomy, and the interest in the case terminates, since a large sized instrument passes into the bladder, while the patient is anæsthetized, which it would not do before.

The case is one which is properly treated by dilatation.

CRUSHING INJURY TO ELBOW.

This is the man I showed you some 3 weeks ago; I show him again to-day, to illustrate the result of careful treatment. This was a bad case of injury. You will remember, 3 weeks ago, his elbow was crushed by being run over by a street-car. Although no bones were broken or arteries lacerated, yet there was so much disintegration of the soft parts about the elbow, that it was a question, first, of saving the man's life; and at that time we little thought of saving the limb.

You will remember I said we would try, at any rate, to save the limb; we made free incisions into the tissues, which had been stripped from the bones, so as to obtain the freest possible outlet for all discharges. This was accomplished, and it was decided to leave the thing to Nature; certain dead parts have sloughed away, leaving the limb in a very favorable condition, and the greater part of this favorable issue has been, no doubt, due to the fact that there has been no accumulation or retention of the inflammatory products. The limb now presents a great hole in the front of the upper and anterior aspect of the forearm, where, you will remember, we made a very liberal incision. See how kind Nature has been! The man can move his hand and also to a certain extent his forearm, and we have every reason to suppose that when all this loss of tissue is filled up and the wound heals that the man will have a very useful arm.

This illustrates the much greater vitality which exists in the upper than in the lower extremity; and you will remember this was one of the considerations which prompted us to think of saving the limb.

If the lower extremity had received a corresponding amount of injury, the limb could not have been saved.

This case ought to fix in your minds the necessity of making perfectly free openings into parts which are disintegrated, and where matter can lodge, so that nothing is retained in the wound, and that there is consequently no tension in any part of the wound.

REMOVAL OF TUMOR OF NECK.

The case upon which I am going to operate now is one occurring in a middle-aged man, whose general health is good and in which there is no history of traumatism. A little less than two years ago, this man noticed a small lump at the angle of the jaw on the left side; this gave him no discomfort or uneasiness. Three months ago, without any exciting or provoking cause, except perhaps exposure to cold, this tumor began to grow, and tolerably rapidly, so that now it is about as large as a small orange. The patient says it has grown and diminished in size at different times; so that its size has not been steadily the same at various times; but during the last few weeks its size has remained uniform.

An exploratory puncture has been made into the tumor, and at the upper part nothing but blood was drawn; but at the lower pus escaped.

The tumor is situated behind the angle of the jaw, extending up to the mastoid process, in the back under the sterno-mastoid and forward almost to the middle side of the neck so as to overlies the upper part of the

larynx, extending down below the os hyoides to about the level of the upper margin of the thyroid cartilage.

It is firm in its upper part and soft and semi-fluctuating at its lower part.

It is adherent to the deeper structures, but not so much so but that it is capable of being moved about to a slight extent.

The nature of the tumor interests me very much.

I was first disposed to consider it a case of glandular enlargement, undergoing degeneration. This is the sort of tumor, in my experience, which is encountered most often in this region.

The only other tumor which it could be, with the history which we have here, is a benign or perhaps glandular growth which has been transformed into a malignant growth. The question of diagnosis rests then between degeneration and preceded hypertrophy of a gland, and a sarcomatous growth.

I do not feel confident of either diagnosis.

The main points of doubt of the tumor being the more favorable of the two, namely, hypertrophy and degeneration of a lymphatic gland, and I consider this by far the more favorable, because after removal, as a rule, they do well, are that when we do have to deal with a degenerated gland, this is usually only one of a series; and almost invariably there is a history of other glands in the body having behaved similarly, or that upon examination you find some other glands in the body in the course of a similar process. Also, the rapidity of the growth and the size attained is almost never seen in degenerated glands.

So on this account I feel certain as to the nature of the tumor, but there is no doubt as to the wisdom of its removal whatever its character be.

The tumor extends deeply, and lies in very close relation to very important vessels; and hence its removal is somewhat more formidable than it would otherwise be.

We may encounter large arteries, veins and nerves.

The superior thyroid, lingual, facial and occipital branches of the external carotid all lie in this situation, as well as the trunk of the vessel itself, and they are sometimes wounded in deep dissections like this, and then there would be a good deal of hæmorrhage before the bleeding vessels could be secured, so that you are then obliged to rush the enucleation to get at the vessels you wish to tie.

In this case, I think, a very wise preliminary step would be to tie the external carotid. Ligature to this vessel is very easily applied, and has been very successful, almost uniformly.

Ligature of the external carotid is not followed by the injurious consequences, notably to the cerebrum, which so often follow ligature of the common carotid. But my colleagues do not agree with me in the advisability of this preliminary step, which would remove many troublesome encumbrances which I shall have to encounter; and so I shall proceed with the operation without trying the external carotid artery.

Another difficulty which may be encountered is the wounding of the internal jugular vein, or one of the large branches which empty into it. More deeply the internal carotid artery and the trunk and some branches of the pneumogastric nerve may be encountered, but there is not much probability of their being wounded.

I wash the part well with carbolic acid (solution), and make an incision along the whole length of the tumor [through skin and fasciæ], and proceed to enucleate the tumor. [This was done by tearing with

the fingers and handle of scalpel, and by cutting with scalpel and blunt-pointed bistoury].

I am now down upon the vertebræ, and must be very careful in separating the posterior part of the attachment of the tumor. I have now removed the tumor, which you see is about as large as a small orange, and which I shall have passed around; there still remain, however, some prolongations of the tumor, passing down near the median line, behind the internal jugular vein, and which you see me lift up by my forceps, and this I shall have to dissect from the internal jugular vein itself.

I have cut one of the branches of the external carotid, I think the facial, and tie it at once. This tumor has been comparatively easy of enucleation, and has not presented any of the hardships which tumors in this situation often do when you attempt to enucleate them. I think in a similar case ligature of the external carotid is advisable, for it diminishes the gravity of the operation, and gives you great freedom in dealing with adhesions.

Having tied several smaller bleeding vessels, I wash out the cavity left with carbolic, and close the upper part of the wound by a few stitches, leaving the middle and lower part open; the cavity is then stuffed with carbolized lint, cut into strips so as to facilitate removal, this covered by iodoform gauze, and over this a bandage to hold it in place.

At the lower part of the neck you see a small growth, which consists simply of an hypertrophy of the superficial part of the skin; it is perfectly benign, and does not inconvenience the patient at all.

Such tumors may exist for a whole lifetime, and not undergo any change; but it is well to get rid of them; for at any moment it is possible for them to develop a carcinomatous—an epitheliomatous element; and for this reason I shall take this one away.

It is a good rule in surgery that when you have two incisions to make, one above the other, that you should make the lower one first; for then no blood will pass from the upper one over the lower one whilst you are making the latter.

SELECTIONS FROM JOURNALS.

ON INHALATION, MORE PARTICULARLY ANTISEPTIC INHALATION, IN DISEASES OF THE LUNGS.

By ARTHUR HILL HASSALL, M.D., Lond.,

Late Senior Physician to the Royal Free Hospital, and Founder of the Royal National Hospital for Consumption and Diseases of the Chest, on the Separate System.

In the *Lancet* of May 5th, 1883, there appeared a paper by myself entitled "On the Comparative Inutility of Antiseptic Inhalation as at present practiced in Phthisis and other Diseases of the Lungs." In the paper itself, I defined more clearly the scope of the inquiry, which was more particularly to test the efficiency or otherwise of antiseptic inhalation in the class of diseases referred to, as carried out by means of the different forms of oral and oro-nasal inhalers.

The substances experimented upon were phenol or carbolic acid, creasote, thymol, and iodine, all frequently employed in inhalation in consequence of their known antiseptic properties. It was shown that, in the case of the three first-named substances, more than

four-fifths were still present in the sponge at the end of the inhalation, while it was proved that the iodine, on coming into contact with the mucous membrane of the mouth and cheeks, became rapidly converted into an iodide, in which condition its antiseptic properties were of course greatly impaired, if not destroyed. It was at the same time pointed out that there were several ways in which the unrecovered portions of the substances used were, at all events in part, to be accounted for, without supposing that they were inhaled, as by loss in extraction from the sponge, by loss and condensation of moisture in the inhaler, on the skin of the chin and cheeks, and on the mucous membrane of the mouth and fauces of the person inhaling. It was further remarked that but little evidence has as yet been adduced to prove that any of the substances named above do really make their way into the lungs in any considerable amount, and so reach the seat of the disease.

It was with a view to obtain evidence on this point that my first endeavors were directed. I contrived the following arrangement, in imitation, as near as I was able, of natural respiration. A syringe was prepared, having a cubic capacity of 200 inches, and provided with a hollow piston, having a valve at each end. The lower valve prevented the escape of the air in that direction when the piston was pushed down, while the upper one at the same time of course allowed of its escape upwards. A Woulfe's bottle filled with water, or bulb-tube filled with spirit, as the case might be, was next attached to the syringe; this bottle in its turn was joined on to the termination of the trachea of an unskinned sheep's head and neck. The mouth and nares were covered with a well-fitting papier maché respirator, furnished with the usual cribriform receiver and sponge. The syringe, of course, is intended to take the place of the lungs, and the Woulfe's bottle to intercept any of the substances used which might pass from the respirator down the trachea, with a view to their subsequent determination. The syringe was capable of being worked at the rate of about 250 times per hour.

The first experiment was with half a gramme (equal to a little more than $7\frac{1}{2}$ grains) of carbolic acid. After the rapid action of the syringe for an hour and a half, the water in the Woulfe's bottle was tested by Chandelon's very accurate and delicate process, with the result of finding in it only 0.003 gramme of carbolic acid, that is to say, a mere trace. A second experiment furnished a similar result.

Such being the results of the experiments with carbolic acid, it is not probable that any with creasote and thymol would have been different, having regard to the relative volatility of these substances. Thymol, indeed, at ordinary temperatures, is far less volatile than carbolic acid.

In the next experiments, much more volatile substances were selected, namely, eucalyptol and oil of turpentine, both also possessing strongly penetrating odors. In the case of the eucalyptol, the faintest possible odor only, recognizable with difficulty, was perceptible in the alcohol through which the air was passed. With the turpentine, however, the spirit was found to possess a decided smell of this oil, although it was obvious that the quantity actually present was but very minute. This last experiment is so far satisfactory, since it shows that substances of considerable volatility, such as oil of turpentine, do really make their way into the lungs, although, in the present case, in but very small amount.

Lastly, an experiment was made with iodine; of

this, two cubic centimètres of an alcoholic solution were taken, containing 0.06 gramme of iodine (equal to about nine-tenths of a grain), a much larger quantity than that ordinarily employed, in consequence of the irritating nature of the fumes. The alcohol through which the air issuing from the trachea was passed did not become coloured in the slightest degree, nor did it furnish any evidence whatever of the presence of iodine. This experiment was performed a second time with another sheep's head and neck. The saliva of the mouth, and the mucus, were also tested for free iodine; not a trace was present, but, after the addition to the mucus of a little dilute nitric acid, it was freely liberated. This shows that the iodine had really entered the mouth, but had become converted into an iodide; of course, losing in the process the greater part of its antiseptic properties. In this respect, the experiment accorded exactly with what I have elsewhere shown takes place in the living human subject.

Of course, it may be urged in objection, that the results of the experiments just recorded would have been different in the case of the human subject; and this is to some extent possible, although I scarcely think it probable, seeing that the construction of the larynx of the sheep is less complicated than that of the human subject, and that the passage is much more open and free. However this may be, the experiments show that substances of little volatility at ordinary temperatures, such as carbolic acid, creasote, and thymol, make their way into the lungs, when oral or oro-nasal respirators are used, with great difficulty, and in very minute quantities only, while even substances with a considerable volatility, as eucalyptol and oil of turpentine, do not find a ready access.

Another form of inhalation is by the vapor of hot water. This is sometimes used alone, but generally as the agent for the diffusion of the medicinal substances employed. I now propose to examine to what extent this method is effective.

The *British Pharmacopæia* contains five formulæ for the inhalation of medicaments by the aid of the vapor of hot water; two of these are vapor conii and vapor creasoti. Considerable discrimination has been exercised in the choice of these two substances, and in the methods described for their use, seeing that the alkaloid of conium is volatile, as of course is also the creasote to some extent. The *Pharmacopæia* directs that twenty minims of a mixture of one part of an extract of hemlock with one part of a solution of potash and ten parts of water, should be put on the sponge of a suitable apparatus, so that the vapor of hot water passing over it may be inhaled. It will be observed that the twenty minims of the mixture will contain less than two grains of the extract of conium. The quantity of the active principle, coneine, contained in the two grains, is infinitesimal, and may be said to be homœopathic; it may be taken to be rather over one-tenth of a grain per 100 grains of the extract. Two cubic centimètres of the mixed referred to above, equal to about thirty-one grains, and containing 0.16 gramme of the extract, or rather more than two grains and a half, were placed on a piece of sponge, suspended in the neck of a retort containing 250 cubic centimètres of distilled water. Twenty-five cubic centimètres were distilled over and tested with Mayer's general reagent for alkaloids (potassio-iodide of mercury), but not a trace of coneine could be discovered. After slow evaporation to dryness at a very low temperature, a faint reaction only was obtained with Mayer's reagent. Subsequently, a similar experiment was

made with 0.1 gramme of the alkaloid itself, or rather more than one-tenth of a grain; but in this case, the alkaloid was put into the water, and not placed on the sponge, as in the previous experiment. The first twenty-five cubic centimetres distilled over gave a distinct reaction with Mayer's reagent, but the second, only after concentration, almost to dryness. It thus appears that, in Mayer's reagent, we have a most delicate test for conine; and, that point being determined, an experiment was made with the extract of conium, in the quantity and under the conditions set forth in the *Pharmacopœia*. The result was, that not a trace of the alkaloid was to be detected in the alcohol through which the vapor was passed, even after careful evaporation, almost to dryness.

With respect to the employment of the vapor creasoti, the following instructions are given in the *British Pharmacopœia*. Twelve minims of creasote are directed to be mixed with eight ounces of boiling water, in an apparatus so arranged that air may be made to pass through the solution for inhalation. With a view of testing how far this method of employing the creasote is effective, the two following experiments were made. Half a gramme (equal to 7.7 grains) was added to 300 centimetres of water, and the vapor, mixed with air, was drawn through alcohol for fifteen minutes; this, of course, retained whatever creasote passed over. The alcohol was afterwards found to contain only 0.007 gramme of creasote, or about the $\frac{1}{12}$ nd part of the amount originally taken. In the second experiment, the same quantity of creasote was taken, but in a somewhat differently constructed apparatus, with tubes of a greater diameter, so as to allow of a freer passage for the vapor. In this case, 0.026 gramme of the creasote was recovered, equal to about one-nineteenth of the original quantity.

It may be safely affirmed, therefore, that the method of inhaling conium and creasote by the vapor of hot water, as prescribed by the *British Pharmacopœia*, is most ineffective, and almost, if not quite, valueless.

The pharmacopœia of the Hospital for Diseases of the Throat contains a variety of formulæ for medicated inhalation by the vapor of hot water. I will select two of the most important of these, and put them to the test of experiment. One of them is the vapor acidi carbolic. Twenty-one drachms, or 1,260 grains, of the acid are directed to be dissolved in three drachms of water, and of this mixture, a teaspoonful, say equal to a drachm, and containing the very large quantity of fifty-four grains of phenol, is to be put into an eclectic inhaler, containing a pint of water at a temperature of 150° Fahr., and maintained at that temperature by the aid of a spirit-lamp. A quantity of the mixture containing exactly three grammes and a half of carbolic acid, equal to 53.9 grains, was put into the inhaler, the inhalation being continued for the space of twenty minutes; after which, 3.44 grammes of the acid, equal to 53.08 grains, were recovered from the inhaler, the loss thus amounting to 0.06 gramme, equal to only 0.82, or four-fifths of a grain. It must not be supposed, however, that the whole of even this small amount was actually inhaled; part, no doubt, was dissipated in the uninhaled vapor, while of that which really entered the mouth, some was absorbed by the mucous membrane of the mouth and fauces.

The air expelled from the lungs at each expiration was also tested for carbolic acid, the quantity found being excessively minute, namely, 0.0076 gramme, equal to a little over one-tenth of a grain.

The second formula selected from the Throat Hospital pharmacopœia for experiment was that for vapor

thymolis, or thymol. The directions in this case are to dissolve twenty grains of thymol by means of three drachms of spirit, and to make up with water to twenty-four drachms, or three ounces; a teaspoonful of the mixture to be added to a pint of water at 150° Fahr. Contrast for a moment the very large quantity of carbolic acid employed in the first inhalation, namely, 54 grains, with the minute amount of the thymol, less than one grain, employed in the second inhalation. Thymol, though little volatile at ordinary temperatures, melts readily in hot water, and then becomes very diffusible. Of course, the greater part of the portion of a grain contained in the 8,750 grains of the pint of water was volatilized in the vapor, but what possible curative effect could be expected to result from so minute a quantity of thymol, even if the whole were really inhaled.

When the substances added to hot water possess a high degree of volatility, and are employed in considerable quantity, and when, at the same time, the temperature of the water is maintained by means of a lamp, vapor-inhalation may be practiced in some cases with benefit—at all events, in affections of the throat. In some instances, the warm vapor of the steam itself, unmedicated, proves serviceable, although it is surprising how little water really passes over in most cases, except the inhalation be continued for a long time, and the temperature be maintained by the aid of a lamp. In the two experiments made with the vapor creasoti of the *British Pharmacopœia*, the loss of water amounted to only 10 and 12 cubic centimetres respectively, equal to about $2\frac{1}{2}$ and 3 drachms.

I now pass on to speak of the inhalation by steam. Steam, of course, does not differ essentially from the vapor of hot water, only that the vapor is generally faster, and the temperature is higher. This temperature, however, is rapidly reduced by contact and intermixture with the air with which it becomes diffused; the vapor or steam with equal rapidity becoming condensed and reduced to particles or atoms of sensible dimensions. When the steam is made to issue from small orifices, as in Siegle's and some other steam-inhalers, it is projected, of course, with considerable force, owing to the pressure exerted, and consequent concentration.

Before giving the results of experiments with Siegle's steam-inhaler, it will be well to refer to the fact—which, however, is constantly ignored or forgotten in many prescriptions for inhalation—that no substance is volatilized and passes over in the vapor of steam, which is not itself more or less volatile at the temperature of the water or steam. Substances which are volatile at ordinary temperatures have, of course, their volatility greatly increased at the boiling-point of water. Whatever substances, therefore, which are contained in or are added to water, and are not volatile at 212° Fahr., or 100° C., will not pass over by distillation, but will all be found in the residue of the retort or still. It is thus useless to prescribe for steam-inhalation, as is often done, such remedies as preparations of opium, cannabis Indica, stramonium, hyoscyamus, and many other medicinal substances.

To show the effect of the temperature of boiling water in increasing the volatility of substances which, at ordinary temperatures, are but little volatile, the results of the three following experiments may be given. Carbolic acid or phenol, notwithstanding the strong odor which it emits, is, under ordinary circumstances, but little volatile. Half a gramme of this (equal to rather more than $7\frac{1}{2}$ grains) was placed in a retort, and distilled with 250 cubic centimetres of water; and

of this, one-fifth part, or 50 cubic centimètres, was distilled off, 0.12 gramme (= 1.85 grains) being found in the distillate by Chandelon's process. In a similar experiment with creasote, which is more volatile than phenol, 0.17 gramme (= 2.6 grains) passed over; while, lastly, in the case of thymol, which is scarcely at all volatile at ordinary temperatures, no less 0.267 gramme (= 4.1 grains) was obtained. Had the distillation been carried further, the quantities recovered would have been proportionately increased.

Steam, therefore, especially when given off in a concentrated form, does carry over a very considerable amount of the antiseptic substances above referred to.

In some cases of steam-inhalation, the substances used are added to the water itself prior to its being boiled; in others, as in Siegle's steam-inhaler, the medicament is not put into the receiver itself, but into a separate receiver or bottle. The steam and the liquid come into contact at the points of the capillary glass tubes, where the hot steam produces a vacuum in the ascending tube, which causes the liquid to flow up it. The force of the jet of steam, and the contact of the cold air, condense and atomize the liquid as it flows up the tube, as well as the steam itself. In both cases, whether the substance used is added to the water before boiling or is contained in a separate vessel, the actual result is very similar, although the quantity of liquid used is, of course, greater in those cases in which two receiving-vessels are employed.

I will now proceed to state the results of experiments with Siegle's steam-inhaler.

The vapor of steam, as has been already said, coming into contact with the colder air, very rapidly cools and condenses; so that, if the mouth be applied within a few inches of the apparatus, the temperature becomes bearable, while the condensation is shown by the rapid deposition of moisture in the track of the jet of steam. Attentively watching the action of a steam-inhaler, it is seen, first, that much of the steam is deposited on all cool objects in the vicinity of the inhaler; secondly, that a considerable portion of the steam-spray does not enter the mouth at all; thirdly, that of that which enters the mouth, part is returned during the act of expiration: indeed, it has appeared to me that not one-third of the steam generated is actually retained, and most of that which is so, there is good reason to believe, settles upon and is absorbed by the mucous membrane of the mouth, cheeks, and fauces; but another and fourth great cause of waste is, that the steam-spray is always in operation, whereas the act of inspiration, thus artificially carried on, probably does not occupy much more than one-third of the whole time—some ten or fifteen minutes—consumed in inhalation; so that, from this cause alone, it may safely be said that more than one-half of the whole quantity of the medicament employed is lost, and can be of no utility whatever for the purpose in view; lastly, it may be pointed out that, in using steam-inhalers, respiration is carried on almost entirely by the mouth, in place of by the nose, the natural channel.

To show, in a measure, how great the loss is from the causes above adverted to, I will now give the results of experiments with steam-inhalers.

It may be remarked, at the outset, that it is most difficult to determine the actual loss which takes place in using a steam-inhaler, owing to the rapid diffusion of the vapour, and the extreme difficulty of confining and condensing it all. With a view of estimating the loss, an apparatus was constructed, consisting of a large hood, fastened round the neck, and furnished

with a long chimney, which was made to pass through a Liebig's condenser, and to terminate in a flask surrounded with ice, the upper part of the chimney also being packed round with ice. It will thus be seen that the surface over which the vapor of the steam-spray was necessarily spread was very large, and the difficulty of recovering the whole of the material taken proportionately great.

Taking 0.750 gramme of carbolic acid (= 11.55 grains), there was recovered, as the mean of two experiments, 0.368 gramme (= 5.67 grains) of the acid. In an experiment made, using the same quantity of carbolic acid, by allowing the steam-jet simply to expend itself in the hood, without any inhalation, there was recovered 0.470 gramme (= 7.24 grains). This experiment is important; the difference in the amount recovered when the steam-spray was inhaled, and without inhalation, being but 0.102 gramme, or $1\frac{1}{2}$ grain.

There is still another form of inhalation often practiced, and that is with the cold spray, the motor power in this case being air. This form of spray was, I believe, originally devised by Sir Andrew Clark. In this case, the liquid is more atomized than in the steam-spray; it condenses still more readily, and the moisture is deposited in a more limited area. This spray may be used either intermittently—that is to say, the jet may be thrown out only during inspiration—or continuously, when, of course, there will be the same loss of material as in the case of the continuous steam-spray. In two experiments with the air-spray, the same quantity of carbolic acid being taken—namely, 0.750 gramme—the mean amount recovered was 0.438 gramme (= 6.74 grains); while in an experiment with the hood empty, there was recovered 0.451 gramme (= 6.94 grains), being only a very little more than was obtained after inhalation.

With a hood and other apparatus in every way perfect, I entertain no doubt that I could succeed in recovering larger quantities of the carbolic acid used than those obtained in the above experiments with the steam and air-sprays.

That only a very small quantity of such medicinal substances as carbolic acid, thymol, etc., really makes its way into the lungs, when steam-sprays are used, is still further proved by the result of experiments with those sprays and the apparatus referred to in the beginning of this paper, namely, the large syringe, and the head and neck of a freshly-killed sheep. Thus, half a gramme of carbolic acid, dissolved in water, was placed in the bottle of a Siegle's inhaler, and the steam generated in the usual manner; at the end of fifteen minutes, the water in the Woulfe's bottle through which the air was passed was tested, but not a trace of the acid was found to be present.

In two experiments with Dr. Lee's steam-draft inhaler, the results were a little different: in the one case, 0.0045 gramme (= 0.069 grain) being recovered; and, in the other, 0.0055 gramme (= 0.085 grain), or the six and seven-hundredths of a grain—that is to say, little more than traces.

I have now, in the present communication, given the results of experiments on inhalation, especially antiseptic inhalation, as at present ordinarily practiced, with the medicated vapor of hot water, and with the medicated steam and air-sprays.

Except in the case of the more volatile substances, and where the temperature is maintained by the aid of a spirit-lamp, the method of inhalation by the vapor of hot water is, as we have seen, but little effective; the medicaments, even when vaporized in any considerable quantity, are expended rather on the mouth and

fauces than upon the lungs themselves, and by far the greater part of the substances used remains, in the majority of cases, in the inhalers themselves.

With steam-sprays, it has also been shown that there is a very large loss of the medicinal substances employed; and further evidence is still required in order to establish the full extent of that loss, but it is certain that a very small portion only of the medicines employed makes its way into the lungs.

A similar remark applies to the cold-air spray, the loss being nearly, but, perhaps, not quite, as great as with the steam-spray. All the sprays, however, possess this advantage, that they are capable of diffusing non-volatile as well as volatile substances, while the cold-air spray has the further advantage over the steam-spray in being applicable in many cases in which the employment of hot steam would be likely to prove injurious.

No doubt, by the employment of sprays, either hot or cold, any quantity of a given substance may be thrown into the mouth, and be applied to the fauces; and, so far, they are effective; but, from the evidence adduced, there is reason to believe that but a very small portion of the substances employed, as the sprays are at present used, really reaches the lungs themselves, or even the larynx and trachea.

The general conclusion, therefore, is that the above-described methods of inhalation are, in the case of diseases of the lungs themselves, but little more effective than I have elsewhere shown the method to be by oral and naso-oral inhalers.

The results recorded in the present communication are, no doubt, disappointing and discouraging for the moment. However, it is very necessary that the facts ascertained should be made known; and I believe that much good will, in the end, ensue from the inquiry, and that, ere long, improved and better means of inhalation will be devised.

It appears that hitherto the wrong method of proceeding has been pursued: a remedy has been applied, without a sufficient examination of the bases on which it rests. The reverse method is the more correct and logical one, and experiment should have preceded the practical application.

I have now to acknowledge the ready and valuable assistance I have received, in carrying out many of the experiments, from Mr. E. G. Clayton, F. C. S.—*Brit. Med. Jour.*

OPERATIONS FOR THE RADICAL CURE OF HERNIA IN CHILDHOOD.

BY

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The object of my short communication is to inquire into the advisability of undertaking operative measures with a view of curing congenital or acquired hernia in childhood, as a purely prophylactic measure, thereby removing the deformity and obviating the dangers to life consequent upon its existence. Judging from the results of cases recently published by Mr. Banks, Mr. Rushton Parker, and others, I take it to be every surgeon's duty, in operating for strangulated hernia, to complete the herniotomy by ligaturing the sac as high up as possible, cutting through it below the ligature, and removing it or not according to circumstances. Stran-

gulated hernia is but rarely met with in infancy; therefore we may look at the question here from a purely prophylactic point of view. In infancy, practically, the only cases of hernia with which we have to deal are the umbilical and inguinal forms. The former is so generally cured in children by well-regulated pressure by means of an air or other suitable pad, that operative treatment is seldom necessary; therefore the following observations may be considered to apply to the latter form alone.

Considering the number of deaths which annually take place from strangulated hernia, if any operation can be practiced which can be performed with but slight risk to life, and which will be followed by a complete cure of the deformity, we ought certainly to undertake it as a prophylactic measure. I look upon the operation to be described as, in suitable cases, not only justifiable, but one which it is our imperative duty to perform; for, in these cases, we operate not only with a view of curing a deformity which is unsightly and productive of discomfort to the sufferer, but one which, by becoming strangulated, may at any moment seriously endanger life. Reducible hernia is generally treated by means of a truss, and the application of a well-fitting truss is perfectly effectual as a palliative measure, and, in a very small number of cases, even effects a cure, the irritation of the constant pressure causing the agglutination of the inner surfaces of the sac, and thus preventing the descent of the hernia.

In childhood, especially in infancy, the truss has frequently to be changed, owing to the growth of the child and to the fact that ordinary trusses are frequently spoiled by the child's urine; so that, in the poorer classes especially, either from carelessness or from the inability to meet the expense of providing new trusses, the truss, even when worn, is frequently of no use.

Some cases of hernia are only partially controllable by a truss; and, on the other hand, we meet cases, mostly large congenital herniæ, which cannot be kept up by any form of truss. These are certainly cases which imperatively call for operation. However, I would not limit the operation to this class of cases; for, however well-fitting or effectual a truss may be, strangulation may, and frequently does, take place when the truss, from any cause, is temporarily not worn; or, in spite of it, through sudden great exertion. A hernia is hardly likely to be cured by a truss in a child after he has attained two years; I would therefore consider any hernia of a considerable size in a child over that age as suitable for operation. The precise operation to be undertaken, or the advisability of choosing different operations under different circumstances, is still more or less a moot point. My own feeling is strongly in favor of the operation which consists in cutting down on the neck of the sac, with antiseptic precautions, and tying it as high up as possible at the inner ring.

Operations for the complete cure of hernia may be divided into two classes: (1) the subcutaneous, and (2) the open method.

In the subcutaneous methods the cure, when effected, is produced by one or more of the following processes; 1. Invagination of the sac and all, or most, of its coverings, and the production of sufficient adhesive inflammation to fix them in their new position, and thus forming a plug, and obliterating the canal; 2. Approximation of the structures external to the sac proper, as the pillars of the ring or tendinous parts around the opening; 3. Agglutination of the inner

surfaces of the sac by inflammatory action, especially at its upper part.

I briefly mention these operations, which are known by their authors' names. In Wutzer's operation, the plan of treatment consists in introducing a plug of the scrotum into the inguinal canal, and fixing it there by exciting and adhesive inflammation in the neck of the sac.

Professor Wood's operation acts partly by invaginating the subcutaneous coverings of the cord, and also by the approximation of the tendinous structures forming the boundaries of the canal by means of a subcutaneous wire suture through a small incision in the skin over the scrotum.

The method of Mr. Spanton of Hanley consists in approximating the sides of the inguinal canal and the walls of the sac by means of a corkscrew-like instrument, which is introduced through a puncture in the skin from above downwards, and thus bringing the parts together, and producing sufficient adhesive inflammation to obliterate the sac. Mr. Spanton has been almost uniformly successful in his cases; and Mr. Banks, in his paper recently published in the *British Medical Journal*, strongly recommends Mr. Spanton's as the operation to be performed in childhood. It undoubtedly is by far the most satisfactory and practical of the subcutaneous methods, and, in the hands of its author, has been extremely successful, but I question whether it would be equally so in other hands. Wutzer's operation has fallen into disuse altogether, and is hardly likely to be revived. Professor Wood's operation too frequently fails in its object. All these operations are applicable only to inguinal hernia.

The Open Method.—This consists of the usual operation of herniotomy, with ligature of the sac at the innermost point of the neck—*i. e.*, at the internal ring. An incision is made, beginning a little above the internal ring and in the direction of the hernial protrusion for about three inches. The coverings of the hernia are successively cut through till the sac, which is kept distended by the hernia, is reached. The sac is then separated from the cord, and freed from the surrounding structures as high up as possible. A ligature of stout catgut, treated with chromic acid, is passed round the sac by means of a blunt aneurism-needle; and, while the sac is well drawn downwards, its contents having been reduced, the ligature is firmly tied once or twice as high up as possible, and cut off short. Though I have not, in most of my cases, cut the sac below the ligature, still I think it advisable to do so, as the occlusion is more likely to be complete, and the part above the ligature slips easily into the iliac fossa. I have never followed Nussbaum's recommendation in removing the whole sac, as, having vital connections with the surrounding parts, it will not slough; and in congenital cases it is so intimately connected with the testicle, that it cannot be removed without excising that organ. It is, however, very important that it should be thoroughly drained; otherwise much swelling, and perhaps suppuration, will take place. I prefer a tube or horsehair-drain, passed into the sac through the upper part of the incision, and through a counter-opening in the lower part of the scrotum behind. If the sac be not cut through, it should be opened below the ligature, and drained in the same way. I do not consider it necessary to bring the pillars of the ring together in all cases; I have only done so where the opening was very large and lax, and the pillars of the ring remained widely separated. In other cases, it is unnecessary, except as a matter of precaution; because, as Mr. Rushton

Parker remarks in his essay, when the sac is tied—the hernia thus prevented from coming down—the pillars full together easily, and remain as tightly as could be wished. A strong curved and handled needle, with the eye at the point, and carrying a chromic catgut ligature, is passed through the external pillar of the ring below and behind, and through Gimbernat's ligament and the conjoined tendon. It is then tied firmly, and cut short. Mr. Banks recommends a silver ligature, which is left covered in. Still I think the catgut ligature will answer the purpose equally well. The lips of the wound are lastly brought together by silver sutures. Strict antiseptic precautions are maintained all through, the spray being used during the operation, and gauze dressings afterwards.

As a rule, the cord can easily be separated from the sac; but, in congenital hernia, it sometimes happens that the cord is so intimately connected with the sac, and perhaps runs through the sac, that it must be included in the ligature. In two cases, I was unable to follow the cord up from the testicle. In cases of undescended or imperfectly descended testicle, the cord and hernial sac may be tied together and the testicle removed, as the testicle, being often undeveloped, is hardly worth preserving.

In conclusion, gentlemen, I must say that the evidence seems to me strongly in favor of the open method, which, especially if undertaken with thorough antiseptic precautions, is almost devoid of danger, or even unpleasant symptoms. I believe that the chief cause of failure in the subcutaneous method is that, by these means, we cannot be perfectly certain of obliterating the sac at its very offset from the main peritoneal cavity. There is no more risk in cutting down upon the sac antiseptically, and tying it at the desired spot, thus with certainty causing obliteration of the sac, and in preventing the hernia from coming down, than there is in attempting to gain the same object by subcutaneous, and therefore more uncertain methods.

The all-important point undoubtedly is, to firmly and securely ligature the sac at the inner ring, *i. e.*, at the part where it becomes continuous with the general cavity of the peritoneum, so as to make the peritoneal surface perfectly level over the internal opening into the canal. The depression over the internal ring is thus obliterated; and, by preventing the hernia from descending into the sac, and dilating the canal after the manner that the bag of membranes acts on the os uteri, the evil is cut off at its very root, as it were; and the tendency towards a reformation of the hernia is entirely done away with. One great advantage of this operation is, that it is applicable to every form of hernia.

Ligature of the pillars of the ring, I consider to be quite a secondary matter, and only necessary in extreme cases; though perhaps, as a matter of precaution, it might be practiced in all cases. The only case on which I have operated, in which relapse has taken place, was a moderately large hernia, in which I did not bring the pillars of the ring together. Perhaps, however, failure was due to the fact that the sac was not tied sufficiently high up. In none of my cases has a truss been used subsequent to the operation.

Most of my cases are of too recent a date to afford evidence of the permanent success of the operation. I show you to-day three or four of my first cases, which were very large herniæ, including the one of relapse. You will also see cases operated upon by Dr. Rawdon in a similar manner.

In my first two cases, I did not open the sac and drain. Considerable swelling occurred, and some

suppuration took place, and, though one child was very ill for two days, with symptoms of carbolic poisoning, speedy recovery took place in both. In the second case, relapse occurred three months after the operation. I did not ligature the pillars in this case.

In the third case the wound healed almost by first intention. There was no constitutional disturbance.

One case I operated on without the spray and gauze-dressings, or other antiseptic measures. The suppuration was so considerable, and the constitutional symptoms so severe, that I would not feel inclined to operate again without antiseptics.

Mr. W. D. Spanton (Hanley) fully agreed with the views expressed by Mr. Pughe as to the desirability, and, indeed, the necessity, for some operation in children with large uncontrollable herniæ, in many of whom a truss was of no use, and whose lives became a misery to themselves and a nuisance to everyone about them. It was rather a question of individual experience as to which operation should be preferred; but he had found excellent results from his screw-method, which had been employed even in very young children. It produced a smaller cicatrix, and had, he thought, less tendency to cause any subsequent weakening of the abdominal wall than the operation by ligature. But the results in young children were almost invariably good, whichever method was employed, and comparatively free from danger; and some operation ought to be employed in a much larger proportion of cases than at present, so that less might be heard of hernia in adult life. The persistent manner in which metropolitan surgical teachers had opposed all such procedures was much to be deplored, and was hardly just to those surgeons who had obtained results which would compare favorably with many other operations which were commonly practiced and commended. Mr. Spanton also referred to three patients who had been exhibited to the members at the meeting, and in whom many who saw them, failed, without a minute examination, to discover any trace of an operation having been done.

Mr. R. W. Parker (London) thought it was conclusively shown, from a comparison of the numbers of congenital herniæ as seen in newly born children and in adults, that this condition tended to spontaneous cure, or that the wearing of a truss sufficed in many cases for its cure. He did not, therefore, operate, except in cases where the hernial protrusion was very large or where it could not be controlled by a truss. In cases, however, which could not be controlled, some operation seemed desirable. He had never tried Mr. Spanton's plan; certainly the cases operated on by this method, and which Mr. Spanton had just exhibited, appeared to be completely cured. He had had to ask on which side the operation had been performed, so insignificant was the scar and so complete the absence of any protrusion of the bowel. In his practice at the Children's Hospital, he had adopted a plan similar to the one advocated by Mr. Pughe. He agreed also as to the necessity of completely closing the peritoneal sac at the spot corresponding with the internal ring. If any dimpling or depression were left behind, the gut seemed naturally to impinge upon it, and gradually to force its way down again into the inguinal canal. In all these cases, however, which were said to be cured, time alone could prove or disprove the assertion. He thought that many years would have to elapse; but the principle aimed at and carried out was good; it differed essentially from some of the older methods, because it

obliterated an opening rather than plugged it up, as was the case in Wood's operation.

—*British Med. Journal.*

LANDOUZY ON ANGINA PECTORIS REGARDED AS A SYMPTOM, AND IN ITS RELATION TO THE ARTHRITIC NEUROSES.

M. Landouzy (*Le Progrès Méd.*, 1883, Nos. 35 and 36), in a recent clinical lecture, reminded his hearers that he has often told them that angina pectoris should not be regarded as a morbid entity. Like epilepsy, he says, it is not an autonomous disease, and, like it, there is no such thing as angina pectoris as an unity. No doubt there is a dramatic completeness about an attack of this affection: retrosternal pain, anxiety, painful immobility, pallor, cold sweat, painful irradiations down the cervical and brachial nerves. This completeness attracts the attention of the patient and physician, so that it has come to be regarded, as always presenting the same characters and bearing the same prognosis. But this involves an error, not only doctrinal, but of great practical importance. Just as there are epilepsies which depend on this or that condition, more or less transient or amenable to treatment, so there are anginas which may be due to transient or curable conditions.

This form of purely nervous angina is well attested, but deserves to be better known. These patients have more to complain of than to fear; the angina is one of the numerous phases of their neurosis, which may depart after a time never to return, is never dangerous to life, and depends on a mere functional derangement of the nervous system. A young girl in the ward St. Anne is, on the other hand, the subject of angina depending upon a serious rheumatic affection of the heart; and in the same category we must place a patient, M. F., aged 67, inveterately gouty, who has well-marked disease of the aortic valves; and in whom these attacks supervene whenever he walks up a steep incline, goes upstairs, walks against the wind, or experiences a sudden change of temperature. The peculiarity of this form is that the same occasioning causes always produce the same result; and these patients have not only cause to complain, they have everything to fear. In the other type, the occasioning causes are obscure, irregular in their effects, and instead of the kind just related are usually a little fatigue, an emotion, or some slight digestive trouble. No doubt there is some pathological element which determines the occurrence which one minute of an attack which was absent a minute before. But this is often hard to define, as such attacks may come on when the patient is in perfect repose, sometimes in bed, and often during the first sleep. This peculiarity of attack, coming on during repose, or in bed, and often during the first sleep. This peculiarity of attack, coming on during repose, or in bed, has been very noticeable in one of my cases, which presents many features in common with the facts recorded by Dr. Marie (*Revue de Méd.*, 1882, p. 339). The patient, an advocate, aged 33, sent for me three times at intervals of a few days, for attacks of angina, which came on in bed after he had dined quietly at home. I was sent for under similar circumstances to see Miss X., aged thirteen, who threw her family into alarm at eleven o'clock at night. Finally, Madame G., had her first attack when quietly sleeping by the fire after dinner over a newspaper. It was in bed also that the attacks of angina used to occur in

the patient with tabes, observed last March in M. Féréol's wards. But, while the attack appears at first sight to attack patients in the midst of perfect health, it is a mistake to suppose that it is an isolated symptom. Thus M. R.'s attacks were preceded by very prolonged œsophageal spasms, during which he complained of painful constriction of the throat; in the tabetic patient, the attacks were preceded by gastric crises; in Mdme. G's case, various nervous phenomena, nervous cough, tingling of the fingers, patches of anæsthesia and hyperæsthesia, dead fingers, frequent and copious micturition preluded the angina. It may sometimes happen that a patient with some slight cardiac lesion, who is also nervous, may have angina, which should be ascribed rather to the neurotic temperament than to the cardiac lesion. Thus Mdme. K. had a slight aortic obstruction; but after the menopause she became decidedly nervous, with sudden attacks of flatulence, outbursts of laughter and tears, œsophageal spasm, neuralgia, transitory paraplegia, palpitations, asthma, loss of memory, difficulty of articulation, slight convulsive seizures, etc. Upon these supervened an attack of angina, which, in virtue of her cardiac lesion, was alarming. The aortic lesion under treatment appeared to improve; but the neurasthenia increased, diabetes supervened, and then new attacks of angina appeared, and these were regarded as rather the results of the neuropathy than of the cardiac condition; and she was told that they were no more dangerous than the asthma, palpitation, neuralgia, etc., which had so long troubled her.—*London Medical Record.*

UNRUH ON MYOCARDITIS IN DIPHTHERIA.

The author (*Jahrbuch für Kinderheilkunde*, Band xx., Heft 1) has met with myocarditis in eight out of 237 cases of diphtheria, and also in one case of scarlatina. Of these nine, six were boys. Two of the children were 6 years old, two 11 years old, and the remaining five were aged 7, 8, 9, 10 and 12. There was nothing in the history of any of the cases to account for an affection of the heart. The diphtheria was always of a severe kind, and involved the uvula and pillars as well as the tonsils; the false membranes were fetid and of a dirty greenish color, and left deep ulcers after their removal. The heart-affection began to make its appearance as soon as the diphtheria had ceased to spread. This was from the seventh to the fourteenth day, except in one case, where it was delayed until the twentieth day. The first symptom of the heart being involved was furnished by the pulse, which suddenly became small and empty. Its frequency was at first unaltered, but, after twenty-four or twenty-six hours, was greatly increased (160–180); at the same time, the pulse became irregular. Both these qualities were greatly aggravated by changes of position. The heart's impulse was, in this stage, perceptibly and palpably weaker, and a little to the right of its normal situation. The heart's dullness extended in all the cases beyond the midsternal line, and in two (one being the fatal case) it reached a finger's breadth beyond the right sternal margin. With convalescence, it returned to nearly its normal dimensions. On auscultation, the first sound of the heart was diminished in intensity; and, when the complaint was at its height, a blowing sound, like a chlorotic murmur, was heard. In only one case was there any præcordial pain. No information was derived from the thermometer. No purpura or other

hæmorrhage was observed in any case; and, some what remarkably, dyspnoea was absent in all. The patients were drowsy and apathetic, indeed too much so to ask for nourishment. Albuminuria was present in all. The albumen first appeared when the diphtheria was at its height; then it subsided, but reappeared in greatly increased quantity soon after the heart-affection showed itself. At the same time the urine diminished in quantity, and œdema, with in one case ascites set in. The first symptom of amendment was the lessening of the albumen.

Of the nine children only one, a boy aged 11, died. The heart in this case, examined *post mortem*, exhibited a number of rather dark-colored deposits of various sizes, some imbedded in normal muscular tissue, others in tissue which showed fatty infiltration or degeneration. The fasciculi were separated by spaces occupied by numerous cells. The striping was faint or imperceptible. All of these changes were more marked on the right side. There was no excessive fatty degeneration of the heart.

The first few cases were treated with digitalis, or ergot, but neither drug had much effect. Camphor was then tried, and with marked benefit. It was given in combination with perchloride of iron. Stimulants were freely administered. The author anticipates the objection that the cases which recovered might have been simple neuroses of the heart, and founds his strongest argument against it upon the widening of the præcordial dullness. But this was marked in two cases only.

[The author would have done better to have given separate notes of the fatal case. But the weakest part of the paper is that which relates to the necropsy. We are not informed upon the following points. 1. Was the heart dilated or enlarged? 2. Of what nature were the "numerous cells"? 3. Did these cells represent the structure of the dark deposits? 4. Were the spots found in any other organ? In the absence of information upon these points, the diagnosis of even the fatal case cannot be unhesitatingly concurred in.—*Rep.*—*Lond Med. Rec.*

MURATOFF ON THE TREATMENT OF NEGLECTED ABORTION.

In the *Mejdunarodnaia Klinika*, May, 1883, pp. 296–309, Dr. A. A. Muratoff, of Moscow, discusses the management of those cases of abortion in which some portions of the ovum are retained within the womb, and undergo there decomposition, threatening septicæmia. Of course there may be no question of what to do in such cases. The obstetrician must remove the remnants of the ovum as quickly as possible, and disinfect the uterus. But how is this to be done? How is the uterine cavity to be reached, with its dangerous contents, through the os, which is usually found closed? Of all the means proposed and used for dilating the cervix in similar cases, sponge-tents are regarded by the author as the most harmful, for, 1. they act too slowly when every minute is precious; 2. any discharge absorbed by them rapidly undergoes putrefaction; and, 3. they cause irritation of the cervical walls. Laminaria digitata, also, acts very slowly; besides, it easily falls out from the cervix. Tupelo-root dilates the os much more rapidly than sponge or laminaria. Thus, according to Dr. A. Solovioff, while a tupelo-tent reaches its maximal swelling in four hours, a laminaria-tent, of an equal size, does so only in fifteen to twenty hours (see his article in the *Mediz.*

Obozr., May, 1880); but it is very difficult to find tupelo roots of larger size.

Dasing his arguments on five years' experience, Dr. Muratoff emphatically recommends dilatation of the uterine cervix by means of a metallic dilator. As the best instrument of this kind, he regards Sims's three-valved dilator. Dr. Muratoff's practice is as follows: After washing out the vagina with 2 or 3 per cent. of carbolic solution, he freely anoints the instrument with 4 per cent. of carbolised vaseline; he introduces its valved end into the cervix, and begins to turn the screw which serves for opening the valves. The first three or five full turns are made without any pause; but from the moment when the patient has felt a sharp pain, he proceeds with dilatation very slowly, making only half a turn at a time in every ten minutes. As a rule the valves are open to their utmost extent in three or four hours. The dilator is left in this condition for a quarter of an hour, and then closed and withdrawn. During the process of dilatation, the author makes repeated intra-uterine injections of a warm carbolic solution, through a double-current catheter. After the withdrawal of the instrument, bimanual expression of the uterine contents is tried. If one attempt be not sufficient, the remnants of the ovum are without any further delay removed by one or two fingers introduced into the womb.

The writer eulogizes the results given by this method of gradual (but still relatively rapid) dilatation in *all* cases of neglected abortion. The presence of any inflammatory processes in the parenchyma of the uterus or in the vicinity of the organ does not contra-indicate the use of metallic dilators; on the contrary, it vitally indicates instrumental dilatation. The latter inflicts no violence on the cervical tissues, and, accordingly, never gives rise to any considerable reaction. In a few cases, indeed, Dr. Muratoff saw a slight temporary rise of temperature and some increase of pain about the sexual apparatus after the operation. But in a great majority of his cases dilatation, with subsequent emptying of the womb, was immediately followed by a marked improvement both of the local and of the general conditions; the patient's temperature steadily and quickly fell to the normal level, rigors and pain disappeared, the uterine discharge rapidly lost its offensive odor, and the uterus underwent uninterrupted involution.—*London Medical Record*.

MEDICAL NOTES AND ITEMS.

The Prevention of Blindness in Children.

—The following excellent popular directions for the prevention of the frequent form of blindness arising from the destructive purulent ophthalmia of newly-born infants is being published and diffused by the London Society for the Prevention of Blindness:—"One of the most frequent causes of blindness is the inflammation of the eyes of new-born babies, a disease which can be prevented and always cured. In almost all blind-schools in England and the Continent, a third, and even more, of the children's blindness is caused by the neglect and unsuitable treatment of this disease. In the Wilberforce School for the Blind at York, it is said that, out of eighty-nine pupils, thirty-seven are blind from this cause; and several eminent oculists state that half the blindness in Europe is due to this inflammation of the eyes of new-born babies. This frequent blindness is largely owing to the general ig-

norance of mothers, and to the unpardonable neglect of the midwives, nurses, and others who have charge of the infants in their earliest days. In many cases, these persons prevent resort to skilled medical assistance, in order to try some unsuitable domestic remedies, until it is too late, even by the most skillful treatment, to save the child's sight. Although the disease appears sometimes in a very mild form, it may still, without some suitable treatment, have an unfortunate issue; but, in most cases, the disease takes a more determined character, and then, if left to itself, it may develop with such rapidity that, in the course of a day or two, all hope for preventing blindness is lost. In general, newly-born babies seldom suffer from any other eye disease, and its first appearance is easily recognized by the redness, swelling, and heat of the eyelids, and by the discharge of a yellowish-white matter from the eyes. This dangerous and ruinous disease is always curable if treated at once. Immediately on the first appearance of these symptoms, send for a medical man; and, until his arrival, proceed at once to keep the eyes as clean as possible by very frequently cleansing away the matter discharge. It is the discharge which does the mischief. The cleansing of the eye is best done in the following manner. 1. Separate the eyelids with the finger and thumb, and wash out the matter by allowing a gentle stream of tepid or warm water to run between them from a piece of rag or cotton-wool held two or three inches above the eyes. 2. Then gently move the eyelids up and down in a circular way, to bring out the matter collected under them; wipe it or wash it off in the same manner. This cleansing will take three or four minutes, and is to be repeated regularly once every half-hour at first, and later, if there is less discharge, every hour. 3. It must be borne in mind that sight or blindness depends entirely in these cases on the greatest care and attention to cleanliness. Small pieces of rag or cotton-wool are better than a sponge, as each rag is to be used only once, and should be burnt immediately; sponges should never be used, except they are thrown away or burnt after each washing. 4. A little washed lard should be smeared along the edges of the eyelids occasionally, to prevent them from sticking. 5. The eyes should not be covered up by any bandage or handkerchief, as the discharge is thereby prevented from escaping. 6. Fresh air and an equal temperature in the sick-room are absolutely required, and the eye, while suffering from the disease, should be kept carefully from all strong lights. Many cases of this disease might be entirely prevented by cleanliness of the eyes. 1. Immediately after the birth of the baby, and before anything else is done, the eyelids and all parts surrounding the eyes are to be wiped with a soft dry linen rag; afterwards, these parts must be washed with tepid water before any other part is touched. 2. Avoid exposing the baby to cold air; do not take it in the open air when cold; at any rate, dress the infant warmly, and cover its head, because cold is also one of the causes of this eye-disease."

A Man Without Hands and Feet.—The Geneva correspondent of the *Times* records the death of Jean Trotter, a man who, by dint of sheer courage and energy, overcame almost insuperable difficulties, and showed that life, even when it seems almost a curse, may be well worth living. The man in question was born in 1831, at Arare, in the canton of Geneva, without hands and without feet. His short arms were pointed; and his legs, such as they were, not being

available for progression, he was able to move only by twisting his body from side to side. His case greatly interested the surgeons of the neighborhood, and local Barnums made the parents, well-to-do peasants, many tempting offers to turn their child's misfortune to account by exhibiting him about the country. But these offers were invariably declined, and, when Jean was old enough, he was sent to school. In writing, he held his pen at the bend of the elbow; and, as he grew older, he took great interest in husbandry, became an active hay-maker, used the reins with dexterity, and was so good a shot that he often carried off the first prize at the village *tirs*. He enjoyed, too, some reputation for sagacity, was consulted by his neighbors on matters of importance, and has left a widow and four children amply provided for.

Transfusion of Blood by Hypodermic Injection.—Dr. Paladini reports (*Gaz. Med. Ital. Prov. Venete.*, August 25th) an interesting case of successful injection of blood into the subcutaneous cellular tissue of the abdomen, in a woman suffering from profuse menorrhagia. R. S., pluripara, aged 48, was reduced by menorrhagia to a profound degree of anaemia. On August 4th, the loss was so great that the patient's state became most alarming. Transfusion of blood was urgently indicated; no apparatus for this being at hand, it was determined to inject the blood

by means of an exploratory trocar and an ordinary syringe into the subcutaneous cellular tissue of the abdomen. The blood, taken from the husband's arm, was heated, to prevent coagulation. The trocar was inserted about four fingers' breadth to the left of the umbilicus, and pushed well in so as to somewhat break up the meshes of the cellular tissue, and thus secure room for the blood to be injected. The stitch being withdrawn, an elastic tube was fastened to the end of the canula; the blood was taken up by an ordinary metal syringe (about 90 cubic centimètres capacity), its nozzle being made fast to the elastic tube, and injected into the subcutaneous cellular tissue, where it appeared as a lump about the size of an egg. Two syringefuls were thus injected. The patient felt no pain; and, after two hours, the swelling had entirely disappeared. No abscess or other ill effect followed, a slight ecchymosis only for a few days marking the site of the injection. On the next day the patient was much better, and began to take and retain nourishment and sleep well; for some days before, there had been constant vomiting, and no sleep. The lax connective tissue lends itself admirably to the transfusion of blood and to its rapid absorption. The quantity of blood might be easily increased, by repeating the injection in two or three different places, to 300 or 400 grammes (about 10½ or 14 ounces). This method is free from the dangers of venous or intraperitoneal transfusion, and is most easily done.

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ORIGINAL ARTICLES.

TREATMENT OF SPERMATORRHŒA AND IMPOTENCE.*

BY

JOSEPH W. HOWE, M.D.

Methods of Treatment used by Gross, Van Buren and Keyes, Post, Bartholow, Hutchinson, McGraw, Gant, Acton, Humphrey and others.

In order to make this volume complete as a book of reference, I have collected the opinions of some of our principal surgeons, and given their various methods of treatment. Their peculiar views can be compared and an intelligent opinion formed as to the respective merits of each mode of treatment.

Prof. Samuel D. Gross, of Philadelphia, in speaking of the treatment of spermatorrhœa, says: "The milder cases after riddance of the exciting cause, often recover spontaneously, or under the use of very mild means, as a proper regulation of the diet and bowels, exercise in the open air, cold bathing, sleeping upon a hard mattress. Circumcision will be necessary when there is hyperæsthesia of the head of the penis from the irritation of retained sebaceous matter consequent upon elongation and contraction of the prepuce. When the parts are morbidly sensitive leeches may be applied to the perineum, and use made, twice daily, of some astringent and anodyne injection, as a solution of acetate of lead and opium, in the proportion of three grains of each to the ounce of water. But a very different mode of management will be required when the disease is fully established, especially when it is dependent upon habitual onanism. The best local treatment then, at least in many cases, is cauterization, but before resorting to this expedient, the urethra should be well explored with a bougie or silver catheter, to ascertain the precise seat of the irritation. This will sometimes be found in front of the membranous portion of the urethra, but generally it is further back, at the neck of the bladder, or, more correctly speaking, at the orifices of the ejaculatory ducts and the anterior extremity of the gallinagenous crest, where it is often so great that the patient will shrink from the mere contact with the instrument. Occasionally the

morbid sensibility is diffused over the whole surface of the urethra, from one end to the other, and then the passage of the bougie is liable to be followed by excessive pain and even syncope." [Dr. Gross then describes the process of cauterization which has been given in a previous chapter.]

"Instead of the solid nitrate of silver, a solution of salt may often be advantageously employed, in the proportion of ten to twenty grains to the ounce of water. The fluid is conveyed directly to the prostatic portion of the urethra by means of a syringe shaped like an ordinary catheter, and perforated with numerous openings at the distal extremity. The injection should not be repeated oftener than once in six, eight, or ten days.

"Cold bathing, general and local, is often highly beneficial; dashing cold water against the perineum, scrotum, penis, and inside of the thighs is useful. Some persons, especially such as are of a nervous, irritable temperament, experience greater advantage from warm bathing than from cold. Occasionally marked relief arises from cold enemata repeated twice in the twenty-four hours. When the patient is plethoric, as is sometimes the case in the early stage of the disease, leeches may be applied to the perineum, followed, if the local excitement is unusually great, by a blister, a small seton, or an issue. When the morbid sensibility of the urethra is very extensive, obstinate or persistent, the treatment should be aided by the injection, twice a day, of a weak solution of nitrate of silver and opium in the proportions of about two grains of the former and five of the latter to the ounce of water. Sulphate of zinc, Goulard's extract and acetate of lead also answer extremely well in cases of this kind. . . . In some cases the irritability of the urethra promptly yields to the daily use of a full sized bougie retained for half an hour at a time. The morbid erections so often present in spermatorrhœa are generally easily controlled by anodyne enemata, or by opium, belladonna and tartar-emetic given by the mouth at bed time.

"The patient must sleep upon a hard mattress and everything stimulating, whether in the form of food, drink or medicine must be carefully avoided. The bowels must be kept soluble by mild aperients. Exercise in the open air is an important auxiliary. Riding on horseback is injurious, as it has a tendency to create undue excitement in the genital apparatus. sometimes an entire change of occupation affords more relief than anything else.

"Where there is great prostration of the system, with restlessness and loss of sleep, the use of tonics, as quinine and tincture of iron with hyoscyamus or opium is indicated. Dilute phosphoric acid sometimes exerts a powerful restorative influence. In such cases a change of air, and the daily use of the shower bath, greatly promote recovery. The diet should be light, but nutritious, and a glass of German wine should be allowed at dinner. Should there be reason to believe that the emissions are dependent upon cerebellar irritation, the chief reliance must be upon leeches and blisters to the nape of the neck, cold shower baths and other soothing measures. Much has lately been written in favor of lupulin as a sedative in this disease, but though I have frequently employed it, it has never done any good in my hands. When such a remedy is required the best article that I know of is bromide of potassium given three times a day, in doses of twenty to thirty grains or under with a few drops of tincture of aconite, in half an ounce of camphor water. I have also used with excellent effect, in

* From advance proofs of "Excessive Venery," etc., in press, by Birmingham & Co.

a number of cases, bromide of ammonium in conjunction with tincture of cypripedium. The action of these medicines is powerfully sedative, and they are worthy of much greater attention than has hitherto been accorded to them in this particular class of affections.

"When, by the above measures, the system has regained its natural tone and the sexual apparatus its accustomed vigor, the best guarantee against relapse is marriage. Upon this point, however, it is impossible to be too cautious."

Van Buren and Keyes, commenting upon the subject, say: "When a man comes complaining of the results of masturbation, an attentive study of his symptoms will not infrequently disclose his disease to be hypochondria, and his malady ungratified sexual desire with often some neuralgia of the vesical neck. His training should consist in encouragement and continence, with absolute purity of thought, and subsequently marriage, to regulate his sexual hygiene. After marriage it is rare to hear any further complaint from these cases, always provided there is really nothing more than functional derangement at the bottom of the patient's complaint, as is the case in the vast majority of instances.

"As for medicines, they are of little or no value; camphor, bromide of potassium or lupulin might be given as *placebos*, but it is doubtful if they are of any efficacy. Cold sponge baths, out-door sports, physical fatigue, sleeping in a cool room on a hard bed with a light covering are all useful; eating lightly at night, not retiring until very sleepy and rising immediately on waking in the morning are powerful assistants in breaking up the habit, but all will be of no avail unless the *morale* of the patient be elevated, unless he keeps his thoughts pure, and desires, for the manliness of it alone, to be rid of this bad habit.

"The treatment of diurnal pollution is by steel sounds and local astringents to the prostrate together with most of the means detailed for nocturnal emission. Circumcision should be performed if the glans penis is sensitive.

"The use of the steel sound and electricity helps to give tone to the parts. The use of local astringents to the prostatic sinus is often of marked advantage. The best agent for effecting this is tannin, and the cupped sound, the most convenient method of applying it. . . . The applications are to be repeated once or twice weekly, according to the effect, and often in a short time a change in the symptoms for the better is usually manifested in mild cases. Should these simple means fail recourse may be had to prostatic injections with deep-urethral syringes; a solution of nitrate of silver not stronger than five or ten grains to the ounce being used. Failing with this, hope must be based upon the continuance of general and local tonic hygienic measures. The use of the fluid nitrate of silver with Lallemand's instrument is not justifiable, for fear of including the orifices of the ejaculatory ducts in an eschar and obliterating them by cicatrization."

Professor Roberts Bartholow recommends cauterization with solid or liquid caustics, injection of astringents for relief of the local symptoms. In discussing general medication under the head of "Anaphrodisiacs" he says: "One of the oldest of these remedies is camphor. . . . It is not, however, a very valuable remedy. To produce the desired anaphrodisiac effects large doses are necessary; it frequently fails, and its action upon the stomach is unpleasant,

giving rise to a sense of heat and burning, and followed by disagreeable eructations.

"Lupulin has considerable efficacy as an anaphrodisiac, but like camphor it is uncertain. Conium and belladonna are quite as efficient if given in sufficient doses, and are considerably more certain. Conium, particularly, is not given in doses sufficient to produce its peculiar effects upon the genital organs, as ordinarily prescribed. Five to fifteen grains of the extract, according to its freshness and activity, may be administered at a single dose. . . . Conium and belladonna are, however, chiefly valuable when administered with bromide of potassium or other true anaphrodisiacs.

"The most important agent of this class, the most efficient and certain, and the least distressing in its immediate and remote effects, when purely administered, is the bromide of potassium. The anaphrodisiac property of this drug is now almost universally acknowledged, but the condition of its success and failure have not been as definitely determined as is desirable. There are yet some skeptics who disbelieve in this property of the bromide of potassium.

"*Aphrodisiacs*.—These are indicated under certain circumstances. The tincture of cantharides is sometimes beneficial in cases of great atony and relaxation. Those characterized by profuse mucous discharge, so-called diurnal pollutions, very feeble power of erection, and absence of sexual desire. It is contra-indicated when much hyperæsthesia of the prostatic portion of the urethra exist. To prevent its irritant effects, or at least to reduce them to the minimum, opium, or cannabis indica, or chlorodyne, may be advantageously combined with it. The red or amorphous phosphorus may be given in the same class of cases as suggested for the tincture of cantharides. Nux vomica is adapted to those cases in which it is desired to restore the functional activity of the sexual organs after the state of quiescence induced by the prolonged administration of anaphrodisiacs. *Cimicifuga* (*actæa racemosa*) has seemed to me to possess considerable aphrodisiac power, and has proved useful in cases of long standing spermatorrhœa, accompanied by nervousness and anxiety, and diminished sexual desire.

"Galvanism, especially the direct current, and static electricity, are often decidedly aphrodisiac, and are probably applicable to more numerous cases than any other remedy of the class. The moral effect of galvanism is too important to be disregarded.

"Ergot has been much extolled in those case in which emission takes place quickly with feeble erections.

"Iron, quinine, the vegetable bitters, the mineral acids, are indicated in anæmic cases. The *hygienica*, exercise, bathing, travel, etc., are valuable adjuncts to the remedial measures."

In his work on therapeutics, Dr. Bartholow also advocates the injection of a solution of ergotin near the dorsal vein of the penis, in order to compress it and promote erections.

Prof. Frank H. Hamilton says:—"If the emissions are only occasional, and do not effect the general health, no treatment is required and these constitute a majority of those cases which are brought under the notice of the surgeon. If on the other hand, both the general health and the mental functions are sensibly impaired as is sometimes the case, a careful inquiry must first be made to ascertain the cause and the proper measures must be adopted for its removal. In nearly all of these latter examples there is evidence of

a loss of tone in the entire nervous system and it will be proper to recommend plain but nutritious diet, mineral tonics, cold bathing with frictions, and outdoor exercise. All stimulating liquors and tobacco are hurtful. The emissions take place usually at night or towards morning, when the patient has become warm in bed, and is sleeping soundly. In such cases the patient must be enjoined not to eat a hearty meal within four or five hours of retiring; he must empty his bladder before getting into bed; the bed should be rather hard and the coverings light, so that his sleep shall be less profound; he must lie upon his side, never upon his back and if possible he should rise a little past midnight, or when he has been in bed about four hours, and, stepping upon the cold floor, empty his bladder again. A strict adherence to these rules seldom fails to prevent nocturnal emissions, and if the habit can be interrupted by these or any other measures for several weeks, the patient is on a fair way for recovery. The object in requiring the patient not to rest upon his back and to empty the bladder often is to prevent an accumulation of urine upon the trigone and neck of the bladder where its presence is liable in children to cause involuntary discharges of urine and in those who are older involuntary discharges of semen.

"As a direct means of recovery from the morbid irritability of the neck of the bladder no plan is more successful than the application of nitrate of silver first suggested and practiced by Lallemand, but the instrument invented by Lallemand and employed by most surgeons up to a very recent date, has proved very unsuccessful and ought to be wholly laid aside. In addition to the numerous accidents which have attended its use, and which have from time to time been recorded by surgeons, it has happened under my own observation also, that a young physician who had borrowed my instrument, turned the style in the wrong direction, and broke it, leaving the cut, containing the caustic and several inches of the cord in the urethra, from which it was with great difficulty removed by a narrow urethral forceps. Since then I have ceased to use Lallemand's instrument myself, and have never recommended its use to others, but I have employed instead a method similar to that which I have seen more recently recommended by Mr. Erichsen. A silver catheter furnished with a large number of small holes instead of the usual long fenestra at its vesical extremity, is introduced to the neck of the bladder, when a piece of sponge fastened to the end of the wire stylet, and saturated with a solution of nitrate of silver, is carried forcibly to the vesical extremity of the catheter driving the caustic solution out upon the mucous membranes. In the first experiment the strength of the solution is not to exceed five grains to the ounce. If this fails after the lapse of two or three weeks ten or twenty grains to the ounce may be employed. Latterly I have obtained in a few cases benefit from the daily introduction of a steel sound of moderate size.

"Beyond these measures, all of which it must be acknowledged are liable to fail, nothing but wedlock can hold out much promise of a cure, and this has proved successful in my observation almost without an exception, not always immediately, but the improvement is generally manifest within a few weeks or months, and a complete cure can in most cases be assured after a year or two at most; nor, in general, need any fear be entertained that the results on the patient will be found to have been injurious. Beyond a temporary incapacity resulting from a lack of confidence,

no failure of the virile powers is generally experienced.

"I have omitted to speak of ligature of the spermatic arteries, ligature of the vas deferens and castration, all of which methods have occasionally been practiced in extreme cases of onanism or entire mania. When practiced for the cure of onanism these measures have in most cases been successful, but the relief has not generally been immediate."

Prof. Alfred C. Post sends me the following brief summary of his method in the treatment of spermatorrhœa and impotence: "I have regard to the constitutional condition of the patient and to the local irritation or congestion of the parts specially involved in the disease. As to the general condition of the patient, I combat debility as indicated by feeble pulse, pale complexion and muscular inertia, by tonic medicines, as iron and quinine, by cold bathing, local and general, especially salt water bathing, by regular moderate exercise in the open air, by nutritious diet, cheerful recreation and other appropriate hygienic means. When the prostatic part of the urethra is in a congested and irritated condition, I make gentle pressure upon it by the careful introduction of steel sounds, of as large a size as can be introduced without giving much pain to the patient. I repeat the introduction at intervals of two or three days. If the irritability be not relieved in this way, I make an occasional application of nitrate of silver to the prostatic portion of the urethra by means of Lallemand's *porte caustique* or other suitable instrument. I sometimes derived benefit from the use of ergot, giving 30 minims of Squibb's fluid extract three times a day in water, and continuing its use for several weeks. It is always important to guard against constipation of the bowels. Good effects are sometimes derived from stimulating diuretics such as *diosma crenata*, *uva ursi*, *copaiba*, *cubebæ*, oil of sandal wood, oil of turpentine.

Dr. Joseph C. Hutchinson, of Brooklyn, says: "In cases of spermatorrhœa requiring treatment, that is to say when the emissions occur two or three times a week and affect the general health, the cause of the trouble should be ascertained and the means for its removal adopted at once. The usual cause is self-pollution. The patient should be directed to avoid stimulants and tobacco (the latter direction is specially important), to have plenty of out-door exercise, to use mineral tonics, cold bathing, etc. He should sleep on a hard bed with light covering, avoid fluids as far as possible during the evening, empty his bladder before retiring and at any time he may awake during the night, and never sleep upon his back. This may be avoided by tying a handkerchief around the body with a knot in the center behind. These directions strictly adhered to will overcome the tendency to *excessive* nocturnal emissions in many cases. In the more obstinate cases I know of no remedy so generally useful as ergot. I advise 5 grs. of Squibb's extract, representing 20 grs. of the best ergot, three times a day. In most cases the hyperæsthesia which exists in the neighborhood of the ejaculatory ducts requires for its removal the application of alterative and astringent unguents to the affected parts. That which has been the most satisfactory to me is an ointment containing one-fourth of a grain of sulphate of copper to the ounce, applied once or twice a week by means of a number twelve cupped steel sound, to the prostatic urethra. In this way we obtain the benefits not only of the medicinal agent, but also of the sound itself, which is by no means unimportant. The cupped sound I have used for the last twenty years formerly belonged to

and was used by the late Dr. Isaacs. The ointment may also be employed by means of a long pipe urethral syringe devised by myself and made by Tiemann. I have used with advantage urethral suppositories of butter of cocoa containing one-quarter of a grain of carbolic acid pushed down to the prostatic urethra by a steel sound and allowed to dissolve there. Patients may be instructed to use these instruments themselves when it is not convenient to attend in person as often as necessary. I formerly used Lallemand's instrument for applying solid nitrate of silver to the orifice of the ejaculatory ducts, but abandoned it because of unpleasant effects which sometimes followed its use. Should these measures fail to promote a cure, the patient ought to be married. Wedlock is often successful when everything else fails.

"In cases where impotence is the principal feature of the case, I have found nothing as efficient as fifteen minims each of the tinct. ferri chlor. and tinct. cantharides with one twenty-fifth of a grain of strychnia. The iron may be omitted when not indicated. In conjunction with the above mixture, phosphorus in one-fiftieth of a grain dose may be used. Very often phosphorus alone is relied upon. The use of the cupped sound and the unguents recommended in the treatment of spermatorrhœa have a marked beneficial influence."

Prof. Theo. A. McGraw, of Detroit, says: "I do not believe that even a daily emission of semen will do serious damage to a healthy vigorous man. In view of the fact that multitudes of men after marriage have connection with their wives more than once every night without suffering injury, it seems to me an absurdity to ascribe so much evil to seminal losses as is usually done by authors. Lallemand especially confounded the effects of long dissipations and other diseases affecting the genital organs with those of seminal losses."

"2d. My experience teaches that young men who do not suffer from involuntary emissions once or twice a month or week, are rarely to be found in civilized society. This is a physiological necessity and it seems to me just as absurd and useless to order medicines and apply treatment to cure moderate seminal losses as it would to try to prevent a man from passing water. When the seminal vessels become full they will contract and empty themselves."

"3d. Young men who read trashy pamphlets on spermatorrhœa may brood over their fancied disease until they cause serious and often irreparable damage to the nerves supplying the genital organs. This causes loss of sexual power, increased irritability of the organs, and eventually an impotence which is not always susceptible of cure. I regard this as the result of the mental despondency and perverted attention, kept up as it often is through a long series of years. I do not believe that it is ever caused by the occurrence of emissions alone."

"4th. As regards treatment, *sine qua non* seems to me to be, to get out of the patient's head that a seminal emission is in itself hurtful. He may then get his mind in healthier channels and get well. He will always, however, continue to have more or less frequent involuntary emissions until cured in marriage."

Acton of London, says: "The first consideration on dealing with any case of spermatorrhœa, is to ascertain from which of its many causes the affection may have more especially arisen. Each patient may complain of some particular or well marked symptom to the exclusion of all others, though the affection itself may consist of a lesion of more than one func-

tion. It is therefore of great importance that this distinction should be clearly understood. According as one or other of the functions (e. g. erection, emission, or the character of the emitted semen) is in fault, so must the treatment vary: what may be good in one case may not be applicable in another. Having learned what particular symptom the patient complains of, he should be desired to make water into a glass which should be deposited at once on a stand, to be examined at leisure. It is well at the same time to pass an oblong bougie to ascertain the susceptibility of the urethra. . . . In order to cure the affection it is of more consequence to ascertain the *immediate* existing or local cause than the *primary cause* which may have impaired the function or congested the brain."

"Before attempting the curative treatment the *preventive* one should be commenced. It should be ascertained if bad habits exist, and if so, the patient should be told at once that unless they are left off it is useless for the surgeon to attempt to heal him. It should, however, not be concealed from the patient that the means about to be employed will speedily impart such power to the will, that by his own volition he will be capable of correcting habits which were previously beyond his control. Moderation in sexual indulgence, if not abstinence, should be enjoined on the married, and a promise to that effect obtained. It should be next ascertained if constipation exists, whether ascarides excite the secretion, or if the patient suffers from varicocele. If the latter complication be present a suspensory bandage must be worn, or what is still better, a varicocele ring, which the surgeon should teach the patient how to put on. . . .

"The patient must do his utmost to prevent emissions taking place, and to effect this should have recourse to all the means spoken of." . . . In the slighter cases of spermatorrhœa, these remedies may alone suffice, and as stated above the occasional passage of a large bougie or the glass tube of the instrument hereafter to be described will suffice to cure the patient. If, however, these plans do not succeed, and if the emissions occur. I have no hesitation in at once employing cauterization." [Mr. Acton injects a ten grain solution of nitrate of silver with a large glass syringe.] With regard to its efficacy he says: "The advantages of injecting a solution of nitrate of silver are so manifest that I now never employ any other plan, and yet I have occasionally to treat some of the most obstinate forms that others have failed in curing. . . .

"Remedial treatment comprises both constitutional and local measures. Constitutional treatment consists in the administration of tonics to restore a healthy state of both the muscular and nervous systems, and in the use of sedatives to allay irritability. Of tonics, the preparations of iron are most efficacious; and particularly the sesquichloride of iron, in doses of from fifteen to thirty drops in half a wineglassful of water thrice daily. Strychnia, in doses of one-twelfth of a grain, made into a pill, with or without the sulphate of iron, forms a tonic anti-spasmodic preparation of great value. Sedatives are less beneficial than tonics; yet, in spasmodic spermatorrhœa, a night pill of belladonna or of hyoscyamus and camphor, may perhaps be advantageously given to subdue the local irritability which favors the seminal emissions. Suppositories of pil. saponis, ten grains, are, according to my experience, preferable as acting topically. The cold hip-bath, or sluicing the perineum with cold water night and morning, is a most serviceable local tonic. Hy-

gienic measures must also be carefully attended to as part of the constitutional treatment. A plain unstimulating nutritious diet is essentially requisite, rigorously excluding peppers and other condiments, which are apt to irritate the rectum and provoke seminal emissions during defecation. The stomach should never be overloaded by a heavy meal; and a daily action of the bowels should be secured by gentle aperients when necessary. A dinner pill consisting of the compound rhubarb pill with hyoscyamus, will answer this purpose far better than colocynth or any other irritant purgative. The invigorating influence of daily exercise in the open air and of outdoor amusements, with perhaps change to a bracing climate, can scarcely be overlooked; but relaxation from study or the excitement of business, and freedom if possible from the pressure of anxiety are no less restorative, while every encouragement must be given to cheerfulness and hope. All this constitutional treatment not unfrequently fails to cure the spermatorrhœa; the local irritability of the prostatic urethra still remaining. Recourse must be had to the application of nitrate of silver along the under surface of this portion of the urethra, to the orifices of the ejaculatory ducts."—*Gant.*

Humphrey thinks that when the emissions return, "more than once in a fortnight, and especially if they amount to two, three or more in a week, as is sometimes the case, they should receive attention." With regard to treatment he says: "The attention to these sensations, real and imaginary, and the constant dwelling upon the matter, tends, unquestionably, to aggravate the malady. My first effort, therefore—having requested the patient to burn any book or pamphlet he may have upon the subject—is to restore a calm and less anxious frame of mind, by assuring him that a great part of his apprehensions are groundless, giving him good hope of recovery, in great measure at least, recommending him to engage in out-door amusements and to enjoy the cheerful society of his friends, not to relinquish his reading, but to work less hard at it, especially towards night, to go to bed early and rise early. I am unwilling to keep up the idea of invalidism by prescribing medicine or particular diet, and simply warn him against overloading his stomach, as that is likely to induce the discharges. These assurances and simple directions are often sufficient, and many have told me of the relief and happiness they have derived from them. This failing, and in worse cases, more particular attention must be paid to the digestive organs and their secretions, especially when the urine is turbid; mild aperients may be required to prevent accumulations in the intestines, and a light diet must be enforced. In those who are robust, an alkali may be given at night, and in those who are weak, quinine or steel. Better than all medicines are relaxation from work, with change of air, traveling, and sea-side residence. Often, however, these cannot be carried out, or are available only for a time; and under the medicinal treatment the discharges are sometimes not sufficiently diminished. Perhaps the intervals between them are lengthened, and they return two or three nights in succession, instead of being more frequent and with more regular intervals. I have not found cold ablutions do much good, though washing the exterior of the glans penis, and keeping it clear of secretion, is of some service by lessening the irritability of that part. The application of nitrate of silver by means of the *porte-caustique* to the inner surface of the prostatic portion of the urethra, where the ejaculatory ducts open, is unquestionably, in some

cases, an efficient adjuvant to the means just described for checking or moderating this malady. It has been employed by many persons since it was brought prominently into notice by Lallemand; and I do not know that mischievous results have attended its use in competent hands. Care should be taken that the instrument is sound, for the solder connecting the part which carries the caustic is liable to be decomposed. This once gave way, leaving the end of the instrument and the caustic in the prostrate of a gentleman whose urethra I was cauterizing. It was voided with the urine in the course of the following day, and, though he suffered more than was intended, no evil resulted. The caustic may be applied pretty freely, the instrument being known to be in the prostatic region by the distance to which it has been passed, and by the sensitiveness of the part, or, more certainly, by feeling with the finger in the rectum. A good deal of irritation, pain, with frequent bloody micturition and some discharge follow the operation, with, perhaps, seminal emissions at night. These subside in a few days, and the good effect is at once shown by a cessation of the emissions. In many cases, however, they return after a period, requiring a repetition of the remedy, perhaps two or three times; and in some cases no good results from it. I am aware that this proceeding is objected to by some whose opinions deserve attention as unsafe, by others as empirical, and by others as unphysiological. It can scarcely be regarded as unphysiological, when we observe the effect which is produced on the whole length of a tube or a series of tubes by irritation at any one part of the lining membrane, especially if that part be near an orifice, how titillation of the fauces will cause vomiting, or of the larynx coughing, or of the rectum diarrhœa and tenesmus. It cannot be very unsafe or even injurious, or we should ere this have heard of more ill-effects produced by it. Neither do I think it so empirical and unpathological as some seem to regard it, mistaking, as I cannot help fancying, the real seat of the malady, which appears to me to be in the prostatic part of the urethra more distinctly than in any other portion of the generative apparatus. I judge this to be so, because there is usually a preternatural sensitiveness of that part elicited by the passage of instruments or by pressure with the finger. Frequently there is uneasiness or actual pain there, especially after the emissions; and an irritation of this part by any cause is likely to induce the emissions. It is the only part in which anything distinctly abnormal in the sensations is experienced; the testes, vasa deferentia, vesiculæ seminales, show little or no tenderness or other sign of disturbance. We are, therefore, warranted in considering this part to be at fault, and in applying to it that salt which is often found to allay irritability or a chronic inflammatory condition in other mucous membranes. Above all, there is the more cogent argument that good frequently results from its use. We must not, however, be too sanguine in our expectations, for, as has been already said, the benefit is sometimes only temporary, and in some cases the treatment fails altogether. In some slight cases benefit is derived from the occasional passage of a metallic instrument into the bladder and allowing it to remain there ten or twenty minutes. It is commonly well to try this before resorting to cauterization. Accompanying this malady or independent of it, there is sometimes a discharge from the urethra of tenacious fluid, like white of egg, in small quantity, following the urine, or of the fæces, especially when straining is required for that purpose. This symptom causes great alarm to the patient, as he conceives that he is suffering

from a continual escape of the semen. Such, however, is not the case. I have examined this fluid passed by several persons, and have never found any spermal elements in it. It proceeds apparently from the prostrate gland, and its presence in sufficient quantity to issue from the urethra is an indication of a relaxed condition of the ducts of the gland, permitting the secretion to be expressed during the voiding of the urine or fæces. It generally ceases or diminishes under a tonic regimen and attention to the state of the bowels. The commonly received opinion that the debility and other symptoms experienced in these cases is due chiefly to the loss of spermat fluid, is a mistaken one, inasmuch as the exhaustion consequent on the emission bears very little relation to the quantity of the fluid discharged, or the amount of spermat elements contained in the fluid. As the disorder progresses, and the emissions are more frequent, the proportion, indeed the actual quantity, of the spermatozoa decreases, the discharge consisting chiefly of the secretions of the vesiculæ seminales and the prostrate gland. The drain upon the system is rather through the testicle, and the exhaustion experienced after each occasion is consequent upon a loss of nervous force rather than upon a loss of the secretion of the generative organ.

"The question of importance, with its contingent,—the unadvisability of matrimony—is one on which it is difficult to write, inasmuch as there is not much very definite to be written. In deciding it, it is usually necessary to allow a considerable margin for the nervousness of the patient. A quiescent state of the organs, consequent on long control of the passions, is not to be regarded as an obstacle, because they may be roused into activity when appropriate circumstances arise; and after a long continuance and frequent repetition of nocturnal emissions, the organs usually retain sufficient vigor to admit of improvement under the influence of matrimony. It has happened to me often to be consulted on this subject, and I have very rarely felt it necessary to give a discouraging opinion. In the case of one gentleman, who from early life had been subject to very frequent emissions, who had long ceased to have erections or desire, and whom a variety of treatment, including cauterization of the urethra, conducted by different persons, had failed to give relief, my advice was that he should remain a bachelor. Very soon afterwards he married and had a family.

"It has been recommended that in doubtful cases the experimentum should be made *in corpore vili*. This appears to me to be useless as well as wrong, for the experiment thus made as a test is no real test, and, as might be expected, has ended in disappointment. I know a gentleman, in every respect, as I believe, well qualified to be a husband, and at one time anxious to be so, who has been prevented from marrying by the failure of this test, to which he, most reluctantly and needlessly, assented, in deference to the advice of an eminent surgeon whom he consulted. The indications derivable from external appearance are of little value; and suspicions based upon them have repeatedly proved to be groundless. There are certain obvious disqualifications, such as imperfect formations or diseased conditions of the necessary organs, and an entire absence of erections or desire. Where such disqualifications exist, matrimony is rarely contemplated. Where they are absent the surgeon is seldom justified in giving an unfavorable verdict, the instances being few in which, by judicious treatment, the patient may not be fitted for matrimony. To the encouragement to matrimony it is well to add the hint that though, for

various reasons, the rite may not be at first consummated, yet that, in all probability, it will be so before long. This may prevent unnecessary disappointment or despair. I have known premature separation carried out, indeed hurried on by the medical man, when there is reason to think that a little management and patience might have resulted in a happy union. The whole of this question is fraught with so much anxiety and excitement to the person concerned, that the mind is liable to be thrown off its balance, and the most deplorable consequences to ensue. In some cases, doubtless, there is cause for the anxiety, but in many the apprehensions are groundless, and happy is it if a man when thus racked with doubts can bring himself to make a confidant of, and disburden himself freely to, some judicious medical adviser, who will assure him that such cases are not uncommon, and will, perhaps, give him the often-quoted recommendation of Hunter, to make up his mind to abstain for a time. In all such cases it is necessary to take the general state of health into account, for any debilitating cause, such as dyspepsia, diarrhoea, mental anxiety, etc., especially when there are phosphates or oxalate of lime in the urine—is liable to be attended with inability, which may be only of a temporary nature, and will yield to appropriate treatment. As a general rule, in the healthy person, the recurrence of desire and power, more particularly the former, decreases gradually with advancing years. Sometimes it does not cease till a late period. This, however, varies much. In those who have abused the organs, or indulged their amorous propensities to excess in early life, the cessation takes place sooner than in others. We learn that the lords of the harem are not unfrequently impotent at thirty or forty; and in this country the same occurs to persons who have been addicted to excite the organs preternaturally by giving way to lascivious thoughts, and in other ways. Any debilitating influence, whether it be mental depression or enervating bodily disease, indigestion, phthisis, diabetes, etc., produces more or less of the same effect, and it has been remarked by Mr. Curling that 'the testes of persons who die of chronic lingering diseases are almost invariably soft and inelastic. When incised, their internal structure seems to contain but few bloodvessels, is pale, apparently shrunk and dry, and the little fluid that can be squeezed from it is destitute of spermatozoa.'

"It seems also that long-continued continence induces an earlier cessation of the capability of function than does moderate indulgence. And after long disuse the attempt to rouse these organs into activity at a late period of life, even if successful, it not altogether without risk to the general health. The excitement consequent on it, is liable to induce much prostration, which may be followed by paralysis, amaurosis, affections of the heart, or other disorders. I suspect there is foundation for the remark that these ill-effects are more likely to occur in the case of widowers marrying after a considerable interval, than in those who have not been before married."

SELECTIONS FROM JOURNALS.

VOGT ON THE ACTION OF FREE HYDRO-CHLORIC ACID IN GASTRIC DIGESTION.

Dr. E. Vogt gives the following interesting summary (*Le Progrès Méd.*, No. 27, 1883) of the recent literature of this subject.

It is well known that during gastric digestion a cer-

tain quantity of free hydrochloric acid makes its appearance. Certain recent German publications attribute to the absence of this acid, in certain cases, a great symptomatic importance. Von der Velden (*Deutsches Archiv für Klin. Med.*, Band xxiii., p. 369,) having procured by Kussmaul's pump some of the stomach contents during digestion, submitted it to various reagents, in order to detect the free hydrochloric acid. He found that by means of tropeoline (OO), a yellow color, which changes to red in the presence of mineral acids, but is unchanged by organic acids, the presence of free hydrochloric acid could be readily discovered. Working with this method, he arrived at some interesting results; he found (*Berliner Klin. Wochens.*, 1877, p. 613) that in typhus the hydrochloric acid disappeared during the course of the malady, to reappear during convalescence. In dilatation of the stomach the acid was never absent, while in carcinoma he could never discover the least trace. This latter phenomenon could not be ascribed to mere weakness, as it was not present in most advanced cases of marasmus apart from carcinoma; nor could it be attributed to any chemical action of the cancer-juice, as it occurred in non-ulcerated scirrhus. In one case, by this means, carcinoma was diagnosed in the absence of all other symptoms, and was confirmed on *post mortem* examination. In another case of suspected cancer the reaction negatived the idea, which was also confirmed by necropsy. In a case of cancer of the liver, the stomach being intact, the acid did not disappear.

A new series of researches (*Deutsches Archiv für Klin. Med.*, Band xxv., p. 105) showed that the saliva, which reaches the stomach mixed with the food, continues to act on the starch until the free hydrochloric acid appears, which is one and a half to two hours after the meal—a fact already observed by Lehmann (*Handbuch der Phys. Chemie*, p. 154, 1854). Consequently, the gastric digestion may be divided into two stages: the first, during which the saliva continues to act; and the second, in which free hydrochloric acid is present, and in which the principal formation of peptones takes place.

Ewald (*Zeitschr. für Klin. Med.* Band. i., p. 619) has objected to some of these conclusions. He finds that the presence of albuminates and blood, etc., interfere with the tropeoline reaction; that in many cases of carcinoma the reaction persists; and that the two digestive periods are not so distinctly separated, but that the diastatic action is rather diminished than suppressed by the rise in acidity of the gastric contents.

Von der Velden (*Deutsches Archiv für Klin. Med.*, 1880) has replied by throwing doubts on the purity of Ewald's chemical reagents. He admits that there is no specific action in carcinoma, but thinks it a subject for inquiry under what circumstances the acid disappears. (In a letter to Vogt, Von der Velden admits having met with cases of cancer in which the reaction was present.

Edinger (*Berl. Klin. Wochens.*, 1880, No. 9, 117) found that the free acid was absent in two cases of amyloid diseases of the stomach, and attributed it to endarteritis obliterans. He obtained the gastric contents by enclosing a small sponge in a gelatine capsule, which being attached to a thread, is swallowed by the patient; at the end of half an hour the capsule is digested, and the sponge being withdrawn, is soaked with gastric contents, which may be submitted to the necessary tests (*Deutsches Archiv für Klin. Med.*, Band xxix., p. 515: 1881).

Uffelmann, in his observations on a case of gastric fistula (*Deutsches Archiv für Klin. Med.*, Band xxvi.,

p. 431) preferred methyl violet to tropeoline. Edinger (*loc. cit.*) objects to this new reagent.

Sasselsky found, in nine febrile patients, that the hydrochloric acid disappeared when the fever was accompanied by dyspepsia.—*London Medical Record*.

MARTIN ON ACTION OF ALCOHOL ON THE HEART.

Professor Martin, of Johns Hopkins University, writes as follows in the *Maryland Medical Journal* for Sept. 1883.

Although the physiological effects of alcohol manifest themselves in many directions, we can only hope to arrive at valid conclusions by taking up the questions one by one. Our own researches made on dogs have been confined to a quite limited field—viz., what is the direct and immediate action of alcohol upon the heart, both as to its rate of beat, and as to the work done by it in a given time. Chronic abuse of alcohol of course affects the heart; but our inquiry has hitherto been limited to the immediate action upon the heart of a moderate quantity of pure alcohol added to the blood flowing through it; the heart being put entirely out of control by extrinsic nerve centres, and isolated from all other organs but the lungs. In other words, our problem was: What is the immediate action, if any, exerted upon the heart by a single dose of ethylic alcohol?

As regards action upon the pulse-rate, our experiments confirm those of Zimmerberg and others; alcohol in doses not directly poisonous does not affect the rate of beat of the heart.

As to the influence of alcohol upon the work done by the isolated heart we have, however, obtained some results which we believe to be new.

Our method of experiment was as follows. A dog having been placed fully under the influence of morphia subcutaneously injected, its heart and lungs were isolated in the manner which I had the honor to describe to this Faculty two years ago.* The heart was then fed with defibrinated blood obtained by the previous bleeding of other dogs, and supplied to the superior vena cava, under a constant pressure of Mariotte bottles. These bottles were four in number; two of them arranged to contain and distribute blood containing no alcohol, and two of them blood containing alcohol. By stopcocks any bottle could at will be connected with the heart. At the commencement of the experiment, the heart was fed with blood mixed with one-fourth its volume of 0.75 per cent. solution of sodium chloride in distilled water—2,000 cubic centimetres of blood mixed with 500 cubic centimetres of the salt solution. This blood, passing from right auricle to left ventricle, was sent through the lungs to the left heart, and from the left ventricle was pumped out into a tube connected with the right carotid artery. The aorta was ligatured immediately beyond the origin of this vessel. The tube connected with the right carotid conveyed the blood to a height sufficient to maintain about an average arterial pressure, as measured by a mercury manometer connected with the root of the left carotid. The pen of this manometer recorded on the kymograph not only the average arterial pressure, but the pulse-rate. Uniform and free artificial respiration was maintained by a water engine.

The mode of work was as follows. One of us took

* Transactions of the Medical and Chirurgical Faculty of Maryland 1882, p. 203.

charge of the kymograph, and was also responsible for time signals. All being ready, the heart was placed in connection with a flask containing good blood, and allowed to pump blood from this flask into another. Let us call the four flasks A, B, C, and D respectively. When flask A was empty and B filled, it was easy, by opening and closing the proper stopcocks, to supply the heart from B and let it pump into A, and so on, to and fro, with the good blood for a certain time. At short intervals, the blood pumped out by the heart in a minute was collected separately and measured. As soon as it was found that this work was pretty constant, varying not more than 10 cubic centimètres in a minute, the good blood was shut off and the poisoned blood from C turned on; this was pumped into D and collected there. While this poisoned blood was circulating, the quantity pumped out by the heart was measured from minute to minute; then good blood was again turned on, and the measuring continued. Any experiment in which the heart did not under these circumstances show marked recovery from the action of the alcohol was rejected, so as to avoid the risk of ascribing to the alcohol something which was possibly due to the independent death of the heart.

The general result of our experiments may be primarily stated as follows. Blood containing one-eighth per cent. by volume of absolute alcohol has no immediate action on the isolated heart. Blood containing one-fourth per cent. by volume—that is, two and a half parts per thousand of absolute alcohol—almost invariably remarkably diminishes within a minute the work done by the heart; blood containing one-half per cent. always diminishes it, and may even bring the amount pumped out by the left ventricle to so small a quantity that it is not sufficient to supply the coronary arteries: hence blood is drained off by them from the outflow tube, and at last none is pumped out from its upper end at all.

We may here point out that the dose of alcohol was not *a priori* a large one. A man weighing 150 lbs. contains about 11½ lbs. of blood. One quarter per cent. of this is 0.46 of an ounce, a quantity exceeded by that in a single ordinary drink of brandy; and some people take a good many such drinks in a day. Moreover, the alcoholized blood in our experiments could hardly have acted on the heart as it flowed through its cavities. It must almost certainly have acted on the heart after it flowed through the coronary arteries to the capillaries of the organ, and came into close relation with its muscular and nervous tissues. To get to these capillaries it had first to circulate through the lungs, and there is no doubt that some of even the small quantity of alcohol present was eliminated.

What is the cause of this diminution in the quantity of blood pumped out?

Differences in the flasks and rubber tubes being excluded as causes of the phenomenon, we have to seek for it in some action exerted by the drug on the living organs; and here several possibilities suggest themselves. It might be that the alcohol constricted the pulmonary vessels, and so prevented the blood from reaching the left ventricle as freely as before; or it might be that it dilated the coronary arteries, and so drained off more blood through the coronary circuit, and thus left less to be pumped out from the exit of the flowing tube; or it might be that the pumping power or the capacity of the left ventricle was altered; or, of course, there might be combinations of these.

We were set on the right track one day, when we modified the experiment by cutting away the pericar-

dium before administering the alcohol. To our surprise, even blood containing ½ per cent. of alcohol now had little or no effect on the work done by the heart.

We tried this repeatedly in another manner. Keeping the heart in the pericardium, we administered alcohol and got the usual result; then recovered the heart by good blood, cut away the pericardium, again gave alcohol, and now with little effect. As the absence of the pericardium could hardly in any conceivable manner prevent constriction of the pulmonary arterioles, or prevent dilatation of the coronary vessels, it was clear that neither of these would account for the results of the administration of alcohol.

Our attention was therefore turned to the proper heart-substance. Direct observation of the organ, in fact, showed it to become enormously distended when supplied with the alcoholized blood. Normally, the dog's ventricle contracts so as to completely empty itself and obliterate its cavity. Under the influence of alcohol this is entirely changed: the ventricle ceases to contract completely; even at the height of its systole the organ completely or nearly completely fills the pericardiac sac; in its diastole, it has little or no room to expand further and take in a fresh supply of blood.

Hence a great diminution in the quantity of blood which it has ready to pump out at its next contraction. If now the pericardium be cut away, the heart enlarges enormously in diastole, takes in its usual quantity of blood, and drives it out at the systole: hence the organ performs its usual amount of work. This seems to show that the muscular power of the organ is not at first influenced; if the heart be not confined in the pericardium, and the quantity of alcohol in the blood flowing through it do not exceed ½ per cent. by volume, the work done is not affected—at least for a considerable time. It is not the contractile power, but the elasticity of the cardiac muscle that is influenced; its "tone" is lowered, and it works under new and (when the pericardium is present) very favorable conditions. It acts like a greatly relaxed muscle, which contracts to half its normal extent, compared with a healthy muscle, in good tonic state, which, when fully extended, is shorter than the atonic, and whenever it contracts, contracts more completely; and, so far as the heart is concerned, to the fullest possible extent. If, however, the administration of alcoholized blood of ¼ or ½ per cent. be long continued, or if blood containing 1 per cent. of alcohol be used, then, even with the pericardium removed, the systole becomes feebler and feebler, the work done less and less, and finally *nil*.

Whether alcohol directly combines with the cardiac muscular tissue, or whether it indirectly influenced it by interfering with its nutrition, we are not able to say. The rapidity with which the effect manifests itself seems in favour of direct poisoning; on the other hand, the dog's heart will only bear a very brief deprivation of oxygen, and it has been shown that alcohol added to the blood makes it hold its oxygen more firmly and yield it less readily to the tissues; and the heart subjected to alcohol has very much the appearance of the heart of an asphyxiated animal. On the whole, we are inclined to think that the poisoning is direct.

We have made a few experiments, to see what dose of alcohol given by the stomach to a dog will produce some similar action on the heart. When the heart lies in the body and in connection with the central nervous system, there are of course considerable difficulties to be overcome; and all we can say as yet is, that to get

any distinct influence on blood-pressure, one must put much more alcohol into the stomach than an amount equal to $\frac{1}{4}$ per cent. of the total blood in the animal. It is either not absorbed fast enough to reach at any moment the heart-poisoning limit, or more probably is picked up by other organs, very likely the liver, and held back from the heart.

We then tried in another way, by directly injecting into the jugular vein of a curarized dog a small quantity of salt solution containing an amount of alcohol equal to $\frac{1}{4}$ per cent. of the total blood of the animal, reckoned as one-thirteenth of its weight. In such cases we found usually a very temporary enfeeblement of the heart, indicated by a lower arterial pressure, but this seems only to last while the injected solution is flowing through the organ, or for a few seconds afterward. Before the blood returns it has apparently deposited its alcohol elsewhere in the body, or at any rate got rid of it somehow, so that it no longer acts immediately upon the heart, at least to a directly noticeable extent.—*London Medical Record*.

CORNIL ON THE HISTOLOGY OF ELEPHANTIASIS ARABUM.

M. Cornil (*Le Progrès Méd.*, No. 37, 1883) gives the following description of the histology of a case of elephantiasis Arabum sent him by Professor Girard of Grenoble.

The *spleen* was very large, hard, smooth, dark brown, distinctly amyloid; the arterioles, corpuscles, capillaries, and veins, being affected.

The *kidneys* were amyloid, with hyaline cylinders *in situ*, and fatty degeneration of the epithelium.

The *liver* presented no amyloid disease; there was fatty degeneration.

The *skin* of the region affected was irregular, granular, warty, rough, covered with a thick layer of epidermis, except in one part, four or five centimètres square, which was depressed and ulcerated. The epidermis was thick and hard, the papillary layer normal, the true skin one to two centimètres thick, resistant and containing a clear fluid in its meshes. The ulcerated patch was covered by a thin layer of granulations, one millimètre thick; the true skin below was one centimètre thick, and below that was the cellular tissue. The papillæ were well developed, giving rise to rough and warty appearance of the surface.

Epidermis.—The Malpighian layer was normal; the granular layer colored vividly with carmine; showing that its cells contained much eleidine; and patches of this substance lay in the horny layer. The latter was very thick and hard, and the superficial layer desquamated, and often broke away in the sections.

Papillary Bodies.—These structures were generally enlarged transversely as well as vertically, their shape being variable—conical, globular, or hemispherical. Their tissue was composed of fibres and loose connective tissue, with flattened and a few round cells. In some, the red corpuscles were extravasated between the fibres, forming true ecchymoses; but the corpuscles were unaltered, and therefore were probably extravasated shortly before death. The capillary vessels were dilated, measuring 4 to 6 hundredths of a millimètre. Their walls were thin, and they were filled with blood-clot.

Dermis.—The true skin was formed of fibres running parallel to the surface, and traversed perpendicularly by vessels mounting to the bases of the papillæ, which were accompanied by certain fibres running parallel to

their coats. Between the first order of fibres were numerous fusiform or flattened cells, and a large number of round or lymphoid elements. These vessels, like those of the papillæ, were filled with clot. The lymphatic vessels were much dilated, and contained lymphatic cells entangled in fibrine, and were lined with swollen epithelioid cells. The intradermic portions of the sweat-glands were elongated, and the calibre of the tubes widened, their epithelium increased, and their lumens filled with granules and detached cells.

Ulcerated Portion.—The surface was covered with an embryonic tissue; below, the dermis was as described elsewhere. In a certain number of vessels, there were heaps of micrococci.

The *nerves* of the affected leg were enlarged to at least a third more than their natural size. The neurilemma was increased, but there were patches of celluloadipose tissue in the nerve which contributed to increase its bulk. The axis-cylinders were irregular in size; some had disappeared, or were represented only by a zone of granules.

The *lymphatic glands* were very large and homogeneous from inflammatory hypertrophy. Their follicles were dilated, containing large cells and micrococci. The lymphatics were dilated, and the capsules thickened.

The *muscles* examined were normal.

The *femoral artery* was thickened by a little endo- and peri-arteritis. The femoral vein showed a little peri- and endo-phlebitis; but both these vessels were free.

The bones were not sent, but M. Girard said the fibula was as large as an adult tibia, and the tibia as large as a femur.—*London Medical Record*.

CHARCOT ON APHASIA.

These lectures, previously unpublished, have been reported (*Gazz. degli Ospitali*) by Dr. Rummo, with the consent of the author. Aphasia is divided into four varieties, depending upon the elements of which speech is composed. Two are motor, and two sensory. The motor forms of aphasia are: first, loss of memory of the processes used in articulating; and, secondly, loss of memory of the processes used in writing—agraphia, or aphasia of the hand. There is no paralysis; other kinds of movement are performed without difficulty. The motor memory for those special movements is alone destroyed. The sensory forms of aphasia are: first, visual aphasia or loss of memory for written signs (*word-blindness* of Kussmaul); and, secondly, auditory aphasia or loss of memory for spoken words (*word-deafness* of Kussmaul). The chief value of these lectures lies in the fact that, while these different varieties of affection of speech are usually seen only in combination, Prof. Charcot has had the good fortune to see the two motor forms and the visual absolutely separate and uncomplicated. One patient was unable to speak, although he could read, express himself in writing, and understand what was said to him. One instance of pure agraphia was observed. The patient could speak, read, and understand what he heard; he had simply forgotten how to write. Another patient could speak, could understand what was said, and, though able to express himself in writing, was unable to read, and it was only by retracing the characters that he was able to spell out even what he had himself written. The cases of word-deafness that have been recorded have been very rare, and the author does not think that they are at all conclusive. In

regard to the localization of the visual centre, experimental research is put aside for two reasons. In the first place, it is not safe to argue from dogs and monkeys to men; in the second place, the results obtained by different investigators are at variance; Ferrier, for example, placing this centre in the *pli courbe* (angular gyrus) Munk in the occipital lobe. The centre for the motor memory of articulation is fixed by necropsies for right-handed persons in the foot of the third left frontal convolution. One case is on record in which the island of Reil was alone affected. The motor memory for writing is ascribed by Exner to the foot of the second left frontal convolution. The visual and the auditory memory for words are seated respectively above and below the horizontal branch of the fissure of Sylvius; the visual centre being in the *pli courbe*, the auditory in the first temporo-sphenoidal convolution. It may be added that the author and Pitres are preparing a work to establish their view, that all the motor centres of the cerebral cortex are grouped in the two vertical convolutions respectively in front of the fissure of Rolando and behind it; namely, the ascending frontal and the ascending parietal. It should be mentioned that hemiopia or more or less narrowing of the field of vision usually accompanies word-blindness (loss of memory of written signs); a fact generally unobserved. Hemiopia is, therefore, sometimes due to a cortical, and not to a basilar lesion or affection of the optic tract. It may be added that the honor of having sown the first germs of the theory of word-blindness and word-deafness is assigned to Broadbent. Although that author did not coin special names for these disorders of speech, he and Bastian must be considered fore-runners of Kussmaul and Wernicke.—*London Med. Record.*

MEDICAL NEWS AND NOTES.

Vigar on Salicylate of Soda in Phlegmasia Alba Dolens.—M. Miguel Vigar (*La Correspondencia Medica*) says that of four cases of phlegmasia alba dolens which he has had occasion to treat, in the first with the topical remedies usually employed he obtained no result attributable to the medication, since the patient remained in bed two months; and that in the other three having employed the salicylate of soda, in the dose of 4 grammes (60 grains) a day, he noticed in all from the first day of taking the medicine notable diminution of the fever and œdema. Neither of these patients passed more than twenty-one days in bed, and no œdema, nodosities, or thickening of the lower limb remained.

Bianchi on the Milk of the Bitch as a Therapeutic Agent.—After treating of rickets and its causes and of the inefficacy of the treatment usually employed, Dr. Bianchi (*La Union de las Ciencias Medicas*, of Carthage) recommends the employment of the milk of the bitch as an article of diet. Its use is justified theoretically and practically. After a comparative study of this milk and that of other animals he finds that it is much richer in nutritive materials and in sulphate of lime, which is entirely assimilated; hence it is especially valuable in rickets and tuberculosis. He has obtained striking results from its use. The great drawback to its employment is the difficulty of obtaining it in sufficient quantity.

Lownds on Feeding of Patients in Cholera Collapse.—Dr. Lownds, in the *Lancet*, July 1883, p. 123, brings before the profession a form of nourishment which may be absorbed by the physical action of osmosis, during the collapse stage of cholera. The mode in which it is prepared is as follows. Mix eight ounces of recently killed meat, chopped fine, with eighteen ounces of distilled water, to which have been added four drops of pure hydrochloric acid, and from half to a drachm of common salt. Stir with a stick, and after half an hour throw on a hair sieve. The red soup thus obtained, given in doses of an ounce every half hour, has proved most beneficial in many outbreaks of cholera.

Prevention of Ophthalmia Neonatorum.—In the clinic of Prof. Braun in Vienna (*Wien. Med. Blätter*, Aug. 2), a modification of Credé's treatment for ophthalmia neonatorum has been in use since March 1881. Immediately after birth, before the eyes have opened, if possible, they and the surrounding parts are washed carefully with pure water and antiseptic cotton-wool, and then one or two drops of a 2 per cent. solution of argentic nitrate is dropped into each conjunctival sac. The percentage of cases of ophthalmia has fallen from 5.14 to 1.60, and the number still existing in other clinics of the same hospital shows that the treatment must have the credit of the decrease.

Dynamite Pills.—Messrs. Landousky and Ballet have published a curious observation of spasmodic contraction with paralysis of the lower limbs, which had lasted for two years and a half in a hysterical girl of 26 years of age. On October 7 two pills were given to her, described as fulminating pills, which she was recommended to take with the greatest care, dividing each pill in half. On the following day the patient announced that she had tried to poison herself, and that she had taken all four pills at once, that they had produced a terrible effect upon her, but that her disease was suddenly and completely cured. The pills were composed of bread crumbs only.

Coupland on Abdominal Aneurism opening into the Duodenum.—Dr. Coupland, in the *Med. Times and Gazette*, July 1883, p. 65, reports a case of a laborer, aged 72, who was admitted into Middlesex Hospital in a state of collapse. Under stimulants and warmth he rallied from the state of collapse, but during the first few hours the bowels were twice opened, and on each occasion some black tarry blood was passed. There was no recurrence of this hæmorrhage until just before his death, twelve days later. *Post mortem* examination showed the stomach to be full of a dark brownish-black fluid; the mucous membrane was intact. The duodenum contained a similar fluid distinctly blood-stained. Thrusting forward the duodenum and head of the pancreas, a globular tumor about the size of an orange could be felt. On laying open the duodenum, four small openings were seen in its inner wall. The tumor and aorta were removed together with the duodenum *in situ*. On laying open the aorta from behind, the orifice of the sac of an aneurism was found immediately below the origin of the renal arteries. During life, the diagnosis between aneurism and tumor of the pancreas was hard to establish.

Bathers' Cramp.—In the *Brit. Med. Jour.*, July 1883, p. 82, attention is drawn to the number of bathing fatalities due to cramp. The nature and causes of this dangerous affection are not generally understood, but experience has given some data to recognize certain conditions favorable to the production of cramp. These are ; a peculiar individual susceptibility or idiosyncrasy, the shock of cold applied to the general surface of the body, prolonged muscular exertion, especially in the direction of the extension of the extremities. The great folly of entering the water while the body is heated by violent muscular exercise is particularly insisted upon. In the *Lancet*, Sept. 1883, p. 468, it is shown that in many fatal cases, classed under Swimmers' Cramp, death is often due to the failure of the heart, or to rupture of cerebral vessels.

Henoch on Nervous Disturbances from Indigestion.—Professor Henoch, of Berlin, relates, in the *Wien. Med. Blätter* of July 5, some cases which occurred in his practice, in which various psychical and nervous symptoms resulted from indigestion. One little girl, three years of age, became aphasic suddenly, and when seen an hour afterwards was not able to utter a word, except a cry on being pinched. Speech returned soon afterwards, immediately on the child vomiting a cherry which had been swallowed without being chewed. One or two other similar cases, which he describes, have occurred ; and the pulse is generally somewhat retarded, but is never irregular, as it is in commencing meningitis, for which this condition might be mistaken. In one case, paralytic symptoms followed the disappearance of the psychical. An emetic seems to be the remedy indicated, as improvement always followed the emptying of the stomach.

Brugnatelli on the Treatment of Pneumonia by Cold Baths.—Brugnatelli reports eleven cases successfully treated by this method (*Rev. Med. dell' Istituto Lombard*, July, 1883). The patients bear the cold bath well ; on immersion in water of 23° to 19° C. (73.°4 to 66.°2 F.) they experience a slight shiver, which soon passes off. These low temperatures are better borne when the patient is placed at once in the cold water, than when the water is gradually cooled down after his immersion. The pulse generally becomes slow and small ; respiration is sometimes unaffected, sometimes hurried, more frequently diminished and deeper. The temperature often falls several degrees, and this fall lasts for some time. The general state is sensibly improved, the patient is much more calm, and generally sleeps for several hours. The bath seems to exercise a beneficent influence on the disease. In seven cases, the fever disappeared and resolution began on the sixth day, in two on the seventh. The bath probably hastens resolution in the lung. Contraction of the superficial vessels causes increased pressure in the deep vessels, while at the same time the heart is stimulated.

Bristowe on Death From Cerebral Hæmorrhage in Purpura.—Dr. Bristowe, in the *Medical Times and Gazette*, July 1883, p. 87, contributes some valuable remarks on purpura, and notes two cases in which purpura proved fatal by hæmorrhage into the substance of the brain. Purpura is divided into two varieties—namely, purpura simplex, and pur-

pura hæmorrhagica : but it should never be forgotten that the distinction is a purely artificial one ; that true purpura in all its forms is, as far as we know, the same disease ; and that, although the prognosis of a case of purpura simplex is generally favorable, there is always the possibility that it may assume grave proportions ; that it may be attended with anæmia and debility, and prove fatal by hæmorrhage. Of the pathology of purpura little is known, the rupture of the blood-vessels being probably due to the weakening of the parietes. The treatment is as unsatisfactory as are its causation and pathology. The two cases noted are typical examples of purpura hæmorrhagica, with the additional important feature that death was due to hæmorrhage into the substance of the cerebrum. One occurred in a man, aged 33 ; the other in a woman, aged 57. [An interesting case of spinal hæmorrhage during the course of a case of purpura is noted by Dr. Eade in the *Brit. Med. Jour.*, October 1881, p. 812. Vide *Medical Digest*, section 57 : 4.—*Rep.*]

Mallins on Jaundice from an Ascaris in the Biliary Duct.—Mr. Mallins, in the *Lancet*, June 1883, p. 1123, reports the case of an Indian officer, who was attacked with intermittent fever of a very mild type, but accompanied by a great deal of nausea and vomiting, followed in a few days by a decidedly yellow tinge of the conjunctivæ, and a week later by well-marked jaundice. All food taken caused nausea, so that the patient took very little nourishment, and emaciated rapidly ; he was ordered to take a change, and decided to return to Europe. Whilst in Bombay, waiting to embark, the patient noticed at stool one day that he had passed a large ascaris lumbricoides, apparently dead, one end of its body to the extent of half an inch being of a deep green color. The next day, the stools began to exhibit a slight amount of normal bilious hue, and before he arrived in England convalescence was satisfactorily established. The case is remarkable, as it is very probable that the common bile-duct was obstructed by the worm having entered the duct, thus effectually plugging it and preventing the flow of bile. [In the *Medical Digest*, sect. 936 : 4, many cases in which ascaris lumbricoides was found in biliary ducts are noted.—*Rep.*]

Prior on the Occurrence of three Infectious Diseases in the Same Individual.—Dr. Prior, assistant to the Royal University Polyclinic in Bonn, communicates to the *Deutsche Med. Wochensh.*, Aug. 1, a case in which three different infectious diseases occurred in the same individual in the space of one month. Three children were attended on Nov. 18 for well-marked scarlatina, with a temperature of 104° Fahr., copious eruption, and some difficulty of swallowing. Desquamation began on Nov. 21, and proceeded normally, only one child having slight renal symptoms, until, on Dec. 1, the two younger were attacked with rigors, headache, and malaise, and on the following day were covered with a thick eruption of varicella. On Dec. 3, in the absence of the mother, a child from the next room, intercourse with which had been carefully avoided on account of measles, was found playing with the child, and showed signs of measles next day. The first patients were now carefully watched, and on Dec. 13 the temperature was found to be raised, with photophobia and slight coryza ; on the 15th the eruption of morbilli appeared. Its course was protracted, and caused some

anxiety; but, finally, the children recovered. The cases show how the two poisons of scarlatina and varicella may be in the organism at the same time, and how measles may be conveyed by a two hours' intercourse in the prodromal stage, while the crusts of varicella are still present, the measles showing itself as soon as ten days later.

Ferrer on Alcohol in Trichinosis.—A case of trichinosis, in which the only treatment was the administration of Alcohol in full doses, is reported by Dr. D. Vincente Ferrer (*Gaceta de los Hospitales*, Valencia). The patient was twenty-three years old, and it was probably the fifth week of the attack when the treatment was commenced. The attack was a severe one, with characteristic pulse, temperature, muscular pains, and rigidity; pulse 124; temperature 103° Fahr. The patient could neither flex the limbs nor stir from the supine position, and was considered by Dr. Ferrer and his colleagues to be in a critical condition. Six ounces of proof spirit (about 56 per cent. of rectified alcohol, R.) were given daily in sugared water in the intervals of feeding. Within twenty-four hours the temperature fell 8°, and the muscular rigidity was distinctly diminished. On the third day of the treatment the dose was increased to nine ounces, and on the fourth to twelve; but this quantity was not borne well, and it was reduced again to nine. On the sixth day the patient was free from pain as he lay in bed, and could move some of the limbs without suffering. The alcohol was continued in the same doses, and from this date convalescence was established. He is stated to have been quite well eighteen days after the alcohol treatment was commenced. Dr. Ferrer considers that the effect was too marked and immediate to be simply a coincidence, but he offers no opinion as to whether the drug affected the trichina, or the muscular fibres, or the reflex irritability of the nerves, or, finally, the areas of inflammatory intermuscular tissue.

Neale on Cancer of the Stomach.—Dr. Richard Neale, in the *Practitioner*, July 1883, records a case illustrating the impossibility of arriving, in some instances, at a positive diagnosis between cancer of the stomach and idiopathic anæmia. The patient was a man aged 61, who for some time had been ailing; he was stout and very anæmic; the cardiac impulse was very weak, and he had extreme dyspnœa on the least exertion; he had no appetite, and had a feeling of uneasiness after eating and often considerable flatulence. Two or three days after Dr. Neale first saw the patient he was suddenly sent for, as the man had fallen down and was supposed to be dead; a few whiffs of nitrate of amyl soon started respiration, and the patient vomited a quantity of matter like modified red-currant jelly. This drew special attention to the gastric symptoms; and the fact that one of the patient's brothers had died from intestinal cancer, led to the case being diagnosed as one of malignant disease of the stomach. Three consultants, who saw the case at intervals of two months, considered it to be one of idiopathic anæmia; and for a time the patient improved remarkably in health, returning from the

sea-side, after a stay of some weeks, a *new man*. It then decided that he should reside near the sea, and a house was taken at Worthing; about three weeks after arriving there hæmatemesis set in, the patient only living a few days. A *post mortem* examination made by Mr. Parish, of Worthing, disclosed a marked case of cancer of the stomach; a large growth occupied the posterior wall of the stomach, encircling the œsophagus, and extending to the pylorus. The growth was very soft and infiltrated the muscles of the back; it was adherent to, but did not implicate, the spleen.

Woakes on the Hygienic Management of the Catarrhally Disposed.—Dr. Woakes gives some practical hints for the guidance of persons thus affected. In using the morning bath, he recommends that the patient should stand all the time in warm water to a depth of three or four inches, whilst the remainder of the body is being washed with good yellow soap and sponged with nearly cold water. In these persons, the sea-bath should be limited to three to five minutes, and the ears protected with Cousins' ear-protectors. In regard to the clothing of the catarrhal subject, the author recommends that his entire surface should be enveloped in woollen material all the year round. As a rule, three sets of under-clothing should be provided. The winter suit should contain a maximum of wool with a minimum of cotton; the reverse holding good in the summer, and an intermediate suit being worn in the spring and early autumn. The author lays down the axiom that during four-fifths of the year in these latitudes the under-clothing of every individual should consist mainly of woollen material—*i.e.* in all but the few weeks of summer. Cold arms the author considers a fertile source of chills. If wool cannot be borne next to the skin, he recommends suits of Indian gauze, silk, or wash-leather. The author cautions against thin boots, damp clothes, and excess of zeal in wrapping up the neck when taking exercise. When the person is, however, exposed to draughts, whilst in a passive state as regards exercise (*e.g.* in a railway carriage), it is well to protect the ears and neck against them. The *bedroom* of a catarrhal patient should be warmed by means of a fire, especially if the weather be damp as well as cold, and the body should be rubbed with a dry towel before getting into bed, etc. In regard to *diet*, the author considers that a fundamental error in this respect is the excessive quantity of sugar ingested. He thinks that if a comparison were possible between the diseases prevalent in this country before and after the introduction of sugar from the West Indies, the parallel would tell against the sweet stuffs. All requirements are, he considers, satisfied if meat be taken only twice daily, and in less quantity than it is the usual habit to do. The positive indication for these patients, according to the author, is that they should partake as much as possible of fresh fruit, preferably oranges and lemons, also of such fresh vegetables as greens, celery, lettuces, etc. In regard to wines and spirits, each case must be decided on its own merits. Tobacco-smoking in any form is injurious to catarrhal patients. Exercise the author considers necessary, and he recommends tricycling. A few remarks on the avoidance of ear-picks, etc., and directions for syringing an ear, conclude this paper, which is a chapter out of the author's forthcoming work on "Catarrh, etc."

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IMPEDED PASSAGE OF ALIMENTARY SUBSTANCES THROUGH THE INTESTINAL CANAL.

BY

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GENTLEMEN: At various places in the intestinal canal impediments may occur which hinder or render impossible the carrying forward of such matters as have been taken up, digested, or designated for ejection from the organism. Yet you will find that with a great number of possibilities in reference to the seat of the impediments, a certain regularity occurs, in so far as certain places are particularly favored in the frequent production of such impediments. Let us view the divisions of the intestinal canal separately, in this connection. Where the pharynx goes over into the œsophagus the diagonally striped constrictor (constrictores pharyngis) muscles are substituted by the smooth muscles of the œsophagus. The œsophagus extends downward behind the trachea, projecting somewhat to the left, and within the thorax runs behind the trachea and left bronchus, while the arch of the aorta lies over the left bronchus, and thus also over the œsophagus. This site belongs to those points in the course of the œsophagus in which, most frequently, impediments to the passage of the food occur. Other narrow points of the œsophagus, we find behind the cricoid cartilage, then behind the entrance of the trachea into the thorax, and furthermore, above the cardiac space and at the passage of the œsophagus through its slit in the diaphragm.

At these places abnormally large morsels and foreign bodies are arrested. We also see that at these places the development of tumors, principally epitheliomas, is most frequent. They also are the most frequent seat of strictures which form within the œsophagus.

Foreign bodies which enter the œsophagus may first be caught in the glosso-epiglottidean folds, as, for instance, fish-bones. Their removal must be accomplished through the mouth, as must all foreign bodies which reach the fauces. Fish-bones, especially, are easily removed by forceps after the tongue has been thoroughly depressed with a spatula. Bodies which have lodged deeper are extracted with special instruments, among

which, first, forceps are to be mentioned. The branches of the forceps for this purpose revolve either upon their fulcrum or around their column long axis, or they are constructed similar to the Lithotriptor, in which one branch is made to lock with the other by pushing it forwards. The forceps are intended particularly for rounded or cylindrical bodies. Von Graefe constructed a very useful coin-catcher (Mänzenfänger) for coins and similar bodies that are frequently swallowed. This consists of a long staff, one end of which carries two rings, which are soldered at an acute angle. In inserting this instrument below the coins they promptly fall into the mould, and thus can be removed. For the purpose of removing deep-seated fish-bones, Petit devised the so-called chain staff (Kettenstäbchen), of a parachute-like form. The ribs of the parachute consists of movable links of chain which easily catch the fish-bone. Instruments have been proposed for the extraction of voluminous foreign bodies, which were to be opened below them, as in Weiss's whalebone sound, or they were to be removed by inserting œsophageal sounds, the ends of which were provided with compressed sponge, and the instrument was to be removed after the sponge had swelled, and thus draw the foreign body out with it.

Greater difficulties are experienced in the removal of sharp bodies, such as, for instance, a fish-hook that has been swallowed. If the hook have a string or thread attached to it, balls of glass or lead may be slipped over the string as far as the hook whereby its point is covered, and lesions of the œsophageal walls avoided in its extraction. When no thread is attached to the fish-hook the extraction must be made with one of the above-named instruments (coin-catcher, chain-staff, etc.), but this always must be essayed within a wide œsophageal sound. This corresponds to Dieffenbach's case, who removed an ear of corn which was hooked fast by its grains to the vaginal mucous membrane. He made the extraction simply through a speculum which he had inserted. (Compare also Marchetti's case, cited by Dieffenbach in his *Operat. Chirurgie Bd. I. p. 36*, who removed a dried pig's-tail from the rectum of a young girl in a similar manner.)

Very soft voluminous bodies can be broken up in the cervical part of the œsophagus by a simple pressure of the fingers, as has been mentioned before (Duputren, von Langenbeck). When such bodies are in the thoracic part of the œsophagus they can be forced down into the stomach, for which purpose Petit's probang (Repoussoir) is useful. This consists of an elastic staff which carries a sponge at one end. Thick œsophagus sounds are equally useful for this purpose; while elastic (whalebone) staffs armed with a metal ball as large as a cherry are much more practical than the repoussoir and sounds, because they furnish a means of more delicate touch of the foreign body and better indications for the force to be employed in projecting them onward (von Langenbeck).*

The removal of foreign bodies from the œsophagus can also be made by opening it, that is, by œsophagotomy. This is called for as a direct life-saving operation in cases where foreign bodies are present which cannot or may not be pushed or extricated; thus in all voluminous, but not compressible objects with irregular, sharp edges or rough surfaces, for instance, artificial teeth. Efforts to push such bodies upwards or downwards in the œsophagus might be followed by injuries to the œsophageal mucous membrane, tearing

* V. Langenbeck, Ueber d. Fremdkörper im Œsophagus u. über de Œsophagotomy. Berl. Klin. Wochenschr. 1877, Nos. 51 and 52.

of its walls, and even by rupturing neighboring organs (the trachea, aorta) with extrusion of decomposing elementary masses into the mediastinum or into the lungs, or by fatal hæmorrhage of the aorta. These consequences would also occur as results of ulcerative processes, in case such foreign bodies were left in situ. Therefore the removal of such foreign bodies is imperative, at all hazards.

Further indications for œsophagotomy are inoperable tumors in the cervical part of the œsophagus, completely plugging it, and, thirdly, non-dilatable strictures in the cervical œsophagus. Furthermore, œsophagotomy has been performed in impermeable strictures in the thoracic œsophagus for the purpose of endeavoring to dilate it gradually through the wound (Bryk*). This suggests the use of the bougies in structures which appear impermeable in the cervical part, passing said instruments through the wound upwards.

The directions of the incision in œsophagotomy are the same as in ligation of the common carotid artery. The incision is made either at the level of the thyroid cartilage, at the inner margin of the sterno-cleido-mastoid (Guattani, Cooper, Bell, Boyer, Richerand) and the omo-hyoid is drawn either upwards or downwards. Or the operation is made in the trigone of the sterno-cleido-mastoid, at the base of the neck, principally when a foreign body is lodged deeply in the thoracic part of the œsophagus with the first-named incision after dividing the skin, the platysma and the superficial cervical fascia, requires the exposure of the inner margin of the sterno-cleido-mastoid, laying bare the vascular sheath, which is not to be opened. At the outside of the sterno-hyoid and under the deep cervical fascia we find the œsophagus. Owing to the more superficial position of the œsophagus on the left side, *the operation is always made on the left side.* Usually the walls of the œsophagus are found dilated by the foreign body, and when the foreign body lies still deeper the œsophageal wall is forced outward by the projecting staff of the EKTROPŒSOPHAGUS (Vacca Berlingheri). A bent metal catheter or lithotomy sound or an œsophageal sound armed with a mandrin, inserted through the mouth, may be used instead of the before-mentioned instruments.

If it is desired to maintain the œsophageal wound open for any length of time, the lips of the wound in mucous membrane are sewed to those of the skin and nutrition must take place through œsophageal catheters. If the mucous lips are not sewed to the skin, inflammatory infiltrations and formations of pus into the connective tissue around the œsophagus easily occur. If œsophagotomy has been performed only for the removal of foreign bodies, the wound in the œsophagus may be closed directly by sutures. The wound in the tissues should also be sewn up, but a drainage-tube, directed downwards, left in the wound.

Foreign bodies, whose pressure upon the trachea produces acute asphyxia, must not be removed before respiration has become thoroughly free. In such cases we must follow the old principle and first execute tracheotomy. After this the foreign body may be removed through the mouth or through the wound in the œsophagus.

Tumors of the œsophagus, situated in the cervical part and circumscribed to the walls of the œsophagus, such as circumscribed epithelioma, are to be removed by resection of the œsophagus. Tumors developed in the thoracic part are inoperable. When they have affected the œsophageal walls in an annular shape they

result in strictures, which finally allow food to pass only with great difficulty or not at all. In these cases opening the stomach in the epigastrium appears the only saving means to prevent death from starvation. We will consider gastrotomy, although the carcinomatous stricture may still be permeable when the passage of food or the passage of the œsophageal sound through the stricture furthers the destruction or stimulates a more rapid growth of the tumor.

Tumors occur, for instance, above the cardia, which involve only the walls of the œsophagus. Pain and narrowing of the œsophagus may be absent and the tumors discovered only post mortem. Ofttimes numerous metastases are found, especially in the liver (the œsophageal veins communicate directly with the portal circulation).

Strictures of the œsophagus are found, as has been said, most frequently at the same sites of election as are foreign bodies and tumors. They are either of traumatic nature, occurring after direct injuries of the œsophagus, or we see them formed as a result of cauterizing after shedding of the slough produced by the cauterization (swallowing sulphuric acid or strong alkalis.) Diphtheritic processes also may leave loss of substance, which by cicatricial contractions may produce stenosis in the œsophagus. Similar results obtain after chronic inflammatory processes of the œsophageal mucous membrane, which appears hypertrophic, and thickened thereby. Spasmodic or hysterical strictures have been observed, but these, as is natural, cede to the administration of chloroform. Finally, as we have seen, a narrowing of the œsophagus is possible from annular tumefaction within it, and also by pressure exercised upon the œsophagus from without, as in retro-pharyngeal abscesses, aneurism of the arch of the aorta, carcinoma of the spinal column, sarcoma of the mediastinal lymph-glands, etc.

Permeable strictures of traumatic origin are amenable to gradual dilatation with sounds. The introduction of sounds is made mainly through the mouth. It is only exceptionally that strictures in the thoracic portion can be dilated exclusively by inserting the œsophageal sound through the opening in the œsophagus made in the neck.

The introduction of elastic tubes through the œsophagus is required when we desire to introduce alimentary substances directly into the stomach, as in difficulties of deglutition, such as occur after resection of the upper or lower jaw in acute tonsillary angina and in rapidly growing pharyngeal abscesses. It is also required in the insane who refuse to take food. When these patients will not open their mouths, the œsophageal catheter is either introduced through the nose or the patient is chloroformed and the tube inserted through his mouth. To avoid inserting the œsophageal catheter into the trachea, which would be followed by the introduction of alimentary liquids into the respiratory tract, the patient is narcotized and a gag placed between his teeth. Then the patient is allowed to recover from the narcosis and the thickest œsophageal sound is inserted through the orifice in the gag down to the stomach (Roser.) The larger the sound selected, the safer is the avoidance of inserting it into the trachea. Previous to pouring in alimentary liquids a few drops of water are allowed to run into the catheter, which will certainly produce reflex coughing in case the sound has been inserted into the trachea.

The introduction of the œsophageal sound is most easily done when the patient is sitting. His head is held as far back as possible, causing the free

* Bryk, Wiener Med. Wochenschr. 1877, Nos. 40 to 45.

edge of the upper incisor teeth to form a tangent to a line projected from the axis of the œsophagus (Trendelenburg).^{*} The index finger of the left hand—which, when the patient is a child or insane, should be protected with a metal case—is laid upon the tongue as far as the epiglottis. The tongue is pressed downwards and the catheter is inserted over it to the posterior wall of the fauces. As in catheterizing the urethra the symphysis is the key to guide the instrument out of the membranous portion into the neck of the bladder, so in the introduction of œsophageal catheters or bougies, *the anterior surface of the spinal column against which the posterior faucial wall lies, is the guide.* If the patient is caused to swallow when the instrument passes the entrance of the trachea, and thus elevate the trachea, and close the epiglottis over it, the entrance of the instrument into the air-passages is more surely avoided.

When great restlessness or excessive sensibility compels us to catheterize the œsophagus in the narcotic state, Girard's† process is recommendable. It consists in narcotizing the patient in the horizontal position and to have his head fixed by an assistant, as it hangs over the edge of the table so as to cause the margin of the upper incisors to form a tangent to the longitudinal axis of the œsophagus. The operator stands at the left shoulder of the patient and can guide the straight instrument horizontally into the œsophagus while holding it in his supine hand and employing delicate tact. Many advantages may be claimed for Girard's method in dilating strictures with bougies, the removal of foreign bodies, and for endoscopic examination of the œsophagus and the interior of the stomach.

We shall now proceed to the consideration of those impediments which may disturb the progress of the intestinal contents within the small and large intestine. The principal matter with which we have to deal is strangulated hernia.

As you know, gentlemen, we distinguish reducible, mobile, adherent and incarcerated hernias, and under therapeutic measures we discuss reposition, retention, and radical cure. The treatment of incarcerated hernias pertains to the domain of urgent life-saving operations.

You, furthermore, know that in hernia we must consider:

1. *The orifice of the hernial sac*, through which the hernial tumor escapes. These orifices are either dilated normal openings in the abdominal walls (crural rings, inguinal canal, umbilicus), or abnormal slits in any of the ventral walls (diaphragmatic, ventral, perineal hernias), or abnormal slits brought about by folding, bending or twisting of the mesentery and the intestines themselves. In this sense intussusception and ileus belong in this category.

2. *As to the hernial contents.* All of the abdominal organs may be found in a hernia. However, most frequent are hernias of the gut or peritoneum (enterocele and epiplocele) or both together.

3. You know that by *hernial sac* we mean a proci-dentia of the peritoneum generally involving the contents of the hernia.

The peritoneal covering may be absent, (a) in vesical hernias, when the bladder proceeds directly out of Retzius's prevesical space through the subcutane-

ous inguinal ring, or (b) when the coecum, the posterior side of which is not covered by peritoneum, forms the contents of the hernia. Finally (c), in many umbilical hernias, perhaps because of atrophy of the peritoneal pocket, and (d) in hernias of the umbilical cord. The absence of peritoneal covering can furthermore depend on a rupture of the hernial sac, or an escape of the ventral contents beneath the skin, after subcutaneous tearing of the abdominal walls.

The *hernial neck* is especially important; it is created by coalescence of the folds of the hernial sac, which have been formed in the hernial opening. It can also be pushed upwards or downwards from the hernial opening. If the neck of the hernia be obliterated after replacing or reducing the hernia, a hernial cyst may form (probably certain femoral cysts below Poupart's ligament may be considered as pertaining to this class).

Hernias which are not invaginated, may be irreducible either because of the large mass of intestine—large scrotal, umbilical or ventral hernias,—or through adhesion of the hernial contents with the sac, or neighboring organs, for instance, within the scrotum, as in congenital inguinal hernias.

Both of these causes for the irreducibility of hernias may often be set aside by continuous efforts at taxis (Arnaud, Hey, Malgaigne), for five or six weeks, sometimes success results within eight to fourteen days, during which compression with lead plates, or with elastic bandages, has been employed during the intervals between each séance. Irreducible large hernias have become reducible spontaneously after emaciation following acute diseases.

The third cause for the irreducibility is found in incarceration. We observe four elements to it:

1. Inflammatory swellings of the surroundings of the hernial opening, or within it near the rupture—inflammation in the region of the spermatic cord in external inguinal hernia. It is very rare.

2. Fæcal filling of the hernial contents: incarceration stercoralis—Engoûement.

3. The occurrence of a sudden disproportion between the hernial contents and the neck, especially when the latter has been subject to fibrous thickening by prolonged wearing of a truss, and the intestinal loop has been forced into the hernial sac which formerly was empty, then real strangulation occurs. The disproportion between the intestine and the hernial neck—in these cases *the intestinal loop is often found quite empty*,—is caused by continued increase in volume of the hernial loop in consequence of circulatory disturbances in the intestinal walls. These are most frequently of a venous character. The disturbances may be quite insignificant in the beginning (Borgreve's experiments). An example thereof might be made of a metal ring which can be pushed on the finger easily; but soon œdematous swelling of the finger takes place and the removal of the ring is rendered difficult, often entirely impossible.

4. Fibrous bands in the lumen of the hernial sac, in which the intestinal loop may be doubled upon itself, or wedged in.

The dangers of invagination are in proportion to its degree and rapidity of the damming of the circulation in the intestinal loop. When circulation is suddenly and totally interrupted, as in compression of the veins and arteries, the intestinal loop collapses, becomes anæmic, discolored, gangrenous (anæmic gangrene, Roser,*). In such cases efforts at taxis will be found

* Trendelenburg, Zur Extraction v. Fremekörpern aus dem Œsophagus. v. Langenbeck's Archiv, 1772, Bd. xiv. p. 63.

† Girard, Zur Anwendung d. Narkose b. Untersuchungen d. Œsophagus, Centralbl. f. Chirurg., 1880, No. 21, p. 337.

* Roser, Centralbl. f. Chir., 1874, No. 41.

useless, and only rapid operative measures will save the loop from death. Relieving invagination in these cases has quite justly been compared to cutting the rope in hanging.

The symptoms of acute invagination are very violent. Intense pains are felt while the swelling in the region of the hernial tumor is not great. The hernial tumor may soon show a doughy, emphysematous consistence, caused by a development of gas in it.

The less violent course of invagination, which we will designate as the *subacute form*,* is found in such cases where the impediments to circulation are produced more slowly. The veins as they lie more superficially are compressed first. Therefore, co-incident with circumscribed venous stasis an increasing œdema of the intestinal loop presents itself, then transudation into the hernial sac and as a consequence of the stasis extrusion of red blood-corpuscles into the tissues of the intestinal walls, all producing real capillary and larger extravasations of blood. In these cases the loop does not appear steel-blue or grayish, as in the previous class, but dark red in the beginning, and later brownish-red. Inasmuch as the arterial supply is not entirely interrupted, despite the venous stasis the danger of gangrene is not so great and often is delayed for several days. Therefore in these cases taxis promises better results.

The processes which we have designated as characteristic of invagination cannot be presented schematically better than by Cohnheim's* original experiments on temporary interruptions of the venous and arterial circulations in the frog's tongue. Microscopic observations of the occurrences which take place in the tissues of the tongue are so significant that if you wish to inform yourselves upon the changes which a hernial loop suffers on invagination, I cannot too urgently recommend you to a study of the above experiments.

In general, the symptoms will be more violent the more acute the strangulation, as is shown by the intensity of the pains and general collapse. Stercoraceous vomiting is often absent in a rapid course of the affection but in general it presents itself the sooner, the nearer the invaginated intestinal loop is to the stomach.

Real strangulations must be distinguished from apparent ones, that is, those in which the series of symptoms which resemble those of strangulation are dependent upon other causes.

Thus we find (a) *peritonitis within the hernial sac*. It may occur after traumatism to any empty hernial sac. Or it may be developed when the projecting intestinal loop suffers perforations of its wall by foreign bodies or ulcerations. Furthermore (b) *in this connection must be considered inflammation of a serous membrane adherent within the hernial sac* (so-called inflammatory invagination); and then (c) *spasmodic invagination*. This refers to spasmodic anti-peristaltic motion of intestinal loops in atony of the intestine, or may depend upon tension on the mesentery in large adherent ruptures. Finally, we will mention (d) *intussusception*, which may occur within the abdomen, as also within a hernia.

Omitting the treatment of apparent strangulation, we would employ anti-phlogistic means in peritonitis of the hernial sac as well as in inflammatory epiplocele accreta. When an abscess forms, especially in intra-hernial peritonitis, opening the abscess becomes necessary. In intestinal colics we would have to employ

the wet pack, clysters of opium and purgatives. In intussusception laparotomy may be thought of in case the intussusception occurs within the abdomen. But if symptoms of intussusception are accompanied by peritonitis in the hernial sac, we will have to proceed to an exploratory herniotomy. This applies to cases where the symptoms of strangulation occur with multiple irreducible hernias.

Before we proceed to the treatment of hernial strangulation we will first call to our minds the place or site where it may occur. In recent hernias the hernial opening itself may be the contracting point, and this opening may appear as a ring (crural ring), or as a canal (inguinal canal), or as a split in the abdominal coverings. In old hernias, especially where a truss has been worn for a long time, the seat of the strangulation generally takes place in the fibrous thickened neck of the sac, which, as we have seen, may sometimes be above and sometimes below the hernial opening. Thirdly, the strangulation may occur neither through the hernial opening nor the neck, but through neoplastic bands within the hernial sac itself, or produced by an intestinal loop being caught in an opening of the peritoneal net. The net also, in an epiplocele, when it has been converted into a pear-shaped polypoid tumor, may produce strangulation when it is withdrawn towards the hernial opening. As it becomes wedged in there, it presses upon the gut between itself and the hernial opening.

The treatment of strangulated hernia implies the essential principles that are suggested by acute interruptions of circulation in the intestine in recent ruptures with violent pains, rapid collapse, etc., (strangulated loop). The only *sp. saving* means is *herniotomy*, executed as soon as possible. In less acute strangulations the mechanism is to be considered, and taxis first employed.

Three manipulations are to be distinguished in taxis, according to the mechanism of the strangulation. In case taxis does not succeed immediately, the success may be attained in repeating the manipulations under the influence of an anæsthetic:

(a) The mechanism, according to Lossen,* applies especially to fecal impaction and is brought about in the manner that I will show you. If a loop of intestine be made to traverse a hole bored through a plank, which hole is somewhat smaller in diameter than the part of the loop which enters it and if you force into the intestine any substance which in consistence resembles the fecal mass (as boiled peas or grits) a moment will arrive when the mass can no more be forced into the part of the loop below the opening in the board. Close examination will show you that the lumen of the afferent loop within the artificial hernial rupture is completely choked and pressed against the wall, while the lumen of the efferent part is filled entirely with the above-named pap. The mechanism according to Lossen, consists of the sudden filling of the afferent part of the intestine with tough matters which it is difficult to move, so that the ring of the hernial opening is completely occupied by it and the walls of the efferent part of the gut are so pressed together that the progress of its contents is prevented. If we reduce the diameter of the afferent part of the intestine within the hernial opening then the intestinal con-

* Lossen, Studien u. Experimente u. d. Mechanismus d. Bruchein-klemmung, Verhandl. d. iii. Congress. d. Deutsch. Gesellsch. f. Chirurg., 1874, and v. Langenbeck's Archiv. B. xvii., p. 301. Compare excellent articles by Busch, Lossen, Roser in Centralblatt f. Chir., 1874, and by Bidder, Kocher, Lossen, and Roser in same journal 1875, as well as Grossere Vorträge, by Busch, Lossen, and Roser in the Verhandl. d. iv. Congr. d. Deutsch. Gesellsch. fr. Chir. im Jahre, 1875.

* Cohnheim, Neue Untersuchungen über d. Entzündungen, Berlin, 1873, and Vorlesungen u. allgem. Pathologie, Bd. i. pp. 108 to 133.

tents can extend the efferent part and thus make their way out of it. To bring about the same results in a real hernia with fæcal impaction, we must exercise pressure upon the afferent intestine within the hernial opening. This pressure must be made radially, from the side of the choked afferent intestine to the opposite point of the circle of the hernial opening. Inasmuch as we cannot tell at what place the afferent gut is compressed during life, therefore we will have to compress the afferent gut within the hernial opening towards all sides radially, until the pressure upon the tensely filled hernial tumor produces free motion of its contents and thus relieves the fæcal impaction.

According to Rosser,* the impaction is brought about by a lack of proportion between the loop and the neck of the hernia, which results in the formation of longitudinal folds in the intestinal walls, within the hernial neck, whereby a flap-like mechanism is produced which when the base of the hernial tumor is pressed upon causes complete shutting off of the intestinal contents from the intestinal tube above the hernial neck. In order that reduction may succeed, simple pressure from the base of the hernial tumor in the direction of the hernial opening must not be exercised, as thereby the form of the tumor will be converted from that of a pear-shaped long-necked bottle into that of a flask which has been flattened in its longitudinal axis. But we must compress the hernial tumor with the fingers of one hand closely beneath the hernial opening, while we grasp the tumor with the other hand and endeavor to conduct its elongated form back through the neck of the hernial tumor (Streubel†).

(c) Busch‡ holds that we must picture impaction of an intestinal loop thus: repletion of the intestine extends its free outer wall, more than its inner one, and the mesentery becomes adherent, thus a doubling of the afferent as well as efferent gut is produced within the hernial orifice, preventing further passage of the intestinal contents to the intestine beyond the hernial tumor. The passage is only made possible by relieving the doubling within the hernial orifice in bending the hernial tumor in the opposite direction, thus straightening the axes of both the efferent and the afferent intestines.

Besides narcosis, certain positions of the lower extremities facilitate taxis; flexion and adduction of the thighs relax the abdominal walls and reduce the tension of the inguinal canal. In crural hernias coincident rotation of the thighs inwards favors a relaxation of the fascia lata. Elevation of the coccyx acts by allowing the intestines to fall back against the diaphragm and by the traction which the mesentery is thus caused to make upon the hernial loop. In like manner deep inspirations, lying on the healthy side and perhaps also a knee-elbow position, exert their influence. Those adjuvants to taxis which were formerly recommended, as, bleeding, leeches, the warm bath, extensive cupping of the abdomen, warm fomentations, narcotics (opium, belladonna), etc., have been entirely substituted by chloroform (or ether) narcosis. The administration of purges, clysters, tobacco (inf. foi. nicot. [5.0] 200.0; gummi mimos, 10.0 ol. ricini 15.0; M. D. S. for two injections), the ice bag, direct compression of the hernial tumor (elastic compress), have

yielded favorable results only in isolated cases, and then owing to particularly favorable circumstances. Results should sooner be expected from forcible injection or pouring of water into the rectum, as in ileus.

When taxis is properly made under the influence of an anæsthetic we will not hesitate to proceed immediately to herniotomy, utilizing the existing narcosis and having made all preparations before. We will now occupy our attention with the details of this operation.

1. We must consider the cases wherein apparently successful taxis makes herniotomy become necessary. Spurious reduction, apparent reduction, false reduction (Streubel*) occurs upon returning the hernial loop *en bloc* with its sack in strangulation, above the hernial orifice between the abdominal parietes and the peritoneum parietale. A similar occurrence can take place after opening the hernial sack in herniotomy when the hernial walls are not fixed during reposition of the hoop. Then the gut may be forced through the dilated hernial neck into the abdominal cavity beside the neck, and between the peritoneum and abdominal wall.

2. By annular tearing of the constricting hernial neck, which is pushed into the abdominal cavity with the hernial tumor.

3. By returning the prolapsed intestinal loop without relieving its torsion or invagination.

Herniotomy, the operation for relief of intestinal strangulation, has saved more human lives than have all other means which have been recommended or adopted for their relief; notwithstanding that the proximity of the abdominal cavity made this measure always appear one which required serious consideration, previous to the period of the antiseptic treatment of wounds.

Herniotomy, as well as lithotomy, is said to have been first recommended in the middle of the sixteenth century (Franco†); Ambroise Paré‡ often performed it successfully. Special instruments are not at all requisite for this operation; the necessary instruments are found in every operating case.

The strangulated loop is exposed by splitting the soft parts which lie upon it. We first incise the skin in the direction of the long diameter of the hernial tumor. In femoral hernia this would imply an incision parallel to the axis of the femur, while inguinal hernias require an incision parallel to Poupart's ligament which will have to extend to the scrotum in the male or the labium maj. in the female. An exception thereto is made in strangulated umbilical hernias, which preclude opening the hernial tumor at its apex, because of the thinness of its coverings. According to the maxims which have been already enunciated, and incision is made either in the linea alba or in a direct parallel to the base of the hernia and near it (preferably to the left.) Then the umbilical ring is freed and notched, as is the hernial neck within it, so as to permit the extraction of the intestinal loop from the hernial sack after separation of its adhesions. The other hand supports the region by compression of the hernial tumor from without (Difffenbach§). The further treatment of the wound is similar to that of laparotomy.

* Roser, Archiv. f. physiol., Heilkunde 1856, 1857, 1860 and 1864. Compare also Roser's Handb. der Anat., Chir., 1872, p. 343.

† Streubel, Prager Vierteljahrschr., 1861; Bd. I, p. I.

‡ Busch, Sitzungsberichte d. Niederrhein. arztl. Gesellschr. v. 10, Marz., 1863.

* Streubel, Ueber d. Scheinreductioinen b. Hernien, Leipzig, 1864.

† Franco Traite des hernies, Lyon, 1561.

‡ Ambroise Pare, Œuvres complètes; ed. Malgaigne, Paris, 1840.

§ Difffenbach, Operative Chirurgie. Bd. ii. p. 612.

In all other strangulated hernias after splitting the skin, the sub-adjacent tissues must be separated with a knife for which purpose they are elevated singly with two rat-toothed forceps as thin plates of connective tissue. Formerly it was customary to drill the several connective tissue layers apart with a hollow sound, but this practice is decidedly reprehensible.

The impediments to circulation in the hernial loop are followed by the transudation of a fluid into the sack (Bruchwasser). The escape of this fluid is the most reliable sign in many cases that we have opened the hernial sack. But in œdema of the hernial sack-walls, fluids may also be found between the separated layers. Again, it may happen that there is no hernial fluid (Bruchwasser) which occurs especially in crural hernias and markedly so in very acute strangulations or also in cases which progress very slowly (hernia sicca). In the latter cases adhesions are often found between the intestinal loop and the hernial sack. Then great care is required in our procedures, lest the gut be split.

In former times the question was discussed whether hernias could be relieved, especially in cases of recent strangulation, without opening the hernial sack (external herniotomy.) It was proposed to free the hernia with its sack from the site of contraction by incision, tearing or separating with the fingers. This procedure does not appear reliable; as, first, the strangulation happens frequently within the hernial sack and then, above all, the method allows no view of the intestine. The other advantages which are claimed for external herniotomy have lost weight since the introduction of antiseptics.

Therefore it is more advantageous to free the intestinal loop *by opening the hernial sac and relieving the strangulation directly* (internal herniotomy). For this purpose a probe-pointed somewhat curved knife, with a concave cutting edge, like a bistoury of the ordinary pocket-case, is used. Special herniotomes are mentioned and called after known surgeons (Pott, A. Cooper, Rust, Seiler, and Tesse. The knives of the latter have convex cutting edges. Grzymala has devised a cover for the point of a convex knife.)

To enlarge the site of constriction *the knife must not be drawn, but allowed to act by pressure*. It is introduced into the contracted site, lying flatly upon the index finger, the cutting edge is then erected against the constricting ring, and by pressure of the finger upon the blade it is made to notch the ring at various places in a centrifugal direction (Vidal's débridement multiple). For this purpose the herniotome need be sharp at its free end only as is Cooper's bistoury, which may be improvised by wrapping the greater part of the blade of a Pott's knife with adhesive plaster. Multiple-notching for the relief of the constriction is highly advantageous over unilateral incision (Pott, Garangcot), which requires special care in inguinal hernias to avoid wounding the epigastric artery. If Gimbernat's ligament were split towards the symphysis there would be danger of wounding the obturator artery in case the latter should take an abnormal course from the epigastric around the crural ring descending to the obturator foramen (Todtenring, death-ring). But the possibility of wounding this artery has been very much exaggerated, and has detained many from performing herniotomy. Thus Dieffenbach is perfectly right in saying that the fear of wounding an abnormal epigastric artery has cost more human lives than the injury itself (Operat. Chirurgie, Band II., p. 480.)

The second step of herniotomy, the multiple-notch-

ing of the contracted part of the hernial opening or sack, frees the contents of the hernia from constriction. And now the third step, the *reposition of the hernial contents* will be considered.

The freed intestinal loop should never be returned to the abdominal cavity without first drawing it forth, to assure us that there is no further site of contraction higher up in the hernial sack. Secondly, we must *assure ourselves of the condition of the loop*, especially at those places which have been subject to direct constriction, and which have often been left with gangrenous marks as the result of pressure. If the loop is quite healthy, such adhesions as may exist should be broken up, and then the loop returned in such a manner *that that part of the intestine which prolapsed last is returned first*. Old adhesions which are separable with difficulty, or not at all, notwithstanding the relief from constriction, will oblige us to return the intestine in the old position. If the appearance of the loop is not normal, all those manifestations which we have described in sudden or slow interruptions of the venous and arterial circulation in the intestinal canal, must be considered in the interests of prognosis. Then Cohnheim's experiments on the tongue may serve as examples. It will be especially difficult to decide whether a discolored spot in the intestinal walls will return to a normal condition or will suffer mortification. In this sense many fatal errors have been committed.

If a part of the intestine is really gangrenous, or if a perforation has occurred, our subsequent treatment has a more distinct base. In round, hole-shaped perforations it has been proposed to draw forth the affected part of the intestine with a forceps, and to place a ligature about the base of the cone thus drawn forth, just as Cooper proposed in hole-shaped injuries to the larger venous branches. Linear necroses of the intestinal wall are most frequently diagonal, to and sometimes at an angle to the intestinal canal, and corresponding to the contracting ring. In such cases the dead parts may be excised and the lips of the wound drawn together by button-sutures or by continuous suture in such a manner that the serous surface of the lips of the wound are brought in exact opposition, and the mucous margins are turned over to project into the intestinal lumen (Lembert's suture.)

The same principles guide our application of sutures when an entire loop of intestine has become gangrenous, and we wish to unite the upper stump of the amputated gut with that which was below the contraction. The safest course in these cases is that laid down by Kocher's excellent advice. Beyond all, not only must the gangrenous loop be excised, but also so much of the neighboring part of the gut as may appear suspicious—that is, discolored brownish or blackish red, swollen, or covered with fragile dim serous membrane, or filled with mucus of a bloody tinge, or, in a word, so much must be removed as appears infarcted. The infarction depends on a venous stasis within the intestinal walls that have been tensely stretched in the strangulation. This stretching almost always affects the afferent gut. The resection of the part of intestine which is to be removed is begun by notching the constricting ring as much as possible, so as to be able to draw forth the intestine easily. Large clamps, or, in emergencies, temporary ligatures, are made to close the upper and lower boundaries of the dead parts. These should be applied to healthy intestine. At

* Kocher, Zur Methode d. Darmresection b. eingeklemmter gangranöser Hernie. Centralblatt f. Chir., 1880, No. 29.

the same time fixed ligatures are made to secure both ends of the piece of intestine which is to be excised, and a strong silk thread is tied around the mesenteric fold which pertains to the necrotic loop. Then the scissors are used to excise the necrotic gut between two ligatures, or between ligature and clamp, taking great care not to soil any of the parts with the contents of the healthy intestine, nor with gangrenous bits, and particularly to avoid the entrance of either into the abdominal cavity. Finally, the excised piece is separated from its mesentery, which has been ligated.

Then threads are drawn through the intestinal stumps beyond both clamps, which threads are to be used for the application of Lembert's suture. The stitches are run through the intestinal wall parallel to its serous surface in such a manner that they do not penetrate anywhere into the intestinal lumen. Previous to tying the sutures, those parts of the intestinal stumps which have been clamped or tied are cut off with the scissors, between the clamp and line of suture, or between the temporary ligature and line of suture. It is also recommendable to allow the contents of the upper part of the intestine, which are mostly mixed with blood, to run into a dish previous to tying the threads. Besides the deep sutures, smaller superficial peritoneal sutures, which grasp only serous membrane, must be placed between them. After complete disinfection, the intestine which has been restored, by suture, is to be returned. Tension on the line of suture is best avoided on reposition, as has been mentioned, by thoroughly notching the contracted site of the hernial sac. In all cases the double suture must be made carefully and closely, *especially in the vicinity of the mesenteric insertion*, to insure that the intestinal contents will nowhere escape between the stitches. Kocher recommends opium in the after-treatment, but attaches more importance to emptying of the upper intestinal stump previous to suture, as has been cited, as well as subsequently washing out the stomach with borated water, so as to disencumber the sewed intestine entirely. During the ten days following the patient must swallow nothing but small pieces of ice. nutrition is carried on by injections into the rectum.

Enteroraphy, after resection of a gangrenous gut, is the simplest and safest procedure, which will seldom disappoint in recent cases, when skillfully executed. Resections of the gut, followed by enteroraphy, should substitute all other measures for the treatment of gangrenous hernias.* When the greater part of the circumference of an intestinal loop is necrosed and the restoration of its lumen is impossible, and where an entire resection of the affected intestinal piece is not made, the necrotic gut has occasionally been simply incised and fixed in the wound with a few stitches. It is self-evident that this operation must be followed by an artificial anus.

If it be decided to cure this subsequently by an enteroraphy, other conditions than those incidental to a primary resection of a gangrenous loop prevail. After the point of attachment of both intestinal stumps in the abdominal wall has been split or circumcised and the intestinal stumps separated from the abdominal

fistula and their margins refreshed diagonally, the upper intestinal end, which generally is the only one in function, appears dilated, while the lower one is collapsed and much narrower than normally. The dilatation of the upper intestinal tube which terminates in the abdominal fistula, will appear greater in proportion to the amount of contraction which has occurred in the mouth of the fistula. When considerable incongruity was found in the sizes of the intestinal stumps the larger intestine which was folded over, or an edge thereof was placed within the lumen of the narrower, which had been cut through diagonally, and then Lembert's suture applied, as usual, after the tube was also fastened by sutures within the smaller intestine (Billroth*, Czerny). Or, as was advised by Jobert, the wider intestinal tube was folded in upon itself while the narrow one was simply pushed into the other one. Complicated propositions, such as for instance, Denan's suture with three cylinders pushed into the intestine, are worthless.

The principles for the treatment of a rupture after relief of the constriction, are somewhat modified when the rupture contains peritoneum only or peritoneum and intestine, normal and healthy peritoneum may be simply replaced like normal gut. Peritoneum that is adherent to the hernial orifice is soon permeated by granulations, and finally shrinks, while it often yields a good permanent closure of the hernial opening. Parts of hypartrophic, degenerated peritoneum which have become converted to a rolled-up lump of connective tissue, should be excised after the stem of the epiplocele has been ligated *en masse* or when this stem is extraordinarily thick, after its vessels have been provided with ligatures. Those convulsive and inflammatory manifestations which formerly followed this ligature *en masse* (symptoms of strangulation, vomiting, and sub-serous phlegmons) are to be attributed to defective treatment of the wound and not as a consequence of traumatic irritation by the ligature *en masse*.

The after-treatment of herniotomies, in which antiseptic measures have been strictly followed, after reposition of the intestine, the wound of the skin may be sewed subsequent to the insertion of a drainage tube into the hernial sack. It appears far more appropriate after reposition of the hernia, to isolate the neck and to draw it up as high as possible against the abdomen with a stout thread which has been boiled in a five-per-cent. carbolic solution and to remove the sack *in toto* from its surroundings below the constriction. This method of *radical cure* of hernia which can be executed in most of those which have been strangulated and reduced by operation, has been resuscitated recently under the protection of Lister's treatment, while in the past it had been known and practiced, yet desisted from owing to its dangers. The radical treatment of hernias in the recent antiseptic period, are especially discussed in the works of Czerny,† Riesel,‡ Schede,§ Maas,|| and Steffen.¶

In inguinal hernias, after ligation of the neck, the hernial opening is closed with special sutures (Czerny's corset sutures or also the mattress suture). The cases

* Billroth, Ueber Enteroraphie. Wiener Med. Wochenschrift, 1879, No. 1.

† Czerny, Studien zur Radicalbehandlung d. Hernien. Wiener Med. Wochenschr., 1877, Nos. 21 to 24.

‡ Riesel, Deutsche Med. Wochenschr., 1877, Nos. 38 and 39.

§ Schede, Contrabl. f. Chir., 1877, No. 44.

|| Maas, Ueber Endresultate radicaler Hernienoperationen. Breslauer arztl. Zeitschr., 1879, Nos. 5 and 6.

¶ Steffen (Socin's Klinik), Ueber Radicaloperation d. Hernien. Basel Franz. Diss. 1879.

* It has been shown experimentally that long intestinal loops can be removed from their continuity of the intestinal tube, so that they remain connected only with the mesentery. If then the lumen of the removed piece is thoroughly washed with five-per-cent. carbolic-acid solution, the piece of gut with its two open ends may be replaced within the ventral walls without evil consequences. Of course the two intestinal stumps must be brought together to restore the continuity of the intestine.

which until now have been operated upon, according to the above method with antiseptic precautions, have yielded very favorable results as regards life. The rupture itself is to be considered as cured in many cases as soon as the patients can follow a part of their occupations without a truss. Partly, at least, so much was attained that ruptures which previous to the operation could not be contained by a truss, permitted one to be worn thereafter. How long this condition lasts, whether the cure remains definite or whether relapses would, notwithstanding, occur upon discarding the truss, are questions which cannot be definitely answered as yet, owing to the brevity of time which has been devoted thus far to these operations.

If no radical cure has been attempted, the patient is allowed to rise after the wound is healed and to exchange his antiseptic compress-bandage for a truss.

But when the gangrenous rupture has been treated, where the formation of an artificial anus is inevitable, the fæces will cover the wound permanently and prevent its antiseptic treatment. Then the wound must be simply left open or covered with disinfecting dressings (carbolyzed or salicylated oil compresses) and unimpeded evacuation of the excrements as well as the secretions from the wound must be provided. The subsequent relief for unnatural anus has been briefly discussed above.

SELECTIONS FROM JOURNALS.

ON SOME KINDS OF ALBUMINOUS AND PURULENT URINE IN CHILDREN.

BY

SAMUEL J. GEE, M. D., F.R.C.P.

The urine of children is sometimes found to be albuminous, purulent or bloody, when there are no other reasons for suspecting disease of the urinary organs. Bloody urine seldom escapes notice. But purulent urine may be easily overlooked, especially in the case of babies who pass their urine into a napkin. And albuminous urine cannot be distinguished by the eye from healthy urine; so that it is a good rule to follow, to examine the urine of all children, even of the youngest, who are suffering from serious or obscure disease. And hereby the nature of an illness, which is otherwise inexplicable sometimes becomes quite clear.

I will speak, first, of purulent urine; and next, of spontaneous nephritis.

1. **PURULENT URINE.**—At the outset, let me exclude all cases, in which the urine of little girls is rendered purulent by mixture with discharges from the vagina or pudendum.

Urine which is purulent within the bladder, becomes so in consequence of cystitis, pyelitis, or destructive ulceration of the kidney. I cannot recall an instance of an abscess having opened into the urinary passages of a child. Again, purulent urine is either a temporary or a chronic condition; and it is to the temporary form of the disease that I wish to call especial attention.

1. *Urine Purulent for a Short Time only.*—In cases of this kind, it is hard to say whether the mucous membrane of the bladder, or of the pelvis of the kidney, or of the whole urinary tract, is inflamed. Some children suffer from the symptoms of cystitis; that is to say, the urine is passed often, in small quantities, and with pain: but other children have no local symptoms

of any kind. And cystitis, even when present, may be only a part of more extensive disease.

I will narrate two instances of this temporary purulent urine; one of which possesses the unusual interest of having been followed by a *post mortem* examination.

The little daughter of a well-known surgeon, a child aged nine months, brought up by hand, suddenly became very feverish and ailing. Asked to see her, I could discover no cause for these symptoms, until, after a few days had passed, the nurse noticed that the napkins were stained in an unusual manner. Some of the urine being saved, it was found to contain pus, and nothing unnatural besides pus. Micturition was painless, and not more frequent than usual. Her urine remained purulent for several weeks, and then she completely recovered; and, at this moment, when she is four years old, she is quite well; her urine is natural, and always has been so since that illness.

A girl, aged two years and a half, was admitted into the Hospital for Sick Children on account of an illness which began on July 4, 1878, with fever and the signs of cystitis; that is to say, she suffered pain when she passed urine, which she did very frequently, so that she often wetted the bed. On July 15th, the day of admission, her condition was as follows. She looked very ill, and was febrile, with a temperature of 104° . She cried when she passed urine. The urine was pale yellow, alkaline, and slightly albuminous. It yielded a flocculent sediment, which constituted about a quarter of the whole; and which consisted of mucus and corpuscles. The corpuscles were faintly granular, larger than ordinary pus-globules, and looked as if swollen with water. Each corpuscle contained a large and distinct nucleus; some corpuscles had two nuclei. There were no casts of renal tubuli. She was sounded, but no stone was felt. There were no other signs of definite disease. The fever continued until August 10th, and the temperature not seldom rose to 104° , sometimes nearly to 105° . After August 10th, it was natural for the most part, but, on three occasions, it rose for a day or two without obvious cause. On August 5th, the urine was still purulent; but there is no note after this date until September 2nd, when the urine was free from pus and albumen. On September 23rd, the urine was almost clear, and threw down hardly any sediment. On October 3rd, she went out, a very different child from what she was on admission, being quite well, fat and firm; the urine was natural.

Eighteen months afterwards, she was attending for bronchitis, and died in the out-patient room. Dr. Abercrombie made a *post mortem* examination, and I extract these details from his report. There were the signs of bronchitis and congestion of the lungs. A small cheesy nodule, of the size of a pea, lay in the lower lobe of the left lung. The tracheal glands were large and cheesy. The kidneys and ureters were natural. The bladder was dilated, the walls thin, the mucous membrane natural. All other parts were natural.

Concerning the treatment of these cases; a milk and farinaceous diet is to be advised. The drugs which I have found to be useful are two; namely, benzoate of ammonia, and pareira brava.

2. *Chronic Purulent Urine.*—When the urine remains purulent for more than a few weeks, the question of tubercular disease or of stone arises. How long a simple cystitis or pyelitis may last, I cannot say.

a. The best account of tubercular disease of the

urinary organs is given by Mr. Thomas Smith in the eighth volume of *St. Bartholomew's Hospital Reports*. There is a good description of the morbid anatomy in Matthew Baillie's *Morbid Anatomy*, published at the end of the last century. (See *Works*, by Wardrop, 1825, vol. ii, pp. 244, 262.) In the eighth volume of the *Clinical Society's Transactions*, Mr. Humby has narrated an unusual case of perforation of the bladder by a tubercular ulcer. I agree with Mr. Smith that the disease commonly begins in the kidney. I once saw, at a *post mortem* examination, most extensive tubercular destruction of one kidney; and yet, during life, no albumen, pus, or blood had been found in the urine, although it had been examined many times. The kidney had been quite shut off from the urinary passages.

b. Stone in the kidney of a child sometimes seems to be latent, and to afford no signs besides purulent urine. In cases of this kind, I do not see how a diagnosis can be made. In other cases of stone in the kidney, the diagnosis becomes possible: when there are symptoms more or less like those of renal colic; when there are symptoms of stone in the bladder, and yet no stone can be discovered there; or when the kidney can be felt by deep pressure.

II. SPONTANEOUS NEPHRITIS.—Acute nephritis, not secondary to any discoverable disease, and not due to the operation of any known poison, is common enough in adults; and I believe that primary spontaneous nephritis is far from being uncommon in children. The question of latent scarlet fever always rises. But when acute nephritis occurs in a child who has never shown any signs of scarlet fever, who has not (so far as can be made out) been exposed to scarlet fever, and whose brothers and sisters, living in the same house, have not shown any signs of scarlet fever, I think that the burden of proofs lies upon him who affirms that such nephritis must needs be scarlatinal.

This acute spontaneous nephritis is sometimes wholly latent. The child is ill, but affords no symptoms which draw attention to the kidneys. It is only when the urine is asked for and examined, as a matter of course, that the nature of the disease becomes apparent. The onset is sometimes attended by a high degree of fever, but this is not always so. Indeed, the temperature is sometimes never raised at all.

There is often no dropsy from beginning to end of the disease. On the other hand, the dropsy is sometimes great, and even cause death by hydrothorax and oedema of the lungs.

Vomiting may attend the onset of the nephritis. When the vomiting is frequently repeated, the case becomes serious. Sometimes the child is dangerously exhausted from want of food. I have known a little patient, suffering in this manner, whose life seemed to be saved by nutritious enemata. Again, incessant vomiting is dangerous when it causes much falling off in the quantity of urine secreted. Occasionally the vomiting is attended by diarrhoea.

In several adults, I have known an ordinary acute sore throat to be attended by profuse renal hæmaturia. The whole disease is short, lasting not more than a week or ten days. One of my patients suffered in this way twice. The same combination of disorders may happen in a child; I will narrate an instance. A boy four years old, complained of his neck; his temperature was 102° ; the next day he seemed well. On the morning of the third day he seemed well, and his urine was natural to the naked eye. In the evening of the same day his neck swelled again; his temperature was 101° , and his urine was highly bloody. On the fourth day his temperature was 103° ; the left side of the neck,

both in front of and behind the sterno-mastoid muscle, was much swollen; one large gland could be felt; the swelling was very tender, and he could not open his mouth, so that the state of his fauces remained unknown. The urine was scanty and very bloody; by the microscope were seen numerous blood-discs, leucocytes, and casts, large and small, more or less corpuscular; there was no dropsy. On the fifth day he was better; temperature 101° ; the swelling of the neck was less; the tonsils were much swollen, and on the left was a small white excoriation. The urine was still very scanty, but hardly bloody, yellow-green in color, very albuminous, turbid, containing casts, leucocytes, and a few red discs. For the next few days the character of the urine remained the same; the swelling of the neck and fauces gradually became less. On the tenth day, the right side of his neck was somewhat swollen. On the eleventh day, he was altogether better, the urine rather more abundant, and much less albuminous. On the twelfth day, the urine was much more abundant, and very slightly albuminous. In a day or two afterwards he was quite well. At the present time, more than six years afterwards, he remains in good health.

More or less drowsiness sometimes attends acute nephritis in children, whether they be febrile or not. In some cases the drowsiness amounts to coma, as in the following instance. A girl, aged 4 years, became unwell on March 24th, and her urine was found to contain many pyoid corpuscles, no casts, and not much albumen. On March 27th, she became febrile and drowsy. The fever continued, and the drowsiness increased. There were no vomiting and no convulsions; the pulse was regular; the pupils were natural; there were no physical signs of disease in the chest or belly. On March 30th, I saw her for the first time with Dr. R. M. Miller of Norwood, whose patient she was, the question being whether her drowsiness was due to disease of the brain or of the kidneys. I will now quote from a report which Dr. Miller kindly sent me. "On April 2nd, there was a most abundant discharge of kidney-casts with epithelium. She became more and more gravely unconscious and ill, and, on April 3rd, her pulse was 180, and temperature 106.8° ; dry brown tongue, sordes; and she was quite unconscious. About three days later there was a little improvement, her temperature came down, and she took food better. On April 9th, there was a decided change for the better. She was not yet conscious, but when spoken to she moved her eyes from side to side. Up to the twenty-seventh day of illness, she never spoke a word. The pyoid corpuscles were absent from the urine for the first time on the twentieth day. After the fourth week she made a rapid convalescence." I may say that I have seen several other cases like this, but in none was the unconsciousness so deep.

Dr. Campbell Pope (London), a few weeks ago, had under observation an infant, just under twelve months old, whose illness commenced with vomiting; and this having continued some days drowsiness came on, and cerebral disease was suspected. On examination, however, of the urine, which had been difficult to obtain it was found to be loaded with albumen and casts, and in a few days became profusely mixed with blood. There was no renal colic or other evidence of stone, and the urine remained albuminous in gradually decreasing quantity for about six weeks, when the child became well and the urine normal. There was no history of scarlatina, or any case of that disease in the house or neighborhood, as far as could be ascertained, within a few weeks before or after the occurrence of this case.

Mr. R. W. Parker (London) was glad to have heard Dr. Gee refer to the probable presence of stone in the kidney, without any other signs than pus in the urine. This absence of what in adults was considered one of the most characteristic signs—namely, renal pain—had frequently struck him. He briefly referred to the case of a girl who had been subject to periodical attacks of hæmaturia and pyuria. She had no renal colic, and even during the height of an attack only complained of a little uneasiness about her umbilicus. Thus it was impossible to say in which kidney the stone was present, although he had little doubt that stone was the cause of the mischief.

Dr. Ashby (Manchester) was glad Dr. Gee had called attention to the importance of examining the urine in infants, a proceeding often neglected on account of the difficulty of saving it. The urine of infants was not unfrequently albuminous, both in general conditions of the body and in disease of the kidney, and doubtless also occasionally purulent. Dr. Ashby also agreed with Dr. Gee in his belief that acute nephritis, other than scarlatinal, occurred frequently in children. Recently, he had seen three such fatal cases; and it would be important to examine such kidneys microscopically, to see if such cases of glomerulo-nephritis, as it had been stated by Friedländer and others that this condition was confined to scarlatina.—*Brit. Med. Jour.*

ON SOME POINTS CONNECTED WITH THE REPAIR OF FRACTURES.

BY

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The very diverse statements which have been and are still made with respect to the structure and pathology of the callus growth which invests the seat of fracture of bones, both of men and the lower animals, induces me to lay before you these specimens, together with the following facts and conclusions for consideration.

First of all, let me call your attention to the typical process of repair in a simple fracture of a bone, the fractured surfaces of which are in perfect apposition, and so retained with complete immobility, either naturally, as in a fissured fracture of the skull, or by the aid of appropriately applied apparatus. The most noteworthy fact in connection with this class of cases is that there is very little new material or callus to be found connecting the fragments. Indeed, Sir James Paget writes (*Lectures on Surgical Pathology*, 4th edition, page 180): "When portions of bone are placed and held in exact apposition, they may be united without any new material being formed for their connection; a continuity of tissues being restored, as in the cases of healing by immediate union of soft parts."

Now, although such a notion of the mode of healing in bones is to me inconceivable, there can be no doubt that, for example, in the case of fissure of the bones of the skull, the amount of new material, or provisional callus, as it is called, which is thrown out, is extremely slight, and often imperceptible. If, however, perfect immobility be not secured, callus is thrown out to an extent more or less proportionate to the amount of mobility and displacement of the fragments; and so disposed, as a rule, that it is found in greatest abundance where support is most required. For instance, in all cases of angular displacement of fractures of long bones, the larger amount of callus is situated in the

concavity of the fracture, whereas comparatively little is observable on the convexity. The explanation of such a disposition of the new material, not at first sight obvious, may, perhaps, be sought in the fact that the periosteum with its vessels is less stretched and torn on the concave side of the bend than on the convexity, whilst, at the same time, in the former case, it is more widely separated from the bone; again, the compression of the surrounding parts, tendons, muscles, fasciæ, etc., would certainly, for a time, be greater over the more salient points of the fracture, and probably less than natural in the bend itself, so influencing the deposition of the callous growth, which one would reasonably expect to be most luxuriant in the direction of least resistance. Then, as to the structure of the callus in such cases: at an early period, it consists of a small-celled tissue, which, later on, tends to develop into more or less perfect fibrous tissue and cartilage (usually in the form of fibro-cartilage), finally becoming partly ossified and partly calcified. The presence of a cartilaginous callus has been much debated; some pathologists (Fœrster, for instance) asserting that they have never seen such in man; others, that whilst it is found in children and animals, it rarely occurs in the case of adults; some, again, that a cartilaginous tissue is always present to some extent. Mr. Greig Smith writes: "In the specimens which I have examined, the part played by callus-cartilage in repair was almost ridiculously small;" again, "I do not argue that this callus-cartilage in the lower animals is not a new growth specially provided for the purposes of fracture-repair. All I would maintain is that I have seen nothing to show that it is such in man."* In the specimens of the ribs and the ulna before you, the presence of abundant formation of cartilage in the callus is obvious to the naked eye, chiefly, it is true, in the form of fibro-cartilage, but still showing tendencies towards a more perfect type of cartilaginous structure. In several specimens in the College of Surgeons', and other museums, in which there is a considerable degree of displacement of the fragments, so involving much mobility, probably, masses of cartilage are imbedded in the fibrous tissue of the callus. In this case of ununited fracture of the humerus, which exhibits an almost perfect—if I may use such an expression—false joint, the fractured surfaces are covered with a layer of hyaline cartilage, which is thicker towards the periphery of the joint, that is, in the parts nearest to the periosteum. In another case, also a fracture of the humerus, with a less completely finished false joint, in St. Mary's Hospital Museum, fibro-cartilage was discovered in the callus around the joint, but none over the fractured ends. In animals, cartilaginous callus is, I believe, invariable, except in the case of compound fractures.

It would appear that the amount of callus-cartilage produced is in direct proportion to the amount of mobility and displacement between the fragments; the process of healing stretching over a long period, and the parts involved being exposed to prolonged and continuous irritation. Thus it is that an abundant formation of cartilage takes place in the case of animals, perfect immobility being exceedingly difficult to secure. In the case of the ribs (and these are not peculiar, for I think that a cartilaginous callus is invariable in fracture of ribs), the application of the explanation is obvious; and in that of the forearm, no

* "Histology of Fracture-Repair in Man." *Journal of Anatomy and Physiology*, vol. xvi, pp. 157 and 158.

splints had been applied, or other treatment adopted. As to the practical utility of this cartilage-callus, it is manifest that it constitutes a far more efficient splint than would slowly organizing fibrous tissue, clasping the fragments together until ossification has had time to spread through it. I do not assert that the presence of cartilage is necessary or essential, but that the significance of its presence lies in the fact that it is found in the class of cases which I have described, where strength and toughness of the callus is required; so that it does seem to me to be a "new growth specially provided for the purposes of fracture-repair;"* and here, of course, I join issue with Mr. Greig Smith.

The layer of hyaline cartilage which overlays the fractured ends of the bone in the case of the false joint of the humerus which I show you, and in other like cases, is remarkable. It is a perfect example of the adaptation of structure to the ends it subserves, and is, I imagine, to be regarded pathologically in the same light as the cartilage-formation in the "callus-rings of the ribs; that is, as a concomitant of the mobility and irritation to which the parts must have been subjected, though differing therefrom in function or utility. The cartilage, and the callus generally, is chiefly derived from the cell-proliferation of the periosteum around the seat of fracture, but there is no doubt that the medulla is capable of producing it, for specimens exist in which the cavity of the latter is plugged by a mass of cartilage. It is interesting to note, in connection with these considerations, that Kassowitz has described cartilaginous development as preliminary to ossification, in connection with the subperiosteal tissues of some bones which may be said to have an intramembranous origin; this is the case with the clavicle, the ends of which are found to be cartilaginous prior to its complete ossification; also with the symphysis, and the articular and coronoid processes of the halves of the lower jaw. He has also described like developments at the tuberosity of the radius and spine of the scapula; in fine, if one may draw the conclusion, that a cartilaginous basis is formed as a preliminary to ossification in those situations where a stronger and more durable support is required than would be supplied by young connective tissues.

We may foresee the future of the callus in the specimens before you; it is, to a large extent, ossified, especially in the case of the ribs. In the microscopical sections of the growing radius; a good opportunity is afforded of contrasting the natural process of growth with that of healing in the same bone. One is struck, I think, rather by the resemblances between the two processes than by their differences, though the ossification proceeds with far less regularity and definition in the latter than in the former case.

My friend Mr. Shattock, however, who examined the microscopical sections, pointed out to me the fact, and I completely agree with him, that in the specimens of the radius the cartilage-cells appear to flatten out and assume the characters of bone-corpuscles, whilst the cartilage-matrix is becoming at the same time calcified, a process exactly akin to that described by Kölliker as occurring in the formation of rickety bone—that a spurious kind of bone is, in fact, developed in the callus of the specimens. This, if it be generally true, would constitute a specific difference between the process of natural ossification and that of fracture-repair. It is right, however, to state that the radius and ulna are both to a slight extent rickety,

and therefore no general conclusion in this respect can be drawn from them.

I must apologise for the incoherency and inadequacy of this short paper; but the specimens before you seemed especially to illustrate the points I have touched upon, and I trust its deficiencies may be excused. (The specimens were from St. Mary's Museum.)

Dr. Coats (Glasgow) said he was pleased to hear the paper of Dr. Silcock, as he had also found cartilage in the callus of fractured ribs. He adverted to the fact that, in the fractures of animals, cartilage was regarded as a regular constituent. This illustrated a somewhat important matter, namely, the virtual identity of cartilage, bone, and connective tissue. The processes in connection with union of fractures were inflammatory in character, the most immediate product being granulation-tissue. It depended on circumstances whether this fundamental tissue developed one permanent tissue or another. If the parts were kept perfectly at rest, then bone formed; with a less degree of rest, cartilage; and with very imperfect rest, fibrous tissue, as in ununited fractures. Taking this view of it, the exact significance of the cartilage was not exactly that of the provisional cartilage of a growing bone, that is to say, it was not produced with the view merely of forming bone. It seemed rather to be a tissue, intermediate in rigidity between bone and fibrous tissue, which developed when the parts were not sufficiently rigid to allow bone to develop. This did not exclude the development of bone out of the cartilage, which Dr. Coates had actually observed, but this was only occasional, and not necessary.

Dr. Charters Symonds (London) mentioned that, in examining a specimen of uniting fracture of the neck of the femur, he had found a large amount of cartilage occurring in the newly-formed material. The age of the patient being seventy-eight, the occurrence was considered the more remarkable, and appeared to represent a stage in the formation of the permanent bone. As indicating that not alone in the inflammatory processes attending the union of fractures was cartilage produced, he mentioned that he had also found hyaline cartilage in a specimen of new bone, forming from inflamed periosteum over a necrosing femur. Cornil and Ranvier stated that the reason that cartilage had been overlooked in the material uniting fractures, was the fact that compound fractures had been chiefly examined, these authors describing cartilage as a constant factor in the reparative material found in fractures. The part played by cartilage in these inflammatory and reparative processes seemed to require further investigation.

Dr. Silcock said, in reply to Dr. Coats, that he did not regard the cartilage in the callus as a tissue especially provided for, or essential to, the process of ossification of the callus material, but only in the manner set forth in the paper. He explained the divergencies of opinion amongst pathologists with respect to the presence of cartilage in the callus, by observing that, in many instances, general conclusions had hastily been drawn from the examination of, perhaps, one or two specimens only, and by the fact that opportunities of examining simple fractures in a man in process of repair but seldom occurred.—*Brit. Med. Jour.*

* Greig Smith, *op. cit.*

MEDICAL NEWS AND NOTES.

A Protest.—The undersigned, respectfully protests against the adoption by the Academy of so much of the minutes of the meeting of October 18th, as, it is assumed, rescinds certain resolutions adopted by the Academy at its stated meeting of April 19, 1883, on the ground, that, the motion to rescind was clearly out of order, and should not have been entertained by the assembly.

The resolution to rescind was out of order for the following reasons: 1. A question once put to a deliberative assembly and decided, cannot be again brought into question except by means of a motion for *re-consideration*. It was only by a motion for *re-consideration* that the resolutions of April 19th could be rescinded, and such a motion was not made at the last meeting, and if it had been made, it would not have been in order.

2. It is usual, in legislative bodies to regulate by a special rule the time, manner, and by whom a motion to reconsider may be made. (Cushing's Manual, paragraph 257).

3. Rule 6 of the rules of order of the Academy provides as follows: "After any question has been decided, except one of indefinite postponement, any two persons who voted in the majority may, at the same, or next stated meeting, move for *re-consideration* thereof; without which, no discussions shall be allowed." At the same meeting at which the resolutions said to be rescinded were adopted (i.e. April 19, 1883) "two Fellows, who voted in the majority" moved their *re-consideration* and the motion for *re-consideration* was postponed indefinitely: so that, according to Rule 6th, the motion for *re-consideration* could not, in order, be again brought forward.

4. A motion, simply to rescind resolutions regularly adopted, is not parliamentary, the proper motion being for *re-consideration*. Under the ruling of the President at the last meeting of the Academy, resolutions could be repeatedly passed and rescinded at alternate meetings of the Academy; a trivial method of procedure, never sanctioned by parliamentary law or usage.

5. The motion to rescind the resolutions of April

19, 1883, even if it had been put in the form of a motion for *re-consideration*, was directly at variance with Rule 6 of the Academy, for the reasons, that, it was not made by "two Fellows who voted in the majority," that, it was not made "at the same, or next stated meeting," and that, a motion for *re-consideration* had already been made, in accordance with rules of order of the Academy, and postponed indefinitely. *For these reasons*, the undersigned regards the adoption of the motion to rescind the resolutions passed by the Academy on April 19, 1883, as a plain violation of the by-laws, and he submits, that the action of the Academy in assuming to rescind the resolutions is *null and void*. He therefore protests against this action forming a part of the record of the Academy, and respectfully requests that this his protest be entered in full upon the minutes.

JOHN G. ADAMS.

Chvostek on the Treatment of Basedow's (Graves's) Disease.—From an experience in upwards of seventy cases, and fortified by the unanimous observations of Van Dusch, Lidenburg, Meyer, Erb, and others, Dr. Chvostek (*Centralbl. für Klin. Med.*, June 23) is led to regard the rational employment of galvanism as the most important part of the treatment of Basedow's disease. He recommends the following method to be pursued: 1, the ascending constant current applied to the cervical sympathetic, on each side, for at the most one minute; 2, the same to the spinal cord (one electrode about the fifth dorsal spine, the cathode high up in the cervical region); 3, through the occiput (one pole at each mastoid process), and in certain cases also through the temples, a constant current, for, at the longest, one minute, and so weak that the patient can feel but the slightest sensation of burning. Sometimes also local galvanization of the thyroid gland with a weak constant current is applied for about four minutes, the current being reversed at the end of each minute. The applications should be made every day, if possible. As a rule, very good results were obtained, even in the most severe cases a cure or marked improvement being recorded. In three cases, death resulted from excessive anæmia or from complications.

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ORIGINAL ARTICLES.

NEUROSES OF THE HIP.

BY

V. P. GIBNEY, M.D.

"*Neuroses*, a generic name for diseases supposed to have their seat in the nervous system, and which are indicated by disordered sensation, volition, or mental manifestation: without any evident lesion in the structure of the parts, and without any material agent producing them. Such is the usual definition. Broussais attributes them to a state of irritation of the brain and spinal marrow."—*Dunglison*.

Such is I am well convinced, the recognized meaning of the term among neurologists, and clinicians generally have found it very useful and a very convenient name to employ. Formerly neurosis carried with it a pathological significance of some kind not always understood, but latterly it has come to represent a class of functional disturbances of the nervous system, and the definition at the head of the article fairly expresses the sense it conveys. In addition to the indications specified in the quotation by which these nervous phenomena are manifested I would add *reflex muscular spasm, chiefly tonic*.

The term associated with the hip is intended to convey to the minds of my readers the fact that there are many pseudarthropathies of the hip wherein the neural element is so prominent that we speak of them as neurotic. There are many cases purely hysterical, and we speak of these as such, and again there are instances in which the symptoms are feigned or counterfeited so closely that we speak of such as cases of neuromimesis. Sir James Paget, in "Clinical Lectures and Essays," published in 1875, employed this latter term and illustrated the subject by some cases quite remarkable. Skey, in a series of lectures published in 1867, called these joint affections hysterical—as did Sir Benjamin Brodie years before. Indeed, Sir Benjamin says: "I do not hesitate to declare that among the higher classes of society at least four-fifths of the female patients who are commonly supposed to labor under disease of the joints, labor under hysteria and nothing else." Esmarch, whose name is associated with so much that is grand and abiding in surgery, made at one time the hysterical hobby, and (Dr. Shaf-

fer—Hysterical Elements in Orthopedic Surgery—is my authority for stating this), fully indorsed this assertion of Brodie. Esmarch, however, adopted to my mind the more comprehensive term—viz., *gelenkneurose*, and his publication at Kiel in 1872 was entitled "Ueber Gelenkneurosen." M. Charcot and S. Weir Mitchell have embellished this subject, and indeed the literature of neurology contains much that relates to the various disturbances in nutrition and sensation. Hysterical contractions are very common in neurological and gynecological medicine. The neurological specialist is too prone, I think, to attribute real arthropathies to neuroses, and the cases of *tabes dorsalis* with bone and joint lesions so well elaborated by Charcot, certainly furnish strong analogical evidence that some at least of the joint diseases with which the orthopedist comes in contact are neural in origin. The late Dr. Jno. K. Mitchell, of Philadelphia, and his illustrious son, whose name I have already mentioned, have furnished many illustrations showing the connection between spinal lesions and joint lesions.

The subject is a fascinating one to the orthopedist, and he eagerly grasps at any cause the knowledge of which will help him to so easily solve some of the harassing problems of this particular specialty. In the early part of the last decade I became exceedingly interested in nervous diseases, and I studied many cases that lay on the border-line of neurology and orthopedy. Many instances of apparently formidable joint affections I could trace to a spinal or neural origin, and I obtained speedy cures with this knowledge at hand.

In 1877 I published a paper that I had presented to the American Neurological Association on the subject with which I am now dealing, and in it gave my conclusions based on a study of some forty cases of true and false arthropathies. The subject was brought prominently before the members of my own specialty at that time. In 1879 Dr. Shaffer collected his own cases, read a paper on "Hysterical Joint Affections," before the New York Neurological Society, and brought it out in the shape of a monograph in 1880.

From a reported case or two in the volume one can infer that the author appreciated the danger of being carried away by enthusiasm. My own enthusiasm when at work over my cases a few years before this period led me subsequently into occasional error, and I am now very skeptical about the causative relationship between neuroses and true bony lesions of the hip joint; so that my present chapter on this subject will deal purely with the false arthropathies of neural origin.

Dr. Shaffer has placed on record some valuable cases, which I shall take the liberty of using in connection with my own. It is difficult to discuss the pathological phases of this subject, for the reasons already given, and I propose now to illustrate the clinical history by means of cases. The following appeared in my paper in 1877, and was that of a boy aged eleven years, who was brought to the out door department of the hospital in March, 1877, for suspected hip-disease. A hasty examination was made, and a day set for his admission as an in-patient. The mother was assured that the lesion was spinal, and a fair prognosis was given. No history was recorded at the time, but this was deferred until his admission. The next day, however, by the unsought advice of a kindly disposed aunt, the child was taken to an orthopedic expert, a consultation was held, and double hip-disease was diagnosed. (This was volunteered testimony on the part of the mother and the aforesaid

aunt.) I simply make mention to illustrate a difficulty in making a differential diagnosis.

On the 27th March, admitted to the hospital, when it was learned that the father, after a long illness, had died of phthisis, and that two other children in the family had died of some acute intracranial disease—in fact no better strumous history could have been obtained. The patient has ever been healthy, prior to the middle of the preceding month. Then, without any known exciting cause, he complained of pain in the right knee; shortly afterward of pain in both knees, and in back. To-day, as he walked, one limb for a while was favored, then the other. His chest was found somewhat rachitic, auscultation furnished negative results. At one time he stands so that a marked left skoliosis presents itself, at another *vice versa*. In other words, one position quickly fatigues. Tenderness on pressure over spinous processes of sixth, seventh and eighth dorsal vertebrae, more marked as that of the ninth is reached, becoming excessively so over those of the lumbar. Pressure over trochanters, lateral ligaments, and malleoli, of both lower extremities, gives pain. Flexion, ab- and adduction of either thigh, is resisted by muscular spasm. Hyperæsthesia is a prominent symptom. No swelling or effusion of any kind is found, periarthritic, and when the limb is grasped firmly and motion made, no pain in any joint is perceived. There is no arthropathy, and the former diagnosis stands unamended. An emplastrum cantharidis to the spinal tenderness is all that is prescribed.

Four days later very little tenderness remained. On the 7th of April it was recorded that he walks with perfect ease, no limp being discoverable. No spinal tenderness at any point; no tenderness anywhere. On the 16th he was cured and on the 17th discharged.

The recurrence of symptoms after long remissions is not uncommon, and occasionally we have an opportunity of observing the case through two or more exacerbations. A boy, for instance, aged four and a half years, came under my care in the spring of 1876, presenting a stiffness in the lumbar spine, without tenderness or deformity. There was a moderate contraction of the psoas, left side. The boy had been resting poorly at night, and walking with a limp for three months. A history was given of a stepladder falling across his back a month before the symptoms appeared. A diagnosis was made of spinal caries and a brace was applied. Ten days later there was scarcely any resistance on the part of the psoas, yet the spinal stiffness remained the same.

Three years after the above note was made, the boy came under treatment again for a recurrence of the same symptoms identically that had presented at first, and they were now of four days standing.

The mother was quite sure that the boy had been pronounced cured shortly after the removal of the brace in 1876. Now there could not be found any evidences that spinal caries had existed and the case was pronounced one of neurosis of the hip. A blister to the lumbar spine was ordered, and in addition to this, the fluid extract of ergot in drachm doses three times a day. The ergot was prescribed a week later, the blister not having been followed by prompt relief. Three days after the ergot treatment had been instituted, the symptoms subsided, the limb was straight and he was discharged cured.

In March, 1883—just four years having elapsed—he appeared again, complaining of the same group of symptoms. The limb was advanced, natis flattened a little, the ilio-femoral crease lower, while the resistance to movement existed only in the thigh flexors.

The symptoms promptly subsided under blistering, and the boy was soon discharged again.

At no time was there any atrophy of the limb, and at no time were there any signs about the hip save a lameness and spasm of the ilio-psoas. There was no evidence that this boy aimed at any mimicry, and the lesion, if any existed, was, I think, a meningeal hyperæmia caused in the first instance by the direct blow, and the meninges being rendered thus vulnerable were easily excited to similar conditions. The theory I favored in my communication to the Neurological Association was the hyperæmic rather than the anæmic one, but I had no pathological facts at that time, nor have I any now.

The hysterical element is well illustrated in this case reported by Dr. Shaffer. It was that of a girl aged ten, coming under his observation in September, 1876. She suffered from all the important and many of the urgent symptoms of disease in the left hip. The family history was unsatisfactorily given. The symptoms had come on very insidiously, the limp coming before the pain, though the interval was very short. Deformity and sleepless nights had followed, and when Dr. S. saw her she was on crutches. The symptoms, I had almost forgotten to mention, followed closely upon a fall. The doctor had great difficulty in securing an examination, and it was only after many suggestions that "the patient was finally placed in the supine position, the mother in the meantime making what seemed to be manual traction with a degree of force that indicated long practice. The patient all this time was shrieking with pain and grasping the furniture near at hand, apparently as a means of counter-traction. I imagined that the case was one of chronic osteitis of the hip-joint in the stage of exacerbation. After much persuasion, I at last induced the mother to permit me to make the traction and control the limb. I then commenced to gently test the condition of the joint, as regards motion. While manipulating in the mildest way I was startled by an urgent cry from the patient and imperative command, 'Hold it tighter,' two or three times repeated. I was already making all the traction possible, and naturally asked an explanation. The mother hurriedly said, 'You don't squeeze tightly enough.' This threw a new light on the symptoms. Desisting wholly from all efforts at traction, I merely compressed the ankle joint with all my power. While doing this I could place the thigh in any position, and could even press the articular surfaces together without resistance or complaint.

"Still 'squeezing the ankle,' I was able to get the patient in an upright position with little or no trouble. Without any support but that afforded by her crutches, the thigh became flexed and adducted. The whole limb was visibly, though not markedly, atrophied. There were various hyperæsthetic areas on the affected limb—principally on the inner aspect of the thigh—and over the crest of the ilium. Pain was produced by pressure through the trochanters, by crowding the sacro-iliac surfaces together, and by digital compression in the inguinal region. The patient stated absolutely that she could not walk without support. There was normal faradic contractility of the leg and thigh muscles."

The doctor informed the mother that the child did not have hip-disease, but his opinion was not well received. Some time later he saw the patient in his wards at St. Luke's, still on crutches, and still with "hip-disease." The mother had sought other advice and the case was pronounced one of "hip-disease."

Under treatment for the neurosis she soon recovered and left the hospital.

A letter to Dr. Shaffer from Dr. G. A. Spaulding, is so interesting a sequel to the case that I shall make no apology for quoting it

"On February 19, 1879, about two months after her discharge, her mother again presented the patient for admission to the hospital, giving the following history: A few weeks previous she had been seized with convulsions. These convulsions, the mother stated, were becoming more and more frequent and alarming—as many as three or four occurring in twenty-four hours. As the mother gave this history, she was occupied in unrolling a large bundle, which proved to be a blanket. This she spread carefully upon the floor, remarking that the hour for one of these attacks had arrived, and that it was her custom to put the blanket down as a protection. Precisely at 11 o'clock A.M. the patient composed herself carefully upon the blanket, and passed into one of the most characteristic hysterical convulsions I have ever witnessed. The subsequent history is very brief and most satisfactory. The usual remedies lessened the frequency and shortened the duration of the attacks. But an absolute cure was not effected until later. I chanced to be in the ward one day at the time the patient was seized with a convulsion, and happening to see a siphon of carbonic acid water, I picked it up and holding the young girl firmly by the back hair, I discharged the contents of the siphon down her throat. Her convulsive movements were instantly checked, and she promised to avoid all such conduct in the future. She kept her word, and in a few weeks was discharged from the hospital. During all this time the patient had no recurrence of the hip-joint manifestations."

It has been my experience, as it has been also that of other observers, to find genuine cases of bone disease of the hip with hysterical or neurotic symptoms complicating. These would be the cases where one finds much difficulty in differentiating one affection from the other. There are, indeed, very many old cases of ankylosis of the hip from suppurative and non-suppurative disease, presenting most marked neurotic phenomena. In August, 1877, a girl twelve years of age came under treatment, presenting a marked deformity of the left hip—two inches shortening, two inches atrophy of the thigh, one of calf, a sessile fluctuating tumor about the trochanter without tenderness or extra heat thereover, muscular resistance to abduction and extension, while flexion was easily made. Her dorso-lumbar spine was excessively tender. Three years antedating this observation she began to walk lame and had pain three months afterwards. With the invasion of pain she soon was unable to walk, and for four months her sufferings and constitutional symptoms, from the history given, were very great. A peculiar neurosis would manifest itself during the remissions of pain about the hip, viz., a sensation about head and right ear as if water were dripping. Eight months after her first symptoms of joint disease she took to crutches, and on these she has walked for over two years. In the family there is a distinct neurotic and a tuberculous history. A blister to the tender spine was ordered, and after a "terrible drawing" on the part of the aforesaid blister, she reported much improvement two weeks later. A high shoe which she had been wearing was discarded now, as the limb seemed to be longer, and the crutches were likewise of no further use.

Belladonna in gradually increasing doses was ordered.

The patient continued to improve, and one morning about four months after her first visit, and after a so-called malarial attack, my attention was called to a hyperæsthetic area on the sole of the foot. For this the hot-water douche was advised, and relief promptly followed, soon after which she passed from under observation. Curious to learn the outcome, I traced out the case, and found March 16, 1883, that in the five years no neurotic symptoms had been present, that the fluctuating tumor had disappeared, that the disease about the hip had been free from any exacerbations, and that the result under expectant treatment was certainly very good.

One of the most difficult problems is the differentiation of neuralgiæ in and about the hip from true disease of the joint. In these cases we seldom have any reflex contractions about the joint. There is the lameness, the pains over bony prominences, the insidious invasion, the exacerbations, and the atrophy. It is safe, I think, then, to exclude joint disease if the absence of reflex symptoms persist, and if the family history be predominantly neurotic. Many and many a case have I seen wherein the family history alone was sufficiently neurotic to enable me to reach a conclusion.

One of the most interesting cases—in view of its neurotic phases—that I have had the opportunity of observing, was in the person of a girl aged twelve, who came to me in 1876. A younger sister had died of tubercular meningitis, a brother aged nine subsequently came under treatment for talipes equinus depending on infantile paralysis, and an elder sister I have likewise had under treatment for lateral curvature associated with an anterior crural neuralgia.

The girl herself came with a history of lameness "off and on" for two years, and unassociated, so far as I could learn, with any fall or injury. She simply began to feel tired and to favor the right limb. The natis on this side was flattened, the crease was shortened, there was one inch atrophy of the thigh, and three-quarters of the calf. The joint-movements were absolutely faultless. A diagnosis, however, was made of "morbus coxæ," and she was admitted to hospital.

Under expectant treatment she was soon so far relieved that she was discharged. The pain and lameness had entirely disappeared. The symptoms returned in a month, and a blister was ordered. Very soon afterwards—ten days—she was entirely relieved. The subsequent notes are full of relapses, and finally a chorea developed in 1880, yielding to arsenical treatment in about three weeks. In January, 1881, she developed an acute articular rheumatism affecting both knees and the left ankle. This took the usual course. Chorea minor developed a year afterwards. Last summer—1882—she had a sciatica. She frequently has præcordial pains without any heart lesion. Her general health is apparently good all the while. The lameness has not recurred, and yet the thigh is two inches smaller than its fellow. The temptation to regard these phenomena malarial by reason of the fact that certain heart symptoms yield frequently to quinine, has led me to employ that drug from time to time in toxic doses without material benefit. At present the actual cautery is being employed.

The diagnosis furthermore is obscured by certain inflammatory signs seen in the distribution of nerves about the gluteal region, and really it is very difficult to avoid committing an error. In some instances there is distinct swelling about the hip, and this, associated with the characteristic deformity and muscular con-

traction causes one to hesitate long before making a diagnosis. This became necessary in the following case, which has been reported to me during the past year, as continuing well and free from lameness. The girl, a strumous-looking child, aged ten years, was admitted to hospital in April, 1876. The family history is imperfectly obtained, as no other members are present at date of admission, the child coming from an orphan asylum. A history of the exanthemata is obtained, however, and of a fall from a bed six or eight weeks prior to this date, and the appearance of signs pointing to some lesion about the hip two weeks thereafter. This, taken in connection with her general appearance, a marked lameness typical of chronic bone-disease of the hip, the position of the right limb in standing, viz. : semiflexion, eversion, and rotation outward ; a flattening of the nates, tenderness on pressure thereabout amounting to a hyperæsthesia ; resistance to flexion beyond 90° , to extension beyond 160° ; a swelling near the crest of the ilium ; an absence of real shortening, while there is an apparent shortening—the above history, I say, taken in connection with all these signs, positive and negative, leads to a diagnosis of “hip disease” second stage ; though, on reflection, it occurs to us that such an amount of hyperæsthesia cannot be due to disease in the hip-joint, and that such deformity has come on too soon for true bone disease, and hence we placed an interrogation point after the diagnosis already recorded. The treatment is expectant.

On the 9th of May a distinct and well-marked fulness over crest of right ilium was observed, extending from the anterior superior spinous process to the sacro-iliac junction, quite tender to pressure. The hip-joint seems free of any disease.

The fulness slowly increasing, a fly blister is applied the evening of the twelfth, the usual poulticing to follow.

Abed the forenoon of the 16th, but in the afternoon she moves about the ward with great difficulty by aid of a chair, the foot being raised some two inches from the floor. The symptoms gradually subsided, and with the exception of a pain in the lumbar region at times, nothing occurred until the middle of August, when the fulness seemed to have shifted from the ilium to the thigh, and the upper fourth of this member measured one inch more in circumference than the left. There were also heat tenderness and constitutional disturbance generally. A cathartic, evaporating lotion, and rest seemed to afford relief in a fortnight, though the fulness remained. With a few intervening notes of minor importance, it is noted a month later that the child stands with both limbs parallel, and scarcely a limp can be detected in her gait. The changes subsequent to this depended on the amount of exercise, and the treatment was purely expectant. At times, she was in great pain, unable to leave her bed, and the parts around the hip would become exquisitely sensitive, then relief would come and she would get almost well.

In one of these attacks, in May, 1877, there was discovered marked tenderness over and to either side of the spinous processes from the fifth dorsal vertebra to the sacrum. The spine was thoroughly blistered and poulticed, with decided benefit. Subsequently ergot was administered, and by July 20th there was no pain or lameness or other sign of disease. She was kept under daily observation until October 5th, up to which time not an untoward symptom had recurred, and she was discharged cured ; no muscular rigidity, no tenderness—spinal or femoral—and no lameness whatever existing.

To sum up, then, the points in diagnosis :

There will in nearly every instance be a neurotic element in the family history. The history is all important, and in certain cases may furnish evidence which will be pathognomonic.

In neuromimesis certain tricks will sooner or later be discovered on examination, which it is needless to say, should in all cases be most thoroughly made. The psychical element will predominate in this as in the hysterical joints. The absence of atrophy both in neuromimesis and hysteria, with electrical reactions to faradism preserved, the hyperæsthetic areas and occasionally paræsthetic areas will contribute largely to the exclusion of joint-disease. There is a peculiarity of the gait that is indicative of pain or fear, and that is otherwise difficult to describe. If contractions exist other signs that will invalidate them as signs in joint-disease will surely be present and their significance will be manifest.

Again, the age will, as a rule, be between ten and twenty. Many of the phenomena are absent about the beginning of menstruation. In neuralgia, as before mentioned, the history will help one to estimate the value of the atrophy, and the freedom from muscular resistance is significant.

Spinal tenderness, though not invariably present, is a very strong diagnostic point, and this will be worthy of study.

The treatment is simple in those cases of muscular contraction, especially if the tender spine be present. Counter-irritation in the form of blistering, the actual cautery, or simpler means, such as liniments, and the administration of ergot or belladonna.

In cases of hysterical contraction or of neuromimesis the treatment by fly-blisters in connection with moral suasion secures good results. The great benefit, in many instances, is in the revulsive effect of the blister, while in some cases the subsequent poulticing gives to the blister a derivative effect. Prompt relief very often follows and the recurrences are as promptly relieved. Take the following as illustrative of the relief afforded by blistering.

A girl, aged nineteen, was admitted to the hospital in June, 1880. She came from one of the towns on the Hudson, and was on crutches when she appeared for treatment. The family history could not be obtained ; the patient reported that as a child she was delicate, but had been in fair health up to January, 1880, when she had a fall, which was soon followed by great pain in the knee. This shifted to the hip two weeks later, and she walked lame, suffering much from fatigue. For the past six weeks she has not been able to walk unless with crutches. She has been very restless nights, and has lost flesh.

She stands resting all of her weight on the right limb, the left foot not even touching the floor. The left limb is advanced and rotated outward, while the pelvis is tilted to this side. No infiltration about the joint ; thighs equal in size. The pain is referred to the left loin, the spine, and anterior surface of the knee. Absence of joint-tenderness, but muscular tenderness, with pain on pressure along sciatic nerve. The thigh can be almost completely flexed without pain or resistance. Indeed all the movements are normal, save extension, which aggravates the pain. There is formication about the sole and ankle and a moderate degree of dorso-lumbar tenderness.

Joint-disease was excluded in the diagnosis, and a fly-blisters was applied to the spine the same night. There was a little relief after two or three days, but nothing very marked until the morning of July the 2d

—ten days after admission—when she got up from a rolling-chair and walked across the floor with very little lameness and very little exertion. The pain had completely subsided and the deformity no longer existed. She was then put upon cod-liver oil and an iron mixture.

By the 1st of August all signs of disease had disappeared, and a month later she was discharged. No signs present, and general health excellent. She continued free from lameness or any symptoms until about two or three months ago. She had become a little anæmic, and complained of pain about her hip again. She came to the hospital, had similar treatment, and returned to her home in two or three weeks fully restored. She had in fact, no joint-symptoms at this last visit.

And again, the following case, in a girl aged nine and a half, a robust, hearty-looking child, who was admitted in the spring of 1877. Until eighteen months before, her health had been excellent, and the family histories on both sides represented as good, although during the past year a sister has been under treatment for infantile paralysis. The patient, however, after a fall, one and a half years since, experienced a sense of weakness in right lower extremity, with pain in knee. This continued for three or four months, uncomplicated with any other functional disturbance. She has walked lame, and during the past three months the symptoms have been increasing in severity. On admission, a thorough examination detects only a marked halt in her gait, a lengthening of the right natal fold, slight infiltration of the right inguinal ganglia, a furuncle in acumination, below the right patella (sufficient to account for condition of the inguinal ganglia), and a slight, though decided tenderness on pressure over the spinous processes of the eighth, ninth and tenth dorsal vertebræ. The negative points were all noted in the case-book, and transcription here is unnecessary.

A blister was applied to spine, and next day, poultices to the vesicated surface, while at the same time the furuncle was subjected to appropriate treatment.

Ten days after admission, there was no spinal tenderness; inguinal enlargement was scarcely perceptible; furuncle has disappeared.

Five days later she was discharged, cured, and returned to her home.

Recent opportunity has presented for learning the final result in this case, and I find that she has never had any relapse.

The belladonna treatment, in my opinion, is certainly to be recommended, as I have witnessed some remarkably good results from its administration. Ergot holds a place therapeutically of somewhat questionable value and may serve a good end in properly selected cases. Above all, attention to the minor details of general health, cathartics judiciously employed, tonics and nutrients, changes of living, and rest are agents that the successful practitioner cannot afford to overlook. Concerning electricity I have had no experience, and *a priori* should consider it contra-indicated except in neuralgia which comes under this classification.

It is my conviction that many of these neuroses depend on meningeal hyperæmia induced by malarial poisoning. I have a patient at present, a patient whom I see once in two or three months; he lives beyond the Harlem River, in a district notoriously malarial. Is ten years of age, a male, and is of a neurotic diathesis. I first saw him March 11, 1882. He had been screaming at night for a long time; had

been favoring the right hip in walking for six or eight months, yet the limp was not constant; and he complained of pain in the course of the anterior crural. The night screamings, I learned, on further investigation, were what the mother called "night terrors," and he had been subject to these phenomena for many years. He did not have the ostitic cry. The anterior crural pain was not constant, was not periodical, sometimes it was present in the morning, sometimes in the evening. They were uninfluenced by change in the weather. I searched diligently for the usual symptoms of malarial poisoning with negative results. During the last summer he had a diarrhoea the course of which was marked by intermission. He now suffered from constipation. I could not detect any atrophy of the limb, and did not encounter any muscular resistance in testing the functions of the joint. There was no joint-tenderness.

On general principles I ordered five grains of quinine twice a day, and on the twentieth, nine days elapsing, he called to report. The report was that his pain and lameness disappeared within a day or two, and that he had been entirely well until the nineteenth, when, after a considerable running at play, he came in very lame and had much pain in the outside of the thigh. His sleep during the night, however, was undisturbed, and in the morning he was "all right again." I still found the joint functions normal. The mother, in response to inquiries, admitted that a sewer-pipe near her house was open. The quinine was continued in the same doses, and on April 26th I examined the boy again, to find nothing whatever in the way of sign or symptoms. The quinine had been continued two weeks after the date of the last visit, and there being no further indications for its use the mother has discontinued it of her own accord.

The patient was conditionally discharged, and on May 9th he called again, complaining of a sharp attack of pain the day before, during damp weather. There was also this morning a little stiffness at the joint, as he had considerable difficulty in getting the stocking on. Still no joint resistance. The quinine was ordered again, and the mother was instructed to renew it on the recurrence of symptoms. From this time to February 20, 1883, he had one light attack of pain, which soon passed off.

Then, again, there are cases of neuralgia, wherein both hips seem weak and the limbs unsteady. The first symptoms here, perhaps, begin years before in the wake of an intermittent fever. A condition of chronic malarial poisoning is present, and quinine will not meet the case. Arsenic in some of its preparations better fulfills the requirements.

I have seen speedy relief follow the use of the cautery in contractions of the ham-string muscles. For instance, I have applied it in light strokes to the lumbar spine in a case where the contraction had existed for six weeks, to find entire relief the following day.

The prognosis is good in the contractions accompanied by spinal tenderness. This predicate I employ, however, when the nature of the affection is fully appreciated. The proneness to recur under like causal conditions is certainly well established. In the neuromimetic forms the prognosis is not so good. The symptoms may continue indefinitely. Sooner or later, however, some one makes a correct diagnosis and the case speedily terminates in recovery, or in other neuroses. The same difficulty is met with in the hysterical cases; and in the neuralgic, symptoms may come and go for years.

SELECTIONS FROM JOURNALS.

SOME POINTS IN THE TREATMENT OF THE SEVERER FORMS OF CONSTIPATION AND OF INTESTINAL OBSTRUCTION. BY JAMES SAWYER, M.D., Lond., F.R.C.P.

I purpose to make some remarks on some points in the treatment of the severer forms of constipation and of intestinal obstruction. I venture to do so, because the subject of fæcal retention and occlusions of the bowels is a practical topic of the greatest importance to us, as medical and surgical practitioners; because the details upon which I shall touch have especially and long engaged my attention as a physician; and because I hope I may be fortunate enough to lead the way to a discussion from which we may all reap substantial profit. It is not my intention to attempt anything like a complete examination of the whole question of constipation and obstruction. The subject, if treated systematically, could not be dealt with, even in a cursory manner, within the limits of the time at my disposal. You know that the literature of the subject is very extensive, that it reaches back to the earliest records of medicine, and that I could not give a summary of it within the compass of a readable paper; you know that intestinal lesions, and especially those pathological changes which tend to fæcal obstruction and intestinal closure, have shared in being the objects of the analytical precision which is the leading note of the medicine of our century, and that I could not recount these details within a single sitting of our Society. Keeping to what is practical in the pathology, and practicable in the treatment, of some of the commoner forms of constipation and intestinal obstruction, as I have met with them in my own reading and clinical experience, I propose to ask you to consider with me the progress of our art in one of the most important and most striking departments of its usefulness.

We must avoid a common confusion of terms in the use of the familiar words, constipation and intestinal obstruction. It is not strictly accurate to speak of intestinal obstruction, as some writers have done, as an exaggerated, an ultimate form of constipation. It is quite true, that some of the worst and most fatal forms of intestinal obstruction are usually long marked by a prodromal constipation, as, for example, cancerous constrictions of the larger intestine. But the phrases, constipation and intestinal obstruction, when properly understood, do not merely mark different degrees of a similar result. They apply to different extents of the intestinal tube. Constipation concerns the large intestine only; intestinal obstruction, the whole of the intestines, small as well as large. Constipation is slow fæcal progress in the large intestine, where alone true fæces are to be found. Intestinal obstruction is a grave disturbance of intestinal permeability, in any part of the intestinal canal; it is practical impermeability of the intestines to the passage of their contents, either in the large or in the small intestine, in any part of the bowel, from pylorus to anus. "Constipation is essentially slow progress of the fæculent mass from the cæcum to the anus."* It is this, and nothing more than this, so far as the mere position of the difficulty concerns us; albeit the pathological causes of constipation, when organic, and when such as narrow the

lumen of the bowel, are apt, in their extreme developments, to determine intestinal occlusion.

The manifold errors of habits, of effort, and of diet, which tend to constipation, are well recognized by our profession. In the discovery of some of these, and in their timely and persistent rectification, we can cure, without drugs, many of the slighter forms of fæcal retention. We should make quite sure that we exhaust these measures in the treatment of every case of habitual constipation. In the slighter cases, such non-medicinal treatment is usually sufficient for a good result; in severer cases, when drugs and instrumental aid cannot be avoided, all that well-ordered habits, well-directed efforts, and well chosen diet can do, should be regarded as the indispensable adjuvant of a more direct therapeutics.

Our pharmacopœias, officinal, non-official, and popular, are richer in purgatives than in remedies of any other class. I must not digress into a comparison of the relative value of our cathartic drugs, although the subject is a very tempting one. The practitioners of rational medicine have accumulated a vast store of precise and valuable information concerning the actions of purgative medicines, and this important branch of therapeutics is still growing. Each of us has his favorite cathartics; if we have tried their adoption well, we should not lightly change them. For cases of habitual constipation which do not yield without drugs, my favorite remedy is socotrine aloes. I have little faith in belladonna, and none in nuxvomica. Aloes is especially useful in the fæcal sluggishness of sedentary persons. Properly given, the drug may be taken daily for years, without either losing its aperient efficiency, or producing any but the best results. I give one, two, or three grains of socotrine aloes in a pill, combined with a quarter of a grain of sulphate of iron, and one grain of extract of hyoscyamus, at bedtime every night.* I find out, in each case, the exact quantity of aloes required to produce one full alvine evacuation after the morning meal. In this combination, the quantity of aloes will need readjustment from time to time, usually in the direction of reduction.† I shall mention only one other drug for the class of cases I am now considering, namely, the American cascara sagrada. From my former experience of so-called new drugs, I have learned to employ such preparations with much caution, and to recommend them with more. But I now venture to state that I have used cascara sagrada in two or three cases of severe habitual constipation with marked success. I have given from fifteen to thirty minims of the American liquor, thrice daily, adapting the dose by

* We are indebted to that veteran therapist, the late Sir Robert Christison, for the valuable suggestion of combining iron with aloes when we use aloes as a laxative. Neligan, in reference to the use of aloes in habitual constipation, wrote: "Christison states that the cathartic property of aloes is much increased by its combination with sulphate of iron, and that its irritating action on the rectum is counteracted by combining it with the extract of hyoscyamus, both of which statements my experience fully confirms."—Neligan's *Medicines*, edited by Macnamara, sixth edition, page 130.

† I was led to adopt this combination of aloes and iron in the treatment of habitual constipation, by reading a paper by the Rev. David Bell, M.D., which was published in the "British Medical Journal," November 5, 1870, entitled, "Remarks on the Beneficial Effects of Combining Tonics with Aperients in Chronic Constipation." Dr. Bell stated in this paper that he had tried various combinations of drugs in the treatment of constipation, and had come to the conclusion that the best formula was the following; R, aloes socotrinæ, extracti hyoscyami, aa gr. x ij; quiniæ disulphatis, gr. vj; ferri sulphatis, gr. iv. To be well mixed and divided into twelve pills. Dr. Bell has found these pills to produce uniform good results without inconvenience.

* This sentence is quoted from a clinical lecture on "Detention of Fæces," by Dr. Matthews Duncan, published in the *Medical Times and Gazette*, November 8, 1879.

the result, and endeavoring to secure one, or at most two dejections, in each twenty-four hours.

The ordinary symptoms of extreme fæcal retention are well known. Our experience, in the main, justifies us in expecting that such symptoms shall be acute, or at least subacute, in their urgency and duration, and that they shall be associated with complete temporary absence of alvine dejections, or at least with very obvious insufficiency of such evacuations, both in quantity and frequency. But we shall fall into error sometimes, if we expect considerable fæcal retention always to be marked in this way. Of exceptional forms of extreme fæcal retention, I have met with two distinct varieties. In both, the process of accumulation has been slow; but in one, the graver signs of intestinal obstruction have at last become urgently and rapidly developed, as it were, as a climax; while, in the other, and rarer form of slowly developed fæcal retention, the condition has been chronic throughout, and the disorder has not perhaps been recognized until after a belly, only distended by a dilated colon filled with fæces, has been regarded as the seat of a huge tumor, the nature of which has been variously interpreted. I have known the extremest fæcal retention, filling the belly, encroaching on the thorax, and displacing the liver, lungs, and heart, presenting itself as a chronic condition, lasting for many years. Let me quote, very briefly, an extreme and very instructive instance of this kind from my note-book.

In the year 1871, a medical friend sent a case to me at the Queen's Hospital as one of obscure abdominal tumor, which had long resisted treatment at two neighboring charities, and about the nature of which he was in doubt, and desired my opinion. I found the patient a pale ill-developed girl, aged 14. Her mother stated that when the child was only two years of age, it was noticed that there was some enlargement of her belly. The child's bowels had habitually been confined, a week or more often elapsing without the passage of a motion. The evacuations had generally consisted of small portions of hardened fæces; but, from time to time, frequent and scanty liquid stools were passed. The quantity of urine appeared to have been normal; the appetite poor and capricious. The abdominal enlargement had gradually increased up to the time of the patient's application to me. I at once admitted the girl as an in-patient. I found she complained of occasional griping pains in the belly. She had never had any vomiting. Her motions were small in quantity and very watery. The tongue was clean. There was no pyrexia. The body was fairly nourished. The abdomen was generally enlarged, and the lower part of the thorax expanded. The superficial veins of the abdomen were slightly enlarged. A solid tumor could be felt to occupy the whole of the right side of the abdomen; it had no distinct margin above, and reached laterally about two inches to the left of the middle line; below, the edge of the hand could be readily passed between the tumor and the pelvis. The tumor was uniformly dull on percussion; palpation gave the impression of a doughy consistence, and firm and sustained pressure with the tip of a finger upon the mass produced a depression which lasted for some minutes after the finger was withdrawn. The heart was displaced upwards considerably; its apex was found to strike the chest-wall at a point one inch and a half above, and one inch to the inner side of, the left nipple. The circumference of the abdomen at the umbilicus was thirty-one inches. The rectum was found to be largely distended, and filled with hardened fæces. The patient was ordered a pill, consisting of a grain

and a half of socotrine aloes and half a grain of extract of hyoscyamus and a third of a grain of extract of nuxvomica, to be taken with a drachm of sulphate of magnesia in one ounce of infusion of roses, thrice daily. An enema of cold water and table-salt was given night and morning. Before the administration of the first enema, I freely broke up the contents of the rectum with my forefinger and the handle of a large table-spoon, and I removed a very large quantity of hardened fæces, together with three plum-stones. On the following day, two chamber-pots were literally filled to the brim with pultaceous fæces, and the abdomen was found markedly diminished in size. On the next day, two chamber-potfuls of fæces followed the morning injection. On the following day, three copious motions were passed. On the next day, there were two free actions of the bowels, and it was noticed that the abdomen was smaller and softer, and that the heart's impulse had fallen to the level of the left nipple. In three days more, the enemata were finally discontinued. Careful physical exploration failed to find any abnormal signs in the abdomen. Faradization was ordered to be gently applied to the abdominal muscles daily. From this time the patient did well, without interruption, and was discharged fourteen days after her admission. She attended a short time as an out-patient, taking steel and aloetic purgatives, and remained well, without any fæcal reaccumulation.

In this case, you will notice that extreme fæcal retention, sufficient to displace the heart into the infra-clavicular region, to distend the superficial veins, and to form a very large abdominal tumor, was unattended by vomiting, scanty urine, abdominal tenderness, or other local disturbance than "occasional griping pain in the belly." You will notice, too, the record of an important point in diagnosis. A large portion of the patient's abdominal cavity was obviously occupied by some solid mass. I had to decide upon the nature of the abnormality. I found that firm and sustained pressure with the fingers over the tumor produced a depression in its mass which lasted for some minutes after the pressure was withdrawn. This very exceptional physical sign is almost absolutely diagnostic of considerable fæcal accumulation. The successful progress of the case illustrates, also, the value of using together a variety of therapeutic measures. In the treatment of fæcal retention, the best results are only obtained by the adoption of a well-considered combination of remedial resources. I did not rely on only one method of emptying the distended intestine. I broke up and dug out all the excrement I could reach through the anus, and I kept up the concurrent and continued use of aloetic purgatives, enemata, and faradization.

I am afraid our profession does not adequately appreciate the immense advantages to be derived in the treatment of many of the severer forms of constipation and intestinal obstruction from the efficient use of the enema. In France, I understand the enema is the routine domestic aperient. We do these things better in England. The custom of relieving slight constipation by an immediate resort to an enema has never become popular on this side of the Channel, and it is well it is so. My experience has led me to discountenance decidedly the systematic use of rectal injections in the ordinary domestic treatment of the slighter forms of fæcal sluggishness. Such cases may be treated better, and especially with less tendency to chronicity, by other means. On the other hand, however, in the severer forms of fæcal retention, we ought always to use aperient enemata, and we must take care

we use them efficiently. In persons past the meridian of life, and especially in persons of sedentary habits, what may be called simple fæcal retention is a very frequent form of constipation. In such persons, this form of constipation is relatively very frequent, both as compared with other varieties of constipation, and also as compared with the same form of constipation at other times of life, and in individuals of other habits. In such persons, coprostasis (a good old name for fæcal stagnation) is especially apt to produce complete intestinal obstruction. It is in these cases especially, that life may be saved by enemata. I do not know any form of intestinal obstruction in which enemata can do harm. In most cases, they take a chief place amongst our most potent means of doing good. In many cases which are at first unpromising, and even when the predisposing cause of the obstruction is some organic and incurable disease, we may repeatedly relieve a threatening fæcal accumulation, and long keep off a fatal fæcal stagnation, by the due use of enemata. It is, perhaps, not too much to say that enemata far surpass any other remedies in curative value in the simple coprostasis of advanced life. Within the limits of this paper, I cannot particularise all the practical details of apparatus, of quantity, quality, and frequency of intestinal injection, and the various manipulative niceties of administration concerned in the question of the therapeutic use of aperient enemata. But I would take this opportunity of affirming that, in all severe cases of constipation, and in all cases of intestinal obstruction in which we use enemata, we can only administer our injections efficiently by means of the long tube of O'Beirne. Let me recommend O'Beirne's classical treatise on defæcation to those who are unacquainted with it.* Than from a study of its pages I do not think I have ever reaped more practical profit from any of my medical reading. The gist of O'Beirne's book is the recommendation of the long enema-tube which, for fifty years has been known by his name. Never entrust the use of O'Beirne's tube to a nurse. The efficient passage of the instrument into and through the sigmoid flexure of the colon is a delicate and difficult operation, which the medical attendant ought always himself to perform for his patient. Much unnecessary detail has been taught about the composition of the enemata. When we use an enema for the purpose of clearing the bowel of fæces and flatus, the quantity of the injection is its chief quality. I am accustomed to tell my pupils that, when they give an enema, they should always ask themselves whether it is to be retained or returned. If it be designed that the injection shall be retained, as in the case of a nutrient and sedative enema, its quantity can scarcely be too small; if, on the other hand, it be intended to move the bowels to the expulsion of their contents, the quantity of an enema can scarcely be too large. The quantity of an aperient injection is precisely so much of it as can be passed into the bowel. For such an enema to be as large as possible, is only to be large enough.

I now ask you to favor me with your further indulgence while I consider very briefly the celebrated question of the treatment, and especially the operative treatment of intestinal occlusion. I feel I need not apologise, because, as a physician, I ask you to consider with me the operative treatment of intestinal impermeability. In the treatment of this most grave and anxious condition, it often happens that it is

not the only office of the physician to determine whether and when the aid of the operating surgeon is to be sought, but also to join with him in deciding upon the special operative measures to be adopted in each particular case. This question is no new one: it is celebrated in the records of controversies which reach back to the earliest portions of our literature. Whatever our conclusions on this question, they can only be accepted as provisional. From time to time its issues must be examined anew, so that they may be brought to the level of our latest curative advances. It is especially necessary that we should often turn to this important question now, when we are witnessing such rapid advances in the safety, precision, and scope of abdominal surgery. In those advances, as fresh and signal triumphs for our art, I humbly claim to share a common pride with my surgical brethren. I take this opportunity of offering my sincerest congratulations to this Branch upon the great advances which have been established in peritoneal surgery in our times, for with these advances the names of some of our members are honorably and indissolubly connected.

I shall not pause to enumerate the long list of lesions which may determine the clinical urgencies of intestinal impermeability, and which, by causing that most grave condition, may demand from us relief if life is to be preserved. As intestinal compressions, constrictions, impactions, obturations, and stenoses, these manifold pathological conditions have been fully described. If, with practical purpose, we translate the anatomical causes of intestinal occlusion into their clinical manifestations and history, we shall find that they fall into three fairly defined groups. A. Causes which come into operation quite suddenly, and which lead at once to complete intestinal occlusion. Here, we have sudden compressions, displacements, and distortions, as all kinds of strangulations and torsions or kinks; some cases of intussusception, especially in children; and some cases of plugging by gall-stones. B. Causes which manifest themselves acutely, but which do not give rise to immediate and complete occlusion, although they produce very grave disturbances of intestinal permeability. Here, we have partial strangulation of all kinds, many cases of intussusception, many cases of peritonitis, and cases of partial obturation by gall-stones and foreign bodies. C. Causes which are developed slowly, and which give rise, often for weeks, months, or years, to marked signs of impaired intestinal permeability, and which lead to a series of sub-acute seizures of intestinal occlusion, yielding, for a time, to treatment, but successively increasing in severity and danger, or culminate in a single, sudden, and final attack of complete and unyielding obstruction, or lead to death in some indirect way, as by perforation, peritonitis, or asthenia. Here, we have intestinal cancers and neoplasms generally, strictures and stenoses of all kinds, chronic local or general peritonitis, compressions from the pressure of slowly growing tumors, and fæcal impactions and chronic fæcal retention from degenerative changes in the muscular coats of the larger intestine.* These various conditions teem with practical interest, both in the niceties of their differential diagnosis, and in the details of their varying therapeutic requirements.

* This classification is a modification and amplification of one to be found in Dr. Leichtenstern's valuable essay on Constrictions, Occlusions, and Displacements of the Intestines, contained in Dr. Von Ziemssen's *Cyclopadia of the Practice of Medicine*. See English Translation, vol. vii, p. 487 et seq.

* *New Views on the Process of Defæcation*, etc. By James O'Beirne, M.D., Dublin. 1833.

Into these points I cannot now enter; but I would state generally that, by a consideration of the age of the patient, of the history of his illness, of his special symptoms and physical signs, and of the results of our treatment, checked by a recollection of the pathological possibilities of intestinal occlusion, and some accurate knowledge of their relative frequencies, we can usually make a practically correct diagnosis, both of the particular portion of the intestine which is affected, and of the pathological nature of its lesion. I cannot, however, leave this part of my subject without reference to certain well-ascertained statistics and approximate generalizations, which are of great practical importance, and which have often stood me in good stead at the bedside, in the diagnosis of the kind and place of an interesting occlusion. First, it is generally true that sudden and very marked obstructions, such as strangulation, torsions, intussusceptions, and pluggings, affect the smaller intestine; while more chronic, but less accentuated, difficulties of permeability, such as strictures, cancers, and intestinal degeneration, affect the larger intestine. Again, an intestinal stricture is a circumscribed diminution of the lumen of the bowel; it arises either from contraction of the mucous and submucous tissues, or from the encroachment upon the intestinal canal of some new growth from the intestinal walls. The latter process is usually cancerous, the former is usually a consequence of ulceration. "Stricture may be met with in any part of the intestine, yet it occurs in different parts with very different degrees of frequency. The published statistics of fatal cases show that its occurrence as a fatal disease in the small intestine is comparatively rare (according to Dr. Brinton,* in 8 out of every 100 cases); and that, as regards the large intestine (to quote again Dr. Brinton's figures, with which those of other writers agree pretty closely), out of 100 fatal cases, 4 are in the cæcum, 10 in the ascending colon, 11 in the transverse colon, 14 in the descending colon, 30 in the sigmoid flexure, and 30 in the rectum. Dr. Brinton calculates that stricture occurs three times in men to twice in women; and that the average age of death is $44\frac{2}{3}$ years."† From these figures, we may gather the important practical generalization that at least four-fifths of the strictures of the larger intestine are situated to the left of the middle line of the body. Again, excluding the grosser forms of hernia, all of the different forms of obstruction of the bowel, intussusception is one which is "most commonly attended with the pressure of manifest tumor;"‡ and, further, excluding cancerous disease of the larger intestine, the discharge of blood *per anum* is characteristic of intussusception, and is generally present from the onset of affection. Again, we have Mr. Jonathan Hutchinson's valuable generalizations, from which I select the following as being the most important. "When a child becomes suddenly the subject of symptoms of bowel-obstruction, it is probably either intussusception or peritonitis. When an elderly person is the patient, the diagnosis will generally rest between impaction of intestinal contents and malignant disease. In middle life, the causes of obstruction may be various; but intussusception and malignant disease are now very unusual. If repeated attacks of dangerous obstruction have occurred with long intervals of perfect health, it may be suspected

that the patient is the subject of a chronic diverticulum, or has bands of adhesion, or that some part of the intestine is pouched, and liable to twist. If, in the early part of a case, the abdomen become distended and hard, it is almost certain that there is peritonitis. If the intestines continue to roll about visibly, it is almost certain that there is no peritonitis. This symptom occurs chiefly in emaciated subjects, with obstruction in the colon of long duration. The tendency to vomit will usually be relative to three conditions, and proportionate to them. These are (1) the nearness of the impediment to the stomach; (2) the tightness of the constriction; and (3) the persistence, or otherwise, with which food and medicine have been given by the mouth."*

No clinical spectacle is more terrible than that afforded by a case of acute and complete intestinal obstruction. All of us, probably, have seen some examples of it. In the midst of perfect health, without obvious cause or warning, or after some unusual or sudden muscular effort, or after a blow on the belly, or after a trifling diarrhoea or some slight constipation, or following some ordinarily insignificant error of diet, a vigorous adult is seized with severe pains in the abdomen. The pains are mostly griping and colicky in character, they usually come and go at short intervals, and they are usually referred to the neighborhood of the navel. Sometimes the pains are excruciatingly violent, or they are persistent, or they are spread over the whole of the belly, or they are of a "bearing-down" character, and are attended by painful but fruitless efforts at stool. Acting on the familiar hypothesis that something has "disagreed," and requires clearing off, the patient usually forthwith takes a domestic purge. The pains continue, and grow more frequent and severe, and the bowels remain unrelieved. At this stage, vomiting generally appears, and a doctor is summoned. The gravity of the patient's condition is usually recognized, and pains are quelled and peritonitis staved off by opium, while efforts are made to open the bowels by enemata; sometimes, unhappily, the pathological possibilities are not adequately appreciated, and the stronger cathartics are injudiciously administered. Save for the passage of a little delusive flatus, or of the contents of the bowel below the difficulty, the belly remains ominously closed. Vomiting continues, and, in a variable time, the vomited matter becomes fæcal in appearance and odor, while at first it consisted of ordinary stomach contents, or of a "bilious" fluid. The case grows more desperate; marked collapse soon declares the patient's increasing danger. The extremities chill, the respirations become shallow and frequent, and the voice fails and thickens; while the pulse is small and rapid, the abdomen distended and drummy, and the face pinched, with pointed nose, sunken eyes, and thin, retracted lips. Hour by hour, and day by day, the sufferer grows worse, until, bathed in cold sweats, with parching thirst, frequent fæcal eructations, hiccup, shortening and shallower breathing, voice all but extinguished, dry brown tongue, Hippocratic face, failing and uncountable pulse, and mind unclouded to the end or gently wandering in the last few hours, death closes one of the saddest and sharpest scenes which human misery can show.

But the terrible and lethal condition I have described is not wholly hopeless. It is true, it is very generally fatal within six days, at the most; yet patients have got well, without surgical operation, even

* "Notes on Intestinal Obstruction," by Jonathan Hutchinson, F.R.C.S., *Brit. Med. Journ.*, Aug. 31, 1878.

* *Intestinal Obstruction.* By W. Brinton, M.D., F.R.S. 1867.

† "Obstruction of the Bowels." By J. S. Bristowe, M.D., F.R.C.P. Reynolds' *System of Medicine*, vol. iii, p. 74, 4th ed. 1871.

‡ Dr. Bristowe. *Op. cit.*, p. 100.

when internal strangulation has brought them to the very verge of death. Surgical art, I freely and thankfully acknowledge, has rescued not a few whom the skill of the physician has proved powerless to save; and this art promises, I believe, to include, in a no distant progress, a material reduction of the present high mortality of intestinal closure. "There is no cause of acute occlusion of the intestine," writes Leichtenstern, "which cannot spontaneously disappear as well as originate. An intestinal knot can loose itself, an incarcerated or strangulated loop can become free, an invagination can become disengaged, compression cease, twisting or dislocation of the intestine with angular bend can straighten itself, a lodged gall or intestinal stone or foreign body may be dislodged and evacuated, and severe fæcal obstruction may be overcome."* But we must never forget, I would strongly insist, that the relative proportion of cases of spontaneous recovery from acute intestinal occlusion is very small indeed—so small as only to support a very uncertain hope of life in any particular case. I fear such a hope is often a harmful one, for I am afraid that its sympathetic exaggeration has sometimes inspired a disastrous inactivity, which has frittered away, in fruitless endeavors and vain expectations, the hour for a fair cast for life by surgical interference.

For want of time, I am compelled to pass over many important points in the treatment of intestinal occlusions, such as, for example, how far purgatives are to be given, if at all, the use of opium, of ice, of the best methods of feeding, of copious enemata, given while the patient is inverted or otherwise, of abdominal kneadings and manipulations, of warm baths, of rectal insufflation of air, of intestinal puncture with an aspirating canula. We mostly do well to combine these measures variously, according to the special indications of each particular case; for clinical experience has abundantly shown that cases of obstruction of the bowel, even when they appear most unpromising, not seldom exhibit the best results of a wise combination of therapeutic resources. But I must now pass by these important topics, because I want to raise again the question whether, when, and how, the abdomen is to be opened for the relief of unyielding intestinal closure. If it be clear we have to deal with a case of acute intestinal occlusion, if a reasonable delay have been afforded for the operation of suitable therapeutic procedures, and for a chance of spontaneous relief, if a due examination of all the hernial openings, including the obturator foramina, the sciatic notches, and the vagina in the female, has excluded the evidence of external strangulation, if the rectum be found free, if full enemata, the passage of OBeirne's tube, and exploration of the abdomen and loins by percussion and palpation, have demonstrated that the difficulty is not in the colon, then the question must be decided whether laparotomy or laparo-ileotomy should be undertaken or not.

Laparotomy is abdominal section, with the view of finding and effectually relieving an acute intestinal occlusion. Laparo-ileotomy is abdominal section, *plus* the formation of an artificial anus in the ileum. Against the performance of laparotomy, the following considerations may be urged, with various degrees of cogency, namely: there are some cases of acute internal strangulation which cannot be relieved by laparotomy; consent is not usually given to the operation till the patient is so far *in extremis* that recovery is impossible; the intestine may be found so brittle, that

it is impossible to avoid fæcal extravasation into the peritoneal cavity; the diagnosis may be incorrect; there is always a chance of spontaneous recovery; the operation in itself adds very seriously to the risk of death; the results of laparotomy are not such as to justify the performance of the operation. But to these considerations it may be answered: the cases of acute intestinal strangulation which cannot be relieved by laparotomy, such as very complicated and extensive volvulus, are so rare, as to be practically unworthy of consideration in determining our action in any particular case; again, that laparotomy has hitherto been performed only when the patient has been in a hopeless condition, is not an argument against the performance of the operation, but only a reason why the procedure should be adopted earlier; and again, the difficulty of diagnosis in cases of acute intestinal closure is daily diminishing, and is already sufficiently certain for all practical purposes; and, if the diagnosis of the exact lesion in any particular case be obscure, there is usually no difficulty in the prognosis that the patient will die unless relieved, and laparotomy gives him, at least, a chance of life. I have already said that the chance of spontaneous recovery is so small, as not to be a just ground for putting off an operation when other means have had a fair trial and have failed. With regard to the pouring out of fæces into the abdominal cavity, from the breaking of intestine from extreme brittleness during a surgeon's search for an occlusion, I may say that I have seen such a case myself, and that I find instances of this fatal condition are recorded as having occurred in the experience of Billroth, Fergusson, and other eminent surgeons. In my case, the patient was a young lady, in perfect and vigorous health up to her seizure with symptoms of acute intestinal closure; we did not put off the operation too long, and the case seemed quite favorable for the performance of laparotomy, with a fair chance of success.

As to the operation of laparotomy being a serious risk in itself, I suppose I shall be told that, in these days, it is not. But, when we have duly weighed all these considerations for and against laparotomy, it seems to me that the strongest point in favor of the operation lies in the practical hopelessness of acute intestinal occlusion, if left to itself, while the strongest point against the operation is to be found in the records of its results. No very large statistics of the results of laparotomy have been collected, and those which have been published show a result better than the truth, because of the unfortunate tendency amongst us to think our unsuccessful cases unworthy of publication. I find, however, that Leichtenstern has collected 79 cases, giving 55 deaths, or a mortality of 70 per cent. So far as cases within my own knowledge have enabled me to judge, I have been inclined to conclude that it is usual in laparotomy for a surgeon to find "something," and to relieve it; and that it has, nevertheless, been very usual for the patient to die shortly afterwards.

I have good authority for stating that laparo-ileotomy is an operation "far less dangerous than laparotomy, and easy of execution, even by unskilled surgeons." (Leichtenstern.) Upon this point, which I regard of great practical importance, I hope I may be so fortunate as to elicit the opinion of my surgical brethren. I have a strong impression, based on some experience of the results of abdominal sections performed in cases of acute intestinal closure, that it is usually safest for the patient for the surgeon to follow

* Lichtenstern, *Op. Cit.*, p. 508.

the great example of Nélaton, and not to attempt a search for the occlusion with a view to its direct relief, but to be satisfied with the establishment of an artificial anus in the ileum, above the seat of intestinal stoppage. As compared with laparotomy, laparo-ileotomy is a much safer operation, and a much easier one. Even the relative disadvantage of a permanent artificial anus is not always entailed, for many cases of successful laparo-ileotomy have been recorded in which the artificial anus healed upon the spontaneous establishment of intestinal evacuations *per vias naturales*. I once met with a case of this kind in an elderly gentleman whom I saw in consultation with my friend and colleague Mr. Oliver Pemberton. Excluding cases of insuperable intestinal obstruction in the colon and rectum, for which well-established and special surgical procedures are required, there is, I think, only one class of cases of closure of the intestine for which laparo-ileotomy is unsuited—namely, for cases in which the occlusion is situated very high up in the bowel. These cases, which are very exceptional, are indicated amongst other signs, by the absence of marked or general tympanites.

My experience and my reading have led me to the following conclusions. If I had to deal with a case of acute intestinal closure affecting the smaller bowel, other than a case of external hernia, I should allow fair opportunity for relief by such remedies as opium, enemata, time, and belladonna; but I should by no means wait till the patient was *in extremis* before I urged surgical interference. If I obtained the patient's consent to such interference, I should hope my surgical colleague would perform laparotomy and relieve the occlusion, but only if its seat were so near at hand, and its nature so clear, that the operation could be thoroughly accomplished without much search amongst intestinal coils but I should hope that he would rather perform laparo-ileotomy than subject the patient to the direct and collateral risks of a prolonged effort at disentangling his bowels.

But, as I have already said, our decisions on these topics can only be provisional, as, indeed, all our therapeutic decisions must be, if we be worthy the name of scientific practitioners. The scientific spirit accepts no result as final, but with stern impartiality presses steadily to fuller truth, by ever assimilating the fruits of an ever widening knowledge. In such a spirit, if we are faithful to it, we shall still expect and still secure further vantage in our conflict with disease; and, in this spirit, our practice shall ever promise progress, and our art attempt and accomplish achievement.—*Brit Med. Jour.*

THE CLINICAL USES OF NITRITE OF SODIUM.

Some discussion and hostile criticism have appeared in lay journals on the subject of a paper recently published by Professor Sydney Ringer and Dr. Murrell on the clinical uses of nitrite of sodium. Few have done more to add to the resources of modern medicine, and to enlarge the *armamentarium* of remedies in acute and painful disease during the last few years, than these two distinguished therapeutists; and it is with no small pain that we have noticed that their most recent effort in this direction has been treated with harshness, chiefly arising, we imagine, from a misconception of the facts, and from erroneous deductions. Nitrite of sodium is a remedial agent which has recently been introduced to the notice of physicians, in

an able paper in the *Practitioner*, as a valuable remedy in epilepsy. It belongs to a class which, although comparatively new in materia medica, has yielded results second to none in alleviating the acute agony of diseases previously most difficult to relieve. Indeed, until the investigations and labors of Lauder Brunton, of Ringer, and of Murrell, had familiarized us with the remarkable antispasmodic power of the class of nitrites, including nitrite of amyl and nitro-glycerine, there was a large class of acutely painful spasmodic affections which defied the art of the physician even to palliate. It is unnecessary to say how vast a sum of human suffering has been relieved by the introduction of this class of drugs; for each succeeding year has widened the range of the utility of these remedies, and their valuable applications to the treatment of painful affections. Angina pectoris, asthma, neuralgia, dysmenorrhœa, epilepsy and various forms of Bright's disease, have, in succession, been brought within the range of the beneficent action of the nitrites. Hence, when Dr. Law recently gave, in the *Practitioner*, his clinical experience of the valuable uses of nitrite of sodium in epilepsy, physicians hailed with satisfaction the introduction of another remedy of this class, and learnt with interest that their field of usefulness promised to be still further widened. It was under these circumstances that Dr. Murrell, with whose name the remedial uses of nitro-glycerine are indissolubly connected, turned to nitrite of sodium as a still further addition to the resources of the physician. The dose indicated by Dr. Law's clinical experience was twenty grains. Dr. Murrell, however, with laudable caution, began to employ it in doses of half that strength; and, in the first case in which it was administered, the patient, after using the medicine for a week, not only showed no symptoms indicating that the dose was one of excessive strength, but, on the contrary, expressed, at the end of the week, the opinion, arising from his personal experience, that the dose was insufficient, and accordingly it was increased to fifteen grains. In other cases, however, the ten-grain dose produced giddiness and a feeling of sickness. Dr. Murrell then reduced the dose to five, and, subsequently, to three grains; and Dr. Ringer, to whom Dr. Murrell communicated his experience, ascertained experimentally, by the administration of the drug to animals, that with the pure drug, at least very much smaller doses should be employed than those indicated by Dr. Law from his clinical experience, which was, as Dr. Law points out in a letter in to-day's *Journal*, made with an impure drug. Dr. Murrell, with the frankness and true candor of a physician bent solely on the advancement of the art of healing, and on cautioning his fellow-practitioners against the quicksands of practice, and against a hitherto unsuspected source of danger, communicated to the profession his full results, reciting the inconveniences which had been felt by the patients to whom he had administered half the dose which had been recorded as, not only harmless, but distinctly beneficial in Dr. Law's hands. He recited also the subsequent experimental researches on animals of Dr. Ringer, and thus added, in a degree which probably will very shortly be more fully appreciated, to our knowledge of the uses of a remedy which is in itself promising, and which has already achieved good results.

It is strange and pitiful that a weapon should be forged from this experience, and from this useful, honorable, and promising work, with which to attack the humanity and the credit of this eminent young physician. We do not choose here to reproduce the bitter and cruel things which have been said, or to

criticise them with the severity which we think they deserve. It is impossible not to reprobate the unthinking and ungenerous promptitude which has been shown to attack the reputation and to injure the character of physicians who, in the exercise of one of the highest and most sacred of their functions, have endeavored to enlarge the means at the disposal of the healing craft, and to add one more useful remedy to our means of combatting epilepsy, one of the most direful and distressing of diseases with which humanity is afflicted. It is hard enough for physicians to have to incur the ordinary risks, dangers, difficulties and anxieties incidental to the daily fight which they carry on with disease. Hitherto it has been rightly assumed that in their daily work, and still more in their laborious efforts to advance the knowledge of their art and to carry further the conquests of medicine, they would be secure in the sympathy alike of the public and the profession. This is not the first instance in which that just hope has been dashed with bitter disappointment from the misrepresentations of the uninformed classes who are opposed to scientific research, and who describe themselves as anti-vivisectionists. They scan all such inquiries with distorted and jaundiced vision; and attacks proceeding from them have to be supported with equanimity and fortitude by those who are conscious that time and truth and the whole knowledge and sympathy of their professional brethren will fight on their side, and will ultimately aid them to achieve a brilliant victory in the cause of science and humanity. But in this case it has unfortunately become apparent that those who undertake such work as has been indicated, cannot always count upon forbearance, or even justice, from professional critics in whom such qualities may fairly be expected. The hostile judgments to which we refer, and to which currency has been given in the professional as well as in the lay press, have evidently been founded upon a hasty and incorrect appreciation of the facts, for we feel that under no other circumstances could such a condemnation have proceeded from any professional journal; nor can we doubt that, in view of the statement which we publish to-day from Dr. Murrell on the subject, whatever *amende* is possible will be made. Dr. Murrell may feel confident in this matter of the full sympathy and support of his professional brethren. We trust that the annoyance which he has had to endure will not deter him from continuing in the future those valuable therapeutical researches which have already in the past largely contributed to the advance of the healing art. In respect to its bearings upon the question of experimental research upon animals, this incident adds additional force, if any were needed, to the argument in favor of such research. For, had a full series of experiments upon animals been carried out at an earlier stage, the important results which Dr. Murrell has attained as to variations in the physiological effects of different qualities of the drug would have been available, and the clinical indications would have been more full and exact. The outcry against such experiment has here received a severe practical rebuke.—*British Medical Journal*.

THE COMMUNICABILITY OF PHTHISIS.

The most striking, and perhaps the most valuable, part of the work done by the Collective Investigation Committee, has been that relating to the communicability of phthisis. The Committee has collected a mass of information which far exceeds in extent that obtained by any previous inquiry upon this subject,

and may be regarded as a fair representation of the professional opinion of this date in this country upon the question.

To their inquiries, the Committee received 1,078 replies; of these, 673 were simple negatives, but 261 replies affirmed the proposition that phthisis may be communicated from the sick to the healthy, and afforded evidence in support of that opinion.

No small importance attaches to these 261 opinions, coming, as nearly all of them do, from gentlemen engaged in family practice. They may be regarded as affording the popular confirmation to that view which has been shared by such eminent observers as Budd, Andral, Williams, Guéneau de Mussy, Jacobi, and Hermann Weber.

Out of the 261 replies, the large majority, as might be expected, refer to husbands and wives or near relatives. In those few instances in which there was no relationship, the persons had been sleeping together, or had been otherwise closely associated. Among the latter class, the following remarkable series of cases is related by Dr. C. Spriggs of Great Barford. Miss R., aged 48, a dressmaker, living in rather a lonely cottage at C., Bedfordshire, had three apprentices, young girls of from 17 to 19 years of age, not related, from three adjoining villages, who took it in turn to remain in the house and sleep with her, each one week at a time. During their apprenticeship, Miss R. was taken with phthisis, of which she died. In less than two years afterwards, all three apprentices died of phthisis, although in the family history of each no traces of phthisis existed; and the parents, brothers, and sisters of two of them are alive and well at this time. Another interesting case is related by Mr. G. F. Blake, of Moseley, Birmingham, in which a perfectly healthy child, with a family history free from all trace of tubercle, is reported as becoming infected by a phthisical nurse, and having died with profuse hæmoptysis, after the disease had run a rapid course. The rapidity of most of the cases resulting from infection is a remarkable fact, not yet explained.

One hundred and ninety-two observers report cases between husband and wife; and, in 130 of these, it is expressly stated that no family history of the disease existed in the partner to whom the disease was supposed to be transmitted.

In opposition to this positive evidence, there are 105 observers whose opinion is negative; yet even here the facts adduced are not always adverse, as the following.

(Return 306.) "Have observed several instances of husband and wife both suffering from phthisis, but have had no direct proof that the one received it from the other."

Return 309 is a list of six cases in which husbands and wives died of phthisis.

A large amount of impressive evidence is forthcoming, that persons who are free from hereditary predisposition may acquire phthisis by being brought into very close personal contact, and especially from sleeping with phthisical patients; but the precise conditions under which the disease is communicated have yet to be studied. While this is perfectly true, it must also be remembered that communication is rather the exception than the rule, and that, while it suggests the precautions of good ventilation, disinfection of air and sputa, and separate beds, sufferers from this disease may be tended with comparatively little risk.

With reference to disinfection, sulphurous acid may be recommended, in the shape of burning sulphur daily in the sleeping apartments of phthisical patients.

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EDITORIAL.

VALEDICTORY.

With the current number, the 10th volume of this journal is completed, and, after a more than ordinarily successful career of seven and a half years, we are obliged to announce its discontinuance. The reason for this is that the duties of a large and rapidly increasing business render it impossible for us to give the minute and constant personal attention to editorial work which a weekly journal requires, and rather than intrust the matter to others we prefer to close the publication with the present number. But loath to relinquish, altogether, editorial work, which has been both a pleasure and a profit in the past, we shall take pleasure in submitting to our subscribers and to the profession, in a few days, the first number of a new monthly medical journal, *The Æsculapian*, which will supersede the MEDICAL GAZETTE and while thanking them for the support they have given the latter, ask the continuance of it for its more worthy and elaborate successor. It has been our aim in the past to produce a journal which should be preëminently useful to the practitioner, and in the future we shall in no wise relax our efforts to place upon the table of every reading professional man a journal so bright and practical that its appearance will be eagerly looked forward to.

The Æsculapian will be published monthly, and each number will contain at least 48 extra large double-column royal octavo pages of reading matter, composed of Original Articles from the pens of our leading practitioners; Clinical Reports from our colleges and hospitals; Critical Reviews of the latest medical literature; Abstracts of Society Proceedings; Selections from Journals, giving the progress of medical science and art; and a department of "Miscellany," composed of items of interest to the profession, as bright, fresh and "newsy" as our reporters can possibly glean.

In the "make-up" of the journal we shall spare neither labor nor expense in order to make it the very perfection of the printer's art; and in order that the greatest number may possess it, we have placed the yearly subscription at the remarkably low price of \$2.00.

All subscribers to the GAZETTE will be supplied with *The Æsculapian* for the unexpired term, unless they otherwise request, in which case we shall be pleased to remit any balance due them.

We find a large number of subscribers *in arrears*, and these we would urge to balance their accounts to date for the GAZETTE, and forward, in addition, a year's subscription to *The Æsculapian*.

ORIGINAL ARTICLES.

SPINAL INJURIES.

BY

ALLAN McLANE HAMILTON, M.D.

One of the Consulting Physicians to the Insane Asylums of New York City, etc.

The medico-legal importance that may be attached to spinal injury is immense, and probably the greater proportion of actions, for damages that arise in our courts are based upon alleged injury to the vertebral column and its contents.

Forms of Injury.—Let us see how traumatisms are likely to produce mischief. Brodie* considers the surgical accidents of the spinal column to be as follows:

1. Fracture without displacement.
2. Fracture with depression or displacement, causing pressure on the cord.
3. Fracture complicated with dislocation.
4. Dislocations not complicated with fracture.
5. Extravasations of blood on the surface of the membranes of the spinal cord.
6. A narrow clot of extravasated blood is sometimes discovered within the substance of the spinal cord.
7. Laceration of the spinal cord and its membranes.
8. The minute organization of the spinal cord may suffer from a blow inflicted upon the spine even where there is neither fracture nor dislocation, and where the investing membranes do not appear to participate in any way in the effects of the injury.

Manifestation of Symptoms.—All of these conditions are likely to be found as a result of injury, and as a result we are furnished with a train of symptoms which vary as to severity and prognosis. In some instances the symptoms are of immediate appearance, and subside gradually; in others there is a progressive disease of the spinal cord due to so-called compression myelitis. We find as a consequence various sensory, motor and trophic disorders which are manifested in anæsthesia or hyperæsthesia, paralysis, spasms or contracture, and atrophy. These may appear gradually one after the other, or almost simultaneously, and depend upon the extent of the injury and destruction of the cord.

Fracture without Displacement.—Fracture without displacement may occur in various situations, but the common site is the dorsal region.

Dislocation.—Dislocation may occur immediately as the result of violence or as the result of bone disease, with the destruction of vertebræ, and this is of secondary causation. The most common site is the cervical region when the dislocation follows the accident at once, or when there is caries the dorsal vertebræ are dislocated more often than the others.

A blow upon the back of the neck without external marks of injury may give rise to serious bone injuries, such as fracture and consecutive atrophy, so that at a remote time, perhaps, evidences of very serious spinal disease of a progressive character may result in the patient's demise. I have seen three cases in which the injury in the cervical region which at first was con-

* *Med. Chir. Trans.* vol. xx., p. 120, and p. 3.

sidered trivial developed finally, in two, in caries and dislocation of these vertebræ, and in the third, where a fracture of the transverse process of the axis occurred so that the most intense cervico-brachial neuralgia was produced.

In one of these cases, J. B. M., a blow was received from a club in the hands of a highwayman, and beyond the production of a short period of unconsciousness succeeded by headache, vertigo and pain, loss of power and numbness in the arms and hands which moderated and disappeared within a few weeks; no more serious symptoms existed, and the would-be assassin received a comparatively light punishment. In the course of a year, however, the pain in the arms returned, and with it there was a loss of power connected with very great wasting of all the muscles of the arms. I first saw him in April, 1880, two years after the injury, and found beyond the atrophy, which was extreme and involved a great loss of substance of the posterior cervical muscles, and left deltoid, there was a peculiar deformity resulting apparently from the anterior dislocation of the third or fourth cervical vertebra, so that a depression existed and the thyroid cartilage was very prominent, and the chin was thrown upwards and forwards. The upper extremities, in which he told me the wasting began, present the appearance of those in a person suffering in an advanced form of progressive muscular atrophy. There is a tendency to flexion of the fingers and great hollowness of the palms, the flexor tendons being quite prominent and the interosseous spaces are deepened. He cannot put the left hand upon the top of his head, and when he raises either hand there is aggravation of the severe pain which he constantly complains of. His co-ordinating power and sense of localization are affected, and he can "do nothing without the aid of his eyes." He cannot pick up a pin nor touch his nose even when his eyes are opened, tactile sensation is not good, the tendinous reflexes are everywhere exaggerated, he is irritable and annoyed by noises and is inclined to cry upon the slightest provocation. The pupils were contracted when I last examined him, and did not respond readily. A significant feature of the case is the difficulty he experiences when swallowing.

Fracture Complicated with Dislocation.—It occasionally happens, as in the case reported by Sir Charles Bell, that peculiar injuries may give rise to extraordinary spinal symptoms, and in some cases the fall of a person who has been assaulted may account for a vertebral dislocation, which it is supposed could have been produced in no other way than by the direct effect of the injury itself. In Bell's case "a man was making a violent effort to impel a wheelbarrow from the street upon the raised foot-pavement, when the wheelbarrow suddenly went before him and he fell with his chin upon the curbstone. He was dead in a few seconds. The processus dentatus was found to have crushed the spinal cord, the ligaments having given way."

Cooper reports an accident of the same kind, not immediately fatal, as the result of a fall, in which the first cervical vertebra was broken.

Potts' Disease.—The production of *Potts' disease* is due to falls, blows upon the back or mechanical violence usually directly applied, or; it may be due to disease of bone without any noticeable injury.* The distinguishing feature of *Potts' disease* is the existence of kyphosis or bending of the vertebral column so that a deformity results, the anterior part of one or more of the vertebræ (the bodies) being destroyed, and

in consequence the spinal processes are thrown out posteriorly so that a peculiar and familiar deformity results. As a consequence of such disease the spinal cord and its membranes are impinged, especially, at the anterior point, and what is known as compression myelitis results.

Compression Myelitis.—The commencement of the disease is indicated by pain which is due to irritation of the meninges and posterior nerve roots so that there is great tenderness, darting pains upon movement of the spine and when the erect position is kept. In the latter case the weight of parts above presses the diseased vertebræ together, and the pain is explained in this way. After a short period of sensory irritation we find that there is loss of power due to the pressure made upon the anterior part of the spinal column. The skin is at first the seat of hyperæsthesia, and subsequently anæsthesia, which is found in isolated areas, and perhaps eventually becomes general. There is atrophy, the response of the muscles to electricity is very feeble, and the initial loss of power is afterwards succeeded by a rather pronounced paraplegia without rigidity, the muscles being flabby, but after a time they grow more rigid as the lateral columns of the spinal cord suffer, the tendon reflexes being exaggerated. There is much irregularity about the manifestation of the motor symptoms, and it will be seen that such must be the case from the unequal pressure made upon the contents of the spinal canal. The striking features of compression myelitis are the reflex symptoms; and tremors, jerkings and active dorsal clonus are produced by the slightest form of excitement. The functions of the bladder and rectum are disturbed, and incontinence of urine and fæces takes place.

According to Erb the cases may be divided into two classes as to recovery. Some patients under proper treatment show signs of improvement and slowly recover, while the others grow steadily worse and cystitis and bed-sores, exhaustion and death follow. In cases of *Potts' disease* there is usually some projection of the vertebræ at a very early period, and when the patient stands erect a more or less conspicuous prominence is found corresponding to the seat of disease, and pressure produces great pain.

The situation and character of the deformity in *Potts' disease* and its association with changes in the posture and movements of the patient should be critically investigated in instances where suit is brought for damages, for unprincipled individuals who coach a plaintiff are very apt to furnish him with suggestions which though at first sight indicate veritable vertebral disease, are out of consonance with the behavior of the pretender. In one outrageous case with which I am familiar a prominent seventh cervical spine was the alleged angularity, but was in no sense the result of disease; and it may be wise in view of the possibility of this claim being urged in other cases, to call attention to the fact that in many hysterical and anæmic women as the result of debility and relaxation to find the vertebra prominens more than ordinarily conspicuous, and perhaps we may discover that tenderness which is so universal in cases of spinal anæmia.

Dr. Gibney, of New York, has written extensively in his practical way upon doubtful cases of *Potts' disease*, where the early symptoms have not only been mistaken for those of other troubles, but where temporary functional troubles have been dignified as true cases of vertebral disease. In undoubted caries of the vertebræ, and especially the traumatic variety, particularly when the upper vertebræ are affected, we find paralysis to be an early and pronounced symptom. Of

* In young persons generally. In older persons the disease is almost always traumatic.

one hundred and eighty-nine cases collected by Gibney, in which the vertebræ above the middle dorsal region were involved, sixty-two instances of paralysis occurred. It must be remembered that in the majority of the cases, especially those occurring early in life, there is a strumous element which predisposes.

In a rather interesting case recently tried in this city, it was alleged that a gentleman who had been injured was the subject of Potts' disease resulting from a sprain, which was produced by his attempt to control a pair of spirited horses when his wagon ran into a hole in one of the public thoroughfares. The accident occurred upon a rainy night, and he was exposed for many hours to the rain, his clothes became wet through, and he did not change them for some time afterwards. His only injury, so far as was shown by the evidence, was a sprain, caused by his being drawn half way across the dash-board. From the time of the accident he complained of severe spinal pain, which, however, was not localized until a few days subsequently. I found, however, when I examined him that he had pain at several points in the spinal column, more intense, perhaps, in the lumbar region. Within a few weeks he began to develop symptoms indicative of locomotor ataxia, and at the time of the trial he presented the classical features of that well-known disease, his tendon reflex, however, being exaggerated, suggesting invasion of the lateral columns of the spinal cord. A distinguished physician who had attended him in the beginning claimed that he had an angular projection, but neither Drs. Hammond, Clymer, Stimson or myself could find the least deformity, and taking into account the fact that although the malady had existed for so long a time there was no paralysis whatever, we excluded the idea of Potts' disease, and practically agreed that it was a hybrid form of sclerosis, traceable entirely to the exposure on the night of the accident.

In cases where Potts' disease has been claimed to be due to an injury of the back, it commonly happens that there has been trouble before the accident, and though in very rare cases an inflammatory process beginning in the joints as the result of a sprain may be found, it is not common for any extension to take place.

Extravasation in the Membranes of the Cord.—

5. Extravasation into the membranes of the cord may follow a fracture or severe shock, such as a fall upon the buttocks or upon the back, or in consequence of wounds made by sharp instruments. The appearance of symptoms is immediate, and if the hæmorrhage be extensive the patient may be deprived of power, and there is paralysis of the body below the level of effusion. In some cases the appearance of symptoms is gradual and marked by pain and rigidity of the back, pain in the legs, anæsthesia, or, perhaps hyperæsthesia; darting pains, formication and other symptoms of irritation of the posterior nerve roots. The loss of power which follows is of a light grade, unless there be compression-myelitis and invasion of the spinal cord. The functions of the bowels and bladder are affected and reflex excitability is usually lowered. We may localize the hæmorrhage by the existence of spinal tenderness, and by the involvement of the upper extremities, the presence of pupillary changes, headache, respiratory embarrassment, etc., when the cervical region is involved. The prognosis is not necessarily bad unless there be extending inflammation to the cord. A serious feature of the trouble is the existence of a clot in the upper part of the cord. The prognosis is then apt to be exceedingly bad.

Sir Astley Cooper reports the case of "a boy, aged twelve, who received a violent jerk of his neck by a cord thrown over his head as he was swinging forward in a swing. He felt no bad effects at the time, but afterwards his limbs became weak and his neck stiff. In eleven months this increased to palsy, and he died at the end of twelve months after the injury. A large quantity of extravasated blood was found in the spinal canal betwixt the bone and the theca vertebralis."

Clot in the Cord Itself.—6. When the spinal cord is involved and contains a clot, the symptoms are much more severe and dangerous and much more likely to be followed by permanent symptoms, indicative of degeneration. The early symptoms need not necessarily be alarming and may be of a light grade; but in the midst of an apparent amelioration after injury, a sudden paralysis may make its appearance, and in this case it is probable that a secondary process of softening has caused the rupture of a blood vessel. The paraplegia resulting from spinal apoplexy is usually complete, if the escape of blood be at all considerable, and its extent depends very much upon the seat of the lesions. At a high level we may have the respiratory and oculomotor symptoms, as well as those indicative of disturbance of the medulla, and as a consequence we find marked temperature changes and affections perhaps of the cranial nerves; if the hæmorrhage be small and confined to a limited portion of the spinal cord, of course there need be little more than local degeneration and its consequences. Wilks refers to a case in which a blow upon the spine caused simply an effusion of blood into the gray matter of the cord and the primary symptoms were those indicative of sensory disturbance, and he calls attention to the well recognized fact that very light ruptures of blood-vessels in this region are apt to be followed by extension of the lesion, and consequently of the symptoms.

Laceration of the Spinal Cord and its Membranes.—

7. Laceration of the spinal cord and its membranes is a very rare accident and probably never occurs without vertebral injury. It is possible for penetrating wounds to produce such mischief and as a consequence we are almost immediately furnished with a train of such manifestations as spinal hemiplegia or paraplegia, the former resulting from a one sided wound which produces severance of the motor tracts with disturbance of sensation upon the other side of the body. In fact, whether the one sided injury to the spinal cord depends upon penetrating wounds or lateral fractures with displacement of fragments, the symptoms are apt to be those of the peculiar paralysis originally described by Brown-Sequard.

In all cases of spinal injury the appearance of symptoms of course depends upon the degree to which the spinal cord is impinged upon, either by the products of inflammation started in the meninges or coverings, or in the cord itself. Dislocated or fractured vertebræ are very apt to be followed, at first, by meningeal symptoms, such as pain and nerve irritation, and afterwards by the production of symptoms referable to the cortex of the spinal cord; and among the latter we find, as a rule, that the earliest is an infection of motor power, which is succeeded perhaps by rigidity and contractures, and by an increase of the reflex excitability of the tendons. When the inflammation of the spinal cord is consecutive either to disease or thickening of the meninges or extensive laceration of the cord itself, and extends transversely across the spinal cord, we then find total abolition of motion and sensation; paralysis as well of the bladder and bowels, and disappearance of reflex excitability.

SELECTIONS FROM JOURNALS.

THE THERAPEUTIC USE OF HOT WATER
TAKEN INTERNALLY.

This is the subject of a very interesting article by Dr. Ephraim Cutter in *Gaillard's Medical Journal*. The article starts out with a *resumé* of the history of this therapeutic measure. It originated in 1858 with Dr. James N. Salisbury, who undertook a series of extended experiments with a view to demonstrating the correctness of the theory on the strength of which the practice is based. Its object is to remove from the stomach the results of processes complicating digestion, but not necessarily a part of it, the principal of these processes being fermentation. The results of fermentation in the stomach are acetic, butyric, hydrosulphuric, lactic and saccharic acids, and sulphide of ammonium vegetations and yeasts. The absorption of these gives rise to a variety of constitutional disturbances, which may even result in organic trouble, the seat of this organic trouble being the lungs, the liver and the kidneys, or other organs. It is probably generally well known, that Dr. Salisbury associates the absorption of these products of fermentation very directly with the causation of phthisis pulmonalis, and it is upon the assumption of this connection of cause and effect that he bases his well-known treatment of this disease by raw meat diet and copious washings of the stomach with hot water. Dr. Cutter is an enthusiastic disciple of Dr. Salisbury, and has done probably more than Dr. Salisbury himself to familiarize the profession with the latter's peculiar views and practices. The article gives explicit directions for the carrying out of this hot water treatment:

1. The water must be hot—not cold or lukewarm. The reasons for this are principally that cold water depresses, and that lukewarm water excites vomiting. By hot water is meant a temperature of 110° to 150° Fahrenheit, such as is commonly liked in the use of tea and coffee.

2. As to the quantity of water: The commencing amount should not be less than half a pint, which amount must be gradually increased with the capacity of the patient, until the specific gravity of the urine stands at 1015 to 1020, the best standard of health. If on examination of the urine the specific gravity stands at 1030 more hot water should be drunk. On the other hand, should it fall to 1010, the amount should be decreased.

3. The time for taking hot water is an hour or two before each meal and half an hour before retiring.

4. The water should not be drunk too fast. It should rather be sipped, so that the stomach may not be so rapidly distended as to make it feel uncomfortable.

5. The length of time during which this hot water treatment should be continued is six months, this time being usually required to thoroughly wash out the liver and the intestines.

6. Should it be desired to add to the palatability of the hot water it may be medicated with clover blossom tea, ginger, lemon juice, sage, salt, and even occasionally sulphate of magnesia. Where the thirst is intense a pinch of chloride of calcium or nitrate of potash may be added.

7. The amount of liquid to be drunk at a meal should not exceed eight ounces. This amount should not be exceeded, in order that the gastric juice may not be unduly diluted, or that the contents of the stomach may not be prematurely washed out.

It is claimed that under this treatment the fæces become black, the discoloration being due to the washing of the bile down its normal channel. While this blackness may last for more than six months the foetid odor of ordinary fæces is abated and the smell approximates that of the fæces of healthy sucking infants. The urine becomes as clear as champagne, free from deposit on cooling and free from odor. The various secreting organs are said to improve as to their functions and a general feeling of well-being takes possession of the hitherto overladen and consequently inactive body.

The following is a summary of the general conclusions on the therapeutical drinking of hot water as given by Dr. Cutter. He claims it to be the foundation for all treatment of chronic diseases. It excites downward peristalsis. It relieves spasm or colic of the bowels by applying the relaxing influence of heat inside the alimentary canal, just as heat applied outside the abdomen relieves. It dilutes the ropy secretions of the whole body and renders them less adhesive, sticky and tenacious. It is an inside bath. It dissolves the abnormal crystallized substances that may be in the blood and urine. It washes down the bile, mucus, yeast and waste, and thus leaves the stomach fresh and clean for the function of digestion. It promotes elimination everywhere.

It is necessary in conducting this treatment that the stomach should be rid of the hot water before meals, and this for reasons which are too obvious to require mention.

While we think it possible that Dr. Cutter has attached undue value to this means of cure, we cannot dispute the fact that the number of cases to which it is applicable is great. We should think it peculiarly applicable in the case of those who habitually gorge themselves, and whose systems are always overloaded with matter which the emunctory organs, constantly overtaxed, are unable to eliminate from the system. The thorough washing out which copious draughts of hot water would favor must be very beneficial in cases of this kind.—*Therapeutic Gazette*.

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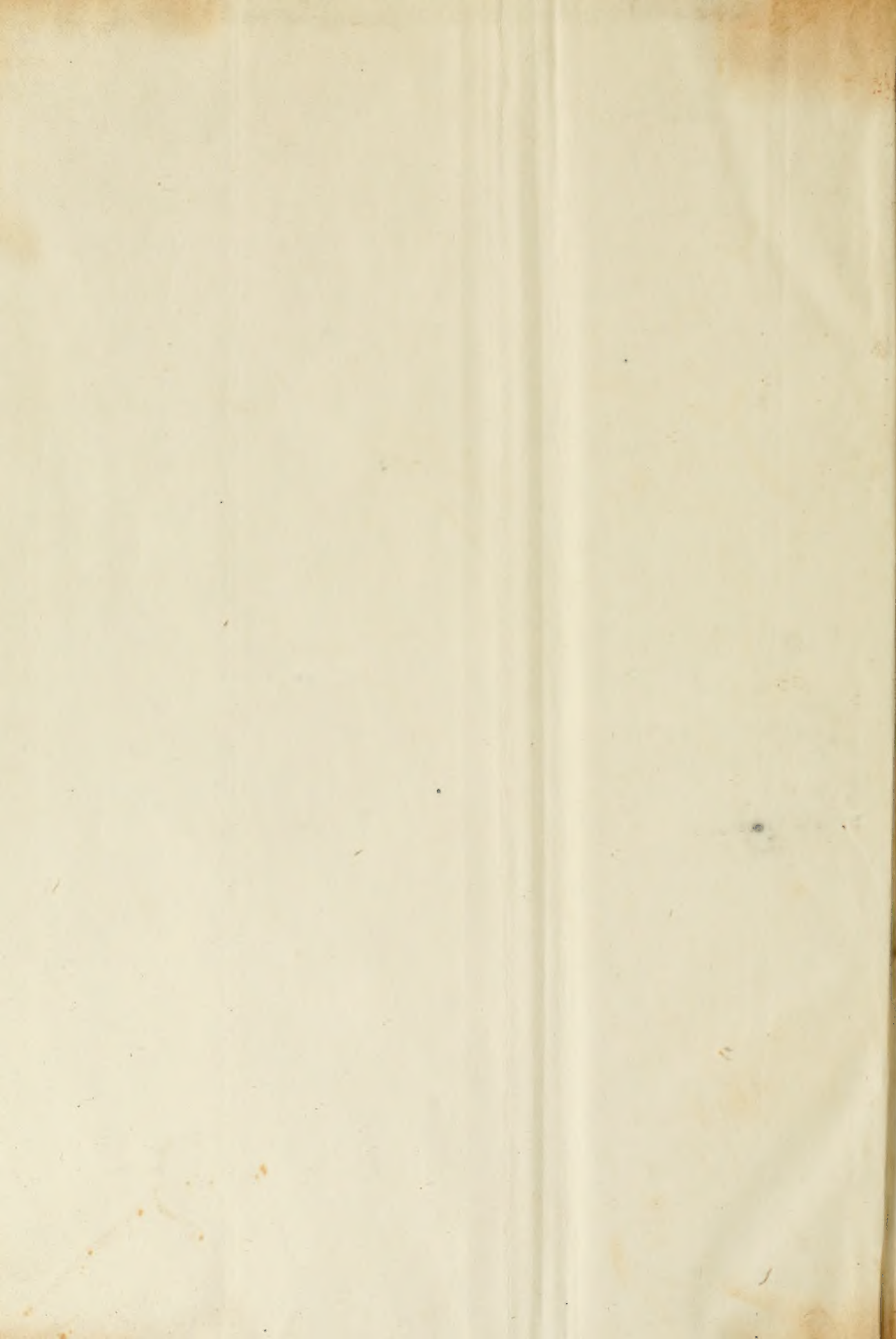
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